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South Australia



HOUSING IN THE ECONOMY: SCALE, CYCLES AND STABILITY

Duncan MacLennan (UNSW, University of Glasgow)

Chris Leishman (University of South Australia)

Satyam Goel

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Executive Summary

Key Findings

- Although Australia has important strengths in macroeconomic policymaking, the changed roles of housing prices and wealth mechanisms in the economy remain under-appreciated by governments
- The growing sentiment in economic policymaking that high and rising house prices are primarily due to over-restrictive land-use planning is inconsistent with research evidence that these problems are also importantly influenced by fiscal and monetary policy settings, as well as housing, infrastructure and other policies.
- Siloed macroeconomic and sectoral policy-making and a disjuncture between state/territory and Commonwealth governments undermines coherent housing market policy.
- Housing system outcomes driven by high house prices are increasingly problematic for the Australian economy but key centres of economic power, collectively, fail to take responsibility for tackling this issue.
- In boosting housing investment to stimulate short-term aggregate demand, policymakers need a more comprehensive measure of housing effects than new construction investment; they should also pay greater attention to the longer term wealth and productivity effects that different mixes of housing 'stimulus' policies have on housing and the economy
- With Australia's house prices rising ahead of incomes, mortgage borrowing has outpaced other forms of household debt; household debt is now at a record national high, and near top among OECD countries; all of the major banks have internationally high residential mortgage exposure. Australian households and the overall financial system have become highly, and increasingly, exposed to interest rate change rates and external economic shocks in a context where uncertainties about the development of the global economy over the next decade are historically high; a re-balanced and therefore less volatile housing market would reduce long-term reliance on intermittent 'macro-prudential lending' interventions
- Monetary and fiscal policy thinking needs to address housing markets that have developed significant speculative processes and behaviours and now operate differently from the past
- The lengthening era of low interest rates and non-traditional measures of monetary policy intervention, that the RBA has managed carefully, has had significant, and often unrecognised, effects on housing market and price outcomes with access to loan supporting equity rather than high mortgage rates and payments rationing opportunities for housing investment.

This Paper

This paper reviews Australian and international literature on the role of housing sectors in shaping, and being impacted by, economic cycles and shocks and their consequences for financial system stability. The review explores the alignment of published economic evidence and Australian 'expert' perspectives on this topic. A central focus is the adequacy of current policy approaches to identifying and addressing housing market outcomes that impair stability.

Housing Policy Governance

Housing is important in the Australian economy. It comprises almost a quarter of consumption, has become the major asset and source of debt for Australians and has direct employment effects of 5-15% of total employment (depending on definitions and cyclical stage). Explicit housing policy in Australia has been continually downgraded for decades and is now seen as a minor part of social welfare spending. Now, as it has come to represent an ever-larger and more -under-performing part of Australia's whole economy, the whole housing system requires to be centre stage in national economic and financial policy formulation.

In their economic thinking about the housing both governments and housing lobbies have typically focussed on official efforts to meet (agreed) merit good needs for housing and facilitate home-ownership growth. It has failed to encompass the broader housing system and has under-appreciated how housing impacts aggregate demand, cycles and growth. While 19 out of 20 Australians are housed through market systems, the country lacks any coherent housing market strategy nor any integrated approach to housing roles in economic policy.

Major divides run through thinking for and governance of the housing system in the national economy. At the Commonwealth level, tax and expenditures that crucially influence housing outcomes do not seem aligned to create the efficient system that monetary policymakers apparently presume to exist. The experience of Australia's three major metropolitan housing markets over the last 20 years, that are 'home' to half of GDP, does not suggest markets that are smooth transmission mechanisms responding effectively to light-touch macro policies. There are serious conceptual and 'grounded action' gaps between housing policies, fiscal policy, monetary and macroprudential policies. Housing policymakers conceptualise their role as limited to 'social issues' and disown responsibility for economic

performance. Monetary policymakers and prudential regulators, on the other hand, state that their roles do not extend to balancing the housing market nor to any consideration about affordable housing. Australian officialdom needs to recognise and address the housing system outcomes that problematically impact financial stability, fairness and productivity as identified through this research project (and many other studies).

There are equally serious splits in policy governance between the different orders of government. State/territory governments may impact housing choices through their tax and spending policies. There is room for better co-ordination of State Treasuries, planning, housing and infrastructure agencies. The macro-economic management of the housing system is even less transparent in some states than at the Commonwealth level. However, what is probably most critical at the sub-national level is formulating strategic housing supply plans linking housing, planning, infrastructure and a range of other state and local services. Federal decisions, for instance in relation to labour laws, or tax arrangements for housing, also impact supply. Better balancing of Australian housing markets requires more effective collaboration between Federal and State governments as they have different autonomies that need to align for effective change. There is no clear-cut divide between 'demand' policies governed by the Commonwealth and 'supply side shortages' induced solely by state and local decision-making. That perspective falsely simplifies the dynamics and policy influences on housing markets that are always local and also open to local, state, national and global pressures.

There is a widespread perception (not least supported by the last three decades of house price changes) that there are, at the national scale, housing shortages. Critics of state and local governments, portraying them as responsible for house price inflation (see, most recently Philip Lowe's comments to the House of Representatives Committee 6 August 2021),

often quickly leap from stressing a supply side difficulty to causality in 'planning'. This growing 'conventional wisdom' is not backed by any serious Australian research. It could be just as readily asserted that housing supply systems are inherently sticky and that the problem is the failure of Commonwealth governments to contain economic and population growth to lower rates to avoid rising 'congestion' costs that reflect demand over-stimulation. Commonwealth and state policies, supply and demand influences are all part of understanding why Australia's housing system outcomes are increasingly problematic.

To shape a new system-wide understanding of how Australian housing systems need to change, it is important for governments to take a longer view beyond electoral terms. The issues involved are sufficiently important and complex that Australia needs either a new national housing agency or a strengthened housing market remit for NHFIC. The role here would be to collaborate with RBA, APRA, state officials and key housing bodies to develop an annual national housing outcomes report assessing demand drivers, and a 'state-of-the housing-supply-chain' analysis for each of the major sub-national state/metropolitan area, as well as for Australia as a whole. A major inquiry, even a Royal Commission, is needed to address how Australia could achieve better housing outcomes and a strengthened economic performance with a focus on the future economic and social roles of home-ownership. The current House of Representatives Standing Committee on Tax and Revenue Inquiry into housing affordability and supply in Australia may assist in this, but its terms of reference largely preclude a wider understanding of the key issues.

Macro-economic Policy Concerns

Along with the associated reviews of productivity and wealth distribution effects of housing outcomes, this review confirms that the core policy approaches of the last decade have exacerbated housing difficulties and also impaired Australian economic outcomes.

Australian and other research confirms that there are strong multiplier effects from housing investment (and indeed housing market turnover) that can boost income and employment. Using 'housing' in stimulus programmes is a plausible recovery strategy. However, the efficacy of actions depends, like any other infrastructure project, on how well-designed and delivered the stimulus strategies are. Current policy priorities are focussed on boosting first home-ownership rather than rental housing for poorer Australians.

Leaving aside any questions of 'fairness' a number of economic policy questions arise. First, in the short-term program implementation has been strongly associated with rising house prices for first owners with extensive proportions of the subsidy capitalised into house prices and land values. These price uplifts must translate substantially into development industry profits and landowner 'scarcity rents' and therefore attenuate the employment benefits of grant programmes substantially. Governments should look to design stimulus strategies that are less inflationary and that unblock supply bottlenecks as, or before, demand is augmented.

Second, although homebuyer take-up increases substantially with new grant programs, it is well-established that such gains are often temporary as demand is often simply brought forward rather than augmented (and that is a policy success). However, if that action raises prices it reduces future purchase potential imposing even steeper ownership entry cost hurdles on those left behind in rental housing, and on new households forming. That is, poorly designed first home-owner programmes can

contribute to the longer-term decline in home-ownership rates. Fiscal policies in Australia with particular impacts on housing outcomes need an evidenced understanding of the real character of Australian housing markets.

The reviewed evidence highlights the cyclical nature of housing markets in Australia, both in relation to investment and price changes. The housing construction cycle is, broadly, procyclical in Australia when activity is measured by housing starts. It is also closely related to changes in income, employment and interest rates. Similar factors drive cycles in turnover and price changes. Monetary policy changes have an important role in shaping housing market outcomes. Looking at the graphs of housing system change and real house price increases over the last fifty years is not simply a story of housing, planning or monetary policy. It is the trace of the interaction of changing real housing system and monetary and other macroeconomic policies.

As in other advanced economies, the role of housing price and wealth channels in Australian housing cycles has changed over the last three decades. Governments, and recently the RBA, appear to have become comfortable with the way that rising house prices appear to stimulate consumer confidence and spending. The empirical evidence is that households have become more adept at withdrawing and using housing equity over time, that financial deregulation has facilitated that process, and that the growing share of housing assets in overall household wealth means that rising house prices now tend to increase upswing, and boom effects making the economy less cyclically stable.

In other advanced economies, and especially after the GFC, the downside of housing price effects has been that negative housing equity, consequent to post-boom price falls, depresses consumption and prolongs recovery, hence exaggerating the downswing. Australia has, aside from specific local situations, avoided recessions

over the last quarter century and hence has avoided prolonged housing downswings. Given the likely global macroeconomic context of the next decade it is increasingly necessary for governments to factor in more adverse housing sector downswing scenarios in setting monetary and fiscal policies. Housing systems, housing finance markets and economic possibilities are changing, and different macroeconomic policy thinking may be required. Changed behaviours of Australian households, with home-ownership increasingly driven by speculative rather than savings behaviours may now reinforce cycles in ways different from the last century. And, critically, they may have created a system less resilient when external shocks disturb national progress. Such shocks, as manifested in the GFC and the current pandemic, can threaten not just economic stability but the stability of financial systems.

In many respects the problems of 'Housing Affordability' and 'Housing Induced Instability' are two sides of the same coin. For many home-owners, rising housing prices reduce disposable household incomes and raise prospects of mortgage defaults, should employment circumstances deteriorate or interest rates rise. Rising loan to value ratios increase risks for lenders and increased equity deposit requirements placed on borrowers to reduce lender risks may raise entry hurdles for those with no or little equity available from their savings or family support networks.

The rising payment and debt burden for Australian households has, since the 1990s, driven increases in mortgage debt faster than other forms of debt and faster than incomes. Over the past 30 years, the household debt to income ratio has increased from around 70% to around 190%, and the RBA has recently acknowledged that Australians of all ages are borrowing more and taking longer to pay off their mortgages. In consequence, Australia now has a record high household debt to GDP ratio that is amongst the highest in the OECD. Australians are highly financially exposed to

interest changes and house price falls. The Australian financial system is also exposed to housing sector change. All of the major banks have similar and internationally high proportions of residential mortgages on their balance sheets.

The role of the RBA in impacting housing market activity through interest rate policies aimed at a central inflation target and, emphatically, not-targeting particular asset prices has been well established. Here, the Bank is questionably embracing a 'market knows best' perspective. Macroeconomic policy has tended to emphasise the short-term demand cycle and to underplay longer-term effects on productivity, inequality and stability.

In recent years the RBA has also deployed 'unconventional' monetary policy, mainly quantitative easing. There is an emerging view in international literature that housing markets play particularly important transmission roles for quantitative easing that are not yet well researched nor understood. This review identified two principal unintended consequences of quantitative easing on the housing system. First, by lowering the cost of borrowing, the effect of unconventional monetary policy is to inflate the value of leveraged assets and reduce the value of cash – and this disproportionately benefits wealthier households. Second, by boosting central bank balance sheets, the scene is set for a future period of housing price instability. Given Australia's high level of household indebtedness, this is a cause for concern and a source of potential instability and to date APRA has been, at least in public, largely silent on this emerging possibility.

The emerging Australian evidence suggests that quantitative easing has indeed skewed housing borrowing to households with equity, and that the sharp rise in Australian house prices seen in 2020-21 (16% in the year to July 2021) has been driven, partly by that policy approach, from the top and upper middle segments of the

housing market. There is growing international recognition amongst economic and housing policy commentators, including central banks and other important institutions, including the BIS, the IMF, and the OECD that policy settings pre-dating the COVID-19 pandemic and even the GFC have become problematic for some economies and exacerbated inequalities.

The impacts of COVID-19 have been disproportionately felt by low-income households and renters, while uneven recovery together with access to cheap borrowing has disproportionately benefited higher income and wealthier cohorts. There is increasing awareness that there are longer term growth and productivity effects of high and rising housing costs. The financial instability potentials of present housing market outcomes are becoming worryingly more apparent. This suggests that in relation to long term economic goals the OECD and Australian experience is that the housing market does not always 'know best' and that central banks now need more sophisticated targets that involve the major systems that transmit monetary policy influences, and especially labour and housing markets.

Changed monetary policy mechanisms need to address a housing market and finance sector that differs from the past and faces a period of uncertain domestic production and international trading difficulties. In New Zealand, the government has reacted to a similar house price boom, after decades of arguing that house price booms are supply-side phenomena, by instructing the Reserve Bank to pay greater attention to house prices in decision taking: The European Central Bank has adopted a similar stance. In Australia, the RBA has strongly rejected such approaches and, flying in the face of decades of evidence, washed its hands of any responsibility for house prices. Without any coherent evidence, the Bank has laid the responsibility on the land planning activities of sub-national governments.

Conclusion

To achieve better housing and economic outcomes for Australia there needs to be a rethinking of the roles and responsibilities of centres of power in economic policy making. There needs to be a more collaborative economic governance for the housing sector in Australia if instabilities are to be reduced, productivity improved, and wealth and income inequalities tempered. Funding and supporting a nation of battlers is one thing. Bankrolling a nation of house price gamblers is quite another.

1. Origins and Aims of the Research

This paper forms part of the evidence base and ideas that underpin the report 'Housing: Taming the Elephant in the Economy' (MacLennan et al, 2021). That report synthesised expert Australian opinions and the conclusions of a review of Australian and international literature on the roles of the housing sector in the economy. This paper focusses on the scale, cyclical nature and stability consequences of housing systems¹. The paper briefly sets out the origins, context and aims of the research in Section 2. Section 3 considers the 'scale' of the housing sector in advanced economies and then, in the main section of the report, Section 4, explores the roles of housing in economic cycles and economic and financial instability. Section 5 draws conclusions for potential policy actions.

1.1 Housing as Economic Infrastructure: Key Outcomes

Over the last five years, there has been a gradually strengthening evidence-based economic narrative to support housing policy interventions in Australia (MacLennan, Ong and Wood, 2015; MacLennan et al., 2018; MacLennan et al. 2019; MacLennan and Long. 2020) and other advanced economies (MacLennan, Miao, Christie and Long, 2021). That approach emphasises that, first, housing is infrastructure with significant productivity and growth effects and, second, that it is developed, valued, and exchanged in real markets that differ in key respects from those assumed in theoretical models that often shape housing policy debates (MacLennan, 2012). These past studies aimed to strengthen economic cases for housing policies by supplementing the usual needs-based and employment stimulus arguments of housing sector lobbies by establishing that housing sector outcomes have significant impacts upon productivity.

In the course of 2021, the core themes of our approach have also gained a wider currency. The Global Financial Crisis (GFC) shocked housing systems, mortgage markets, and economies in a significant number of countries (Duca, Muellbauer and Murphy, 2021), though much less so in Australia than many. Yet, as discussed in MacLennan, Pawson, Gibb and Hulchanski (2019), the GFC did not induce significant shifts in housing policies to cope with the internationally evident triple difficulties in major market economies of rising homelessness, growing rent burdens, and rising proportions of younger households rationed out of home-ownership (as overall home-ownership rates were declining). The COVID-19 pandemic that induced so many purposive housing policy actions to deal with housing emergencies has highlighted how differences in housing quality shaped both the incidence of infection and the capabilities of households to respond to new, challenging circumstances for living and working.

However, as governments now seek to build forward into recovery from the pandemic, there has also been growing recognition of the longstanding dysfunctional housing sector outcomes that impair growth and inclusion, and that may be exacerbated by policy understanding and settings that predate not only COVID-19 but also the GFC. For example, left behind places that are both economically and politically problematic in many countries (Rodrigues-Pose, 2018) are often places where there are disproportionate numbers of poorer renters, with high housing cost burdens, concentrated into capability reducing housing in disadvantaged neighbourhoods. In prosperous, growing metropolitan areas, the productivity gains from agglomeration economies are increasingly swallowed up by rising housing and land costs (Leishman et al., 2021). Carbon emissions induced by low energy efficiency homes and residential suburbanisation comprise a costly and

¹ Parallel papers on 'Australian Expert Evidence' (Randolph, Pawson and MacLennan), 'Productivity' (MacLennan, Long and Leishman) and 'Wealth' (MacLennan, Long and Leishman) are being simultaneously released.

significant challenge in many economies (UNEP, 2020), not least Australia (Chen et al., 2018). Housing system outcomes, therefore, play importantly into the major challenges of productivity, fairness, stability, and sustainability goals of governments. At the same time, since the third quarter of 2020, Canada, the UK, the USA and Australia, and other countries have experienced significant real house price increases, with appreciation rates averaging 10% per annum. Although unusual circumstances are in play, especially widely available low-cost loans and low market supply volumes, the shifts have raised policymakers concerns about the outcomes and stability of these market outcomes and the Bank of International Settlements (BIS, 2021), OECD (2021) and the IMF, 2021 have signalled warning of longer-term potential instabilities.

1.2 A Renewed Economic Interest

The need for rethinking is apparent. However, 'housing policy' has often shrunk from a major national policy concern to become a secondary concern within 'social welfare departments and without central agencies grasping the major multisectoral outcomes of the system (MacLennan, Pawson et al, 2019). Put simply, this is a critical time for governments to look up from short term political cycles and address the accumulated housing infrastructure deficits of the last quarter century and re-envision strategies for their removal.

There are new emerging concerns about housing sector outcomes in international arenas for economic policy debate. The recent pathbreaking OECD report, 'Brick by Brick' (OECD 2021) on housing system effects on economies and policies to secure better outcomes highlights how the housing narratives of economic policymakers are changing too. Governments, at national and local scales, and housing sector actors in profit and non-profit sectors are on the threshold of a better discussion for effective housing policies.

Two developments in macroeconomic policy thinking are apparent that pave the way for a

new economic narrative for housing policies. Governments are now looking at 'wider than GDP' measures of national/local policy success and are paying renewed attention to major system outcomes beyond GDP per capita and its cyclical stability. Distributional outcomes and inclusionary processes, the importance of creativity and innovation, and the sustainability of environmental outcomes are all now urgent policy concerns. Stiglitz, Krugman, and Piketty have all highlighted that the post-1970s value judgement to disregard distributional outcomes in mainstream macroeconomics both limited the thinking and relevance of economics in policymaking. The potential existential threats of ignoring environmental outcomes and their damaging economic feedback consequences have now become widely accepted, following the work of Stern (2006) and Dasgupta (2021), for example, in finance ministries. Macroeconomic policy is increasingly concerned beyond the traditional goals of output, employment, and inflation targeting (IMF, 2021; Carney, 2021; Loneragan and Blyth, 2020). The goals required for macroeconomic actions, in some contexts, are changing and diversifying. Some countries, institutions, experts, and policymakers have been loath to depart from the wisdom of the policy paradigms prevailing since the 1970s. Others stress the need for change as times, and economic systems, have altered.

The policy means, or instruments, that are used to achieve goals have also diversified. Summers (2013) and others, for a decade and more, have been highlighting that an apparent growing surplus of global savings has been driving down real interest rates and reducing the potency of monetary policy and redefining measures and meanings of debt in the overall economy. With low interest rates prevailing for the last decade, and expected to continue for another, traditional interest rate policies to control aggregate demand have become less reliable and indeed, now, less relevant. When inflation rates (still low) and bank costs on accounts are taken into consideration there are already negative real interest rates for savers in major OECD economies. Keynes famously described monetary policy measures

to stimulate demand when interest rates are already low as like 'trying to push on a string'. In consequence current stimulus strategies have developed significant roles for unconventional monetary policies, such as quantitative easing (with the RBA at the forefront of global thinking on these alternatives). Strong cases are being made to raise the strength of fiscal policies to support stimulus and reduce concerns about significantly expanding public debt to GDP ratios (and indeed developing better measures of wise and unwise public debts stances).

This decade long diversification of understandings of how to shape the aims and means of macroeconomic policies (Summers, 2014; Summers and Foreman, 2020; Davis, 2021) have been brought strongly into focus as governments try to restart or stimulate supply and their approaches, with a widely agreed need to boost aggregate demand (IMF, 2021; G7, 2021) are having to take place in the context of already low (sometimes negative) real interest rates and already record-high levels of private household and corporate indebtedness relative to GNP (that reflect the global surplus of savings).

The results of a last quarter 2020 survey of leading Australian economists and housing experts (MacLennan et al. 2021), undertaken for this project and subsequent detailed follow-up interviews (Pawson et al. 2021), have highlighted the importance attached to distributional and sustainability goals and to the significant debates about how to better structure policy. They also highlighted that most Australian economists are deeply concerned by the Federal government's unwillingness to significantly expand investment in affordable rental housing. That finding is of immediate importance. However, of much wider, and longer-term, significance for Australian housing policies were the results that the majority of economists believed that present arrangements and emphases in housing policies increased risks of economic and financial instability, reinforced inequalities in income and wealth and constituted a major drag on productivity growth in the Australian economy.

1.3 Housing Sector Scale and Instability

The findings reported in Pawson et. al. (2021) are a substantial critique not just of Australian housing policy arrangements but how governments, of all orders, address the roles of housing within the economy. In order to establish whether the existing evidence base supports the economics profession's fairly damning views on how Australian housing outcomes impact the economy, this report indicates the conclusions that can be drawn from a review of the economics (primarily) literature on the key relations between housing and the economy. That evidence can strengthen the housing policy narrative that will lead to both a fairer and more productive Australia.

This paper addresses housing sector scale and instability. Although the focus was on macro-economic and metropolitan scale research findings, wherever they were available, microeconomic research on household behaviours was also reviewed, when relevant, to highlight the underlying behaviours and influences that impact more aggregate outcomes. Much work in housing economics stresses how economic system outcomes (notably incomes, inflation, and interest rates) impact upon housing choices and demands. That is, the economy drives (along with demographic change and policy interventions) the housing system. A great deal, though not all, of applied economic analysis assumes that economic impulses - best summarised by price signals - drive 'efficient' market processes (ignoring the distributional issues involved). Our approach is different. First, we assume that there may be significant market (as well as policy/regulatory) failures in credit, land, labour, and materials markets that need corrective policy action but our main point of difference, at this juncture, is that the key housing system outcomes driven by the economy may have a recursive or feedback effect on the next iteration of the economic system. That is housing system outcomes may shape economic system performance through several distinct channels.

One consequence of the conventional 'economy to housing system' approach is that there is policy focus on the short term: exploring and estimating effects on aggregate demand and economic cycles. The longer-term productivity and growth effects of housing costs, prices, and outputs are usually ignored, and the issues then forgotten. This tendency may be a function of, as well as giving rise to, an under-developed empirical evidence base concerning the range and scale of such effects. Only in the case of homelessness have adverse housing outcomes been examined through an economic impact lens, and even there studies have been few, and narrowly focused on the most readily identifiable consequences, such as demands and associated costs on health and criminal justice services.

Disregarding the great majority of the housing to economy feedbacks seems reckless given the scale of housing consumption and investment in the economy (housing, like the labour market, is a big integrative system). Further, assuming that housing system transmission mechanisms will invariably be efficient disregards the complex nature of housing, and its associated markets, systems and sectors. Housing has multiple attributes: it is spatially fixed physical capital, housing choices 'place' people within economic and social contexts and networks, residential location influences access to localities of job density, and unproductive time in travelling, poor quality homes may inhibit the development of human capital (especially early in the life cycle), house prices change asset choices and wealth patterns. The challenge, from custodians of public spending, is for those advocating policies to secure better locational, quality outcomes (for example) is to identify the evidence for such 'housing' effects in growth processes. At the same time, housing researchers and advocates have a common cause in ensuring policymakers do not pursue unduly reductionist theories and models of the housing-economy interactions.

We undertake this review with the assumption that the housing system is not a neutral and passive economic system but, driven by secular growth, cycles, and economic shocks. It is a complex socio-economic system that can destabilise economies and finance systems, change the distribution of residual incomes and wealth and, in the longer terms shift productivity and growth. So, where is the evidence?

2. Big and Growing: Sector Spending and Multipliers.

2.1 Scale

The housing sector (the residential property sector) is a major aspect of the Australian economy, whether the emphasis is on year-by-year patterns of employment and income in the economy or the medium to longer cyclical patterns of economic activity. The overall weight of housing in the economy can be estimated in different (more or less generous) ways, but all the measures confirm the growing importance of the sector in this millennium.

The economic significance of the housing sector is sometimes reported as the share of housing in construction starts (either numbers or values) but that measure neglects the value that flows from the ownership of housing assets and the wider range of sectors involved in planning, financing, selling, letting and maintaining property. Indeed, some industry advocates argue that the cross flows of resources, manpower and ownership between housing and other property sectors are sufficiently large to mean that the overall property sector should be treated as a major sector of the economy. The Property Council of Australia (2017) defined the Australian property sector/ industry as consisting of ‘organisations and individuals involved in developing, operating and facilitating activities within the property industry that meet the residential and non-residential property needs of Australia.’ Defined in these expansive

terms, the property sector constituted the largest sector of the Australian economy, contributing close to a quarter of GDP in 2006 and rising steadily to almost 30% (and similar shares of Australian employment) a decade later. Less expansive definitions focussing only on direct property sector contributions indicate a share of around 13% of GDP. For 2020, the share of GVA contributed by construction alone was closer to 7.6 pc, and Renting, Hiring, and Real estate added another 3.2%.

In their detailed study of the more broadly defined property sector, the Property Council (2017) attributed that the residential construction subsector contributed around 67% of the entire property industry gross product and approximately 69% of direct employment in 2015-16, thus stressing the significant role of housing activities in the Australian economy (and with the non-construction service comprising a larger share of jobs and incomes than building work). NHFIC (2020) updated estimates of residential construction scale, strictly defined and reported that it was one of the largest industrial sectors in the Australian economy producing 5% of GDP and generating 134,000 direct jobs for 2019-20. Debelle (2019) draws attention to the more detailed nature of employment related to the residential construction sector. He points that the residential construction sector (along with the associated services) contributed a share of around 5.8% in total employment in the period 2016/17 (see table 1).

Table 1: Employment related to residential construction (Share of total employment 2016 to 17)

Classification	Percentage Share
Residential construction	2.00
Construction services	1.00
Manufacturing	0.80
Distribution	0.60
Business services	0.60
Household services	0.30
Other	0.30
Total	5.80

Source: Debelle (2019)

Sector growth has been most rapid, until the second half of 2020, in the major metropolitan areas, especially Sydney and Melbourne and the four states of NSW, Victoria, Queensland and Western Australia comprise produce around nine-tenths of the sector output (Property Council, 2017).

Official statistics do not allow a ready identification, year by year, of the broader but direct of housing activities in the economy (with residential construction starts the most readily identifiable), and it is unfortunate that given the scale of cross-sector effects pointed up by the Property Council's special study in 2017 that government does not produce a recurrent run of more meaningful housing sector data. Regardless of the measures used, official statistics for Australia demonstrate that both the overall property and housing sectors have grown faster than GDP over the last decade (to 2020) and, as analysed further below, have also been less stable than GDP growth and have substantial spillover effects.

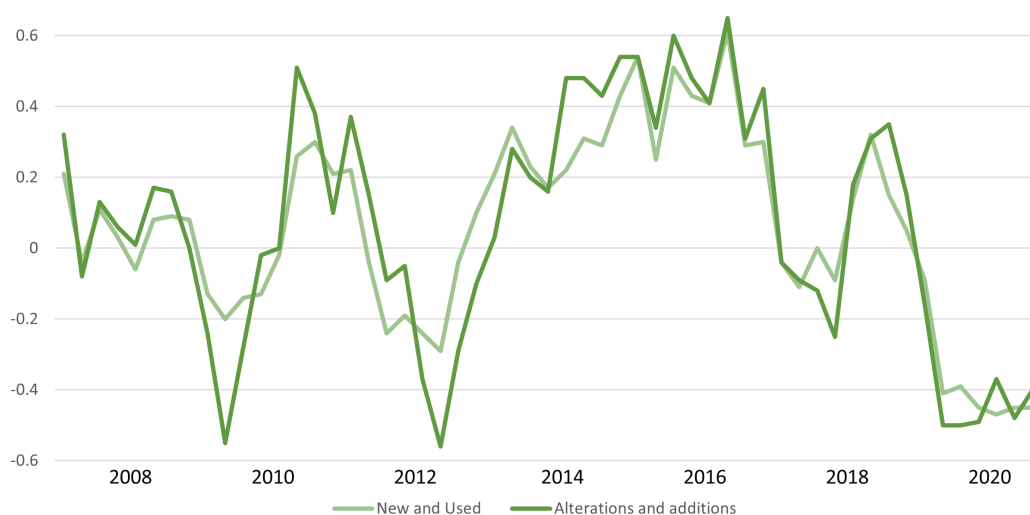
2.2 Spillovers and Multipliers

Traditional advocacy cases for housing policy draw attention to the importance of scale of housing in the economy because faltering income growth may quickly lead to construction job losses. But they are also focussed on the immediate spillover or multiplier effects (there are medium- and longer-

term effects discussed in Parts 2 and 3 of the report). Few studies draw any detailed attention to the state and Commonwealth tax revenue impacts of stimulating residential construction. The Property Council Report (2017) is an important exception. Other studies draw attention to the fact that building homes generates jobs in the construction sector, and a large proportion of incomes earned in these jobs are then re-spent on domestic consumption items, thus boosting demand and employment and incomes in other sectors (the multiplier effect). Spending on domestic construction materials and business services also generates multiplier effects. Table 1 produced above illustrates the sectoral spillovers point and he notes that the multiplier effect also disproportionately contributes to the wider economy when there is a downturn in housing construction. Recent AHURI funded research (Rowley et al, 2020) confirms that non-residential, followed by residential, construction have the highest multiplier effects (just under 3), and have a significant effect on the public-facing, hardest-hit, economic sectors during the pandemic.

Sectoral spillover (input-output linkages) and employment multiplier effects are well established in Australian studies. The overall combined effects of residential construction and multiplier effects on Australian GDP growth to 2020 are illustrated in Figure 1. Sector scale, impetus and instability are obvious, and 2021 trajectories are discussed in the concluding end note in section 5.

Figure 1: Contribution of Dwelling Construction to Annual GDP Growth



Source: Jericho (2020)

NHFIC (2020) provided a clear statement of the estimation of residential construction impacts and their scale (and also noted the important caveats that multiplier estimates implicitly assume no displacement or sectoral shortages, that would raise prices and not employment). The effects of residential production include:

- **Initial impact** of increased spending to begin the production process.
- **First-round industry impacts:** on suppliers of goods and services used in building homes., including subcontractors (construction services), structural steel fabricators (structural metal product manufacturing), engineers, architects and town planners (professional services).
- **Industrial support impacts (second-round effects):** The industries directly affected by residential construction that engage other industries, such as manufacturing, raw materials and transport, in producing output.
- **The consumption effect:** This is the subsequent economic activity provided by the extra income and employment from the output of the residential construction industry. It includes consumption by wage and salary earners across all first- and second-round industries and consumption by wage and salary earners in the residential construction industry.

They concluded:

- Residential building construction industry has the second-largest economic multiplier, estimated at 2.9, of all 114 industries that make up the economy.
- The analysis shows that \$1 million of residential building construction output supports around \$2.9 million of industry output and consumption across the broader economy.
- Each \$1 million of residential building construction industry output supports nine jobs across the economy.

- The employment impact on construction services such as plumbing, electrical, bricklaying and carpentry is almost four times that of any other industry leveraged to the residential construction industry. But the analysis shows that several other industry sub-sectors are also leveraged to residential construction, including manufacturing and transport services (for more depth, see also Rowley et al, 2020).

The sections above confirm that the scale of and multiplier effects arising from residential construction investment suggest that housing market and non-market investment intentions should be an important consideration in setting macroeconomic policy concerned with output, employment, and incomes. And that set of concerns applies whether investments are to be made by the state or the market. Allied to the traditional Keynesian economic concern to stabilise economic downturns by fiscal policy, they naturally lead to a concern about short-term income and employment and how an investment might alter the cyclical trajectory of the economy. Economic understandings of what has driven the frequency and amplitude of cycles (in growth rates) involve assessing downswings and upswings and the roles of monetary and fiscal policies.

In the next section, we directly address how the medium and longer-term housing sector processes and outcomes may influence economic stability.

3. Housing Cycles, Shocks and Economic and Financial Instability.

3.1 Introduction

Changing Cycles

Traditional housing policy narratives are primarily concerned with making cases for increased investment, usually in affordable housing, when government perceives a need to stimulate aggregate demand in the economy. This may be in response to some unanticipated, non-cyclical shock (such as the GFC or COVID-19) or as has been more traditionally the case, to boost public investment to forestall or recover from recession-induced falls in other components of demand. Economists, from the 1930s onwards, have had a broader interest, namely whether the temporal pattern of residential investment is cyclical, whether fluctuations are more prolonged and/or stronger than for the economy as a whole and whether the residential sector leads the economy into recession, whether it is synchronous or lagging.

The focus of these very Keynesian concerns was initially on cycles in new housing starts as they drove changes in incomes and employment. The key housing-economy interaction lay in housing investment changing demands for labour and materials that drove wider, as explained above, multiplier gains. Over time investment in repairs and renewals came to be recognised as equivalent drivers of jobs and incomes and the importance of the second-hand housing stock came into focus as home relocation has often acted as stimulus to demands for refurbishment, new white goods, furnishings and fittings.

Contemporary concerns about economic and financial stability and their relationships to the housing sector encompass these long-standing issues, but they also have regard to other powerful feedback measures from housing to the economy, in particular the key relationships between housing prices, mortgage debts, and wealth and instability. These concerns

have grown because housing markets and their outcomes have changed. For instance, the role of homeownership has changed, and is indeed changing again. In addition, there have been extensive integrations of housing finance systems into national capital markets and indeed, until 2020, growing flows of housing finance capital and direct investors across national boundaries. Both the domestic demand settings and supplies of national housing finance that used to set endogenous limits to housing market growth and instabilities have been relaxed.

The rising stock of housing wealth and the rising stock of mortgage loan debt have also exposed national economies to potentially significant instabilities in the economy and can pose systemic risks for national finance systems. Governments have to be more and not less careful in how they manage housing in the economy and shape housing investment patterns. Instability issues are not just about the quick stimulus to forestall recession, but they are about shaping a housing system that reduces its potential to shape instability and is resilient in the face of other cyclical and shock instabilities. This section of the report outlines how these policy concerns have evolved - especially in Australia. It highlights evidence regarding the efficacy of how governments have dovetailed housing policies with their economic consequences and, equally, weighed the housing consequences of macroeconomic and macroprudential policies.

Evidence and Central Banks

A great deal of the relevant literature informing this discussion is found outside the realms of peer reviewed, academic research. This is not to suggest it is not scholarly nor technically sound, but rather it is often written within the context of institutions that are part of or close to governments. That is, they may have 'a line to take' For instance, the central and reserve

banks in countries such as Australia, the UK, New Zealand and Canada have major technical capabilities and provide a wide array of well researched papers on housing-mortgage market economy relations, as do the international equivalents at the IMF, BIS and OECD.

Yet all the central banks noted will always strongly argue (for instance in the Australian context see Lowe, 2019) that monetary and financial policy has not been responsible for sustained real house price inflation and that 'supply' is the problem. And indeed, it may be, but there is little systematically researched evidence base to make such sweeping, singular judgements. In some countries, the UK and the USA for example, there is a strong tradition of leading macroeconomists undertaking housing-economy analyses (see, respectively, Muellbauer and Miles, or Summers, Krugman and Shiller). In others there is not. Australian Economic Papers recently (2020) published a list of their 'best 50 papers' over the last 40 years. Not one of them was concerned with housing and mortgage markets in the national economy. That said, there is a wide range of

RBA and other studies on which to build a better understanding of housing in the economy.

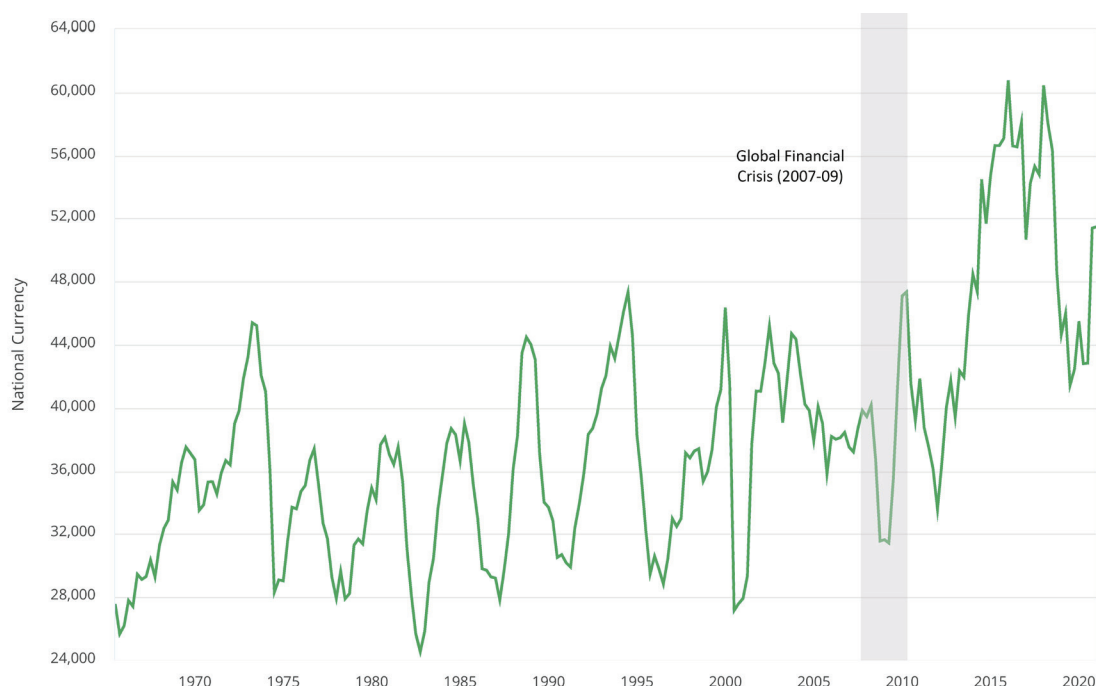
In the remainder of this section, we first outline traditional cyclical concerns about the housing sector, then note the importance of growing housing assets and debts in a deregulating financial system. Thereafter, we note key system drivers in the Australian context and then assess monetary policy responses that have significant housing sector implications that are not always reflected in housing policy debates and decisions. More policy thought needs to be given to both how housing policy affects the economy and how economic policy affects the housing system.

3.2 Residential Cycles and Instability: Key Patterns and Issues

Well-Defined Cycles in Housing Investment.

New housing starts in Australia have had a well-defined, if changing, cyclical pattern since the 1970's (see Figure 2).

Figure 2: Total Dwelling and Residential Building Starts (1970-2020)



Source: OECD, "Total Dwellings and Residential Buildings by Stage of Construction Started for Australia" FRED Economic Data, Federal Reserve Bank of St. Louis.

In that period (1970- 2020) there have been 10 cycles, and the system is presently in an 11th. The peak to trough duration has varied from 2 to 9 years but has typically been 4-5 years unless disrupted by significant shocks, such as the East Asian Financial crisis, the GFC and COVID-19. Despite the growth in Australia's population the peak output of the sector remained between 38-40,000 units, rose to 45-47, 000 in the 1990's but substantially rose after the GFC to peak at around 60,000 units, and that total was reached again in 2018 prior to slowdown and then COVID. In the third quarter of 2020, output had fallen to just over 40,000 units.

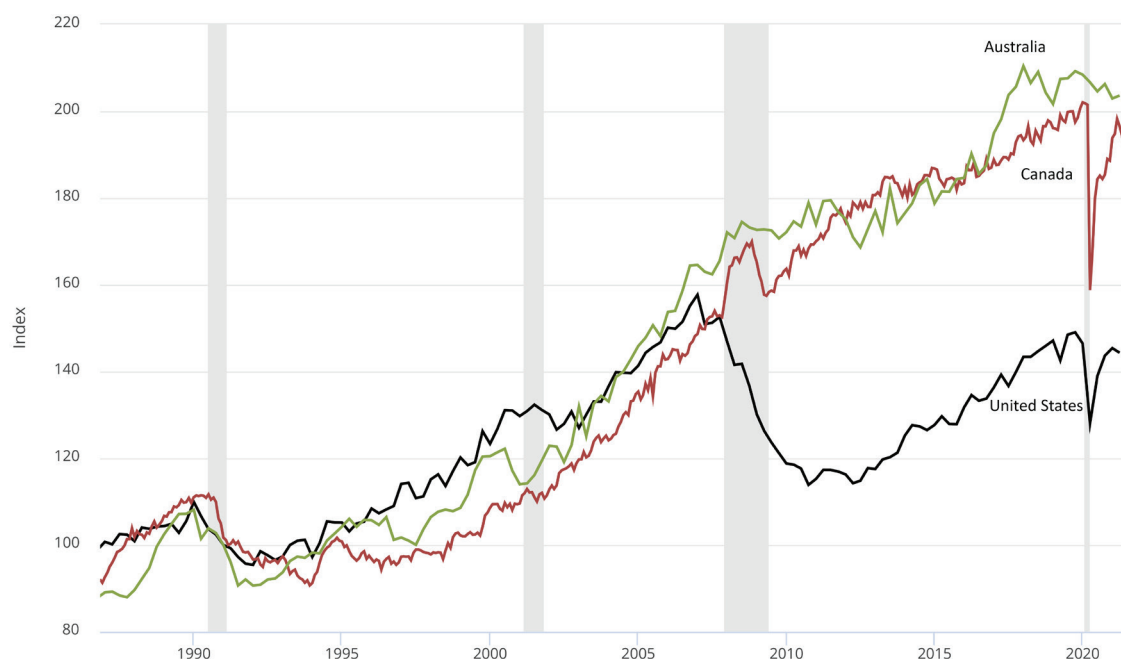
Cycles in Construction Employment, Price Increases and Turnover

These fluctuations are also reflected in other channels of connection from housing to the economy, including construction sector employment, house price change and market turnover. As the Australian economy (as a whole) had not suffered an overall recession for 27 years, until mid-2020, then clearly, the 30-40% reductions in peaks and troughs in housing starts are indicating a sector considerably more

unstable than the economy as a whole. Further, housing instability was not then inducing overall falls in output and employment, but it may have imparted a cyclical dimension to overall growth. A key question discussed further below is whether housing starts led growth cycles or reflected falling demand effects from growth reduction. The extent to which the sector, and employment therein, was relatively undamaged by the GFC is apparent in Figure 3.

Empirical analysis of the relationship between aggregate GDP, employment, and residential investment often involves quite complex econometric models and techniques (largely because, as this paper emphasises, both the economy and the housing market are complicated, interacting, recursive systems in which statistically disentangling cause and effect and establishing the weight of influence of a single factor are complex estimation tasks). There are robust international research studies, including Australia with other advanced economies and Australia-specific studies that merit attention. These studies suggest a variety of different patterns across different countries and periods.

Figure 3: Construction Employment in Australia, Canada and the United States



Note: Shaded grey areas represent recessions

Source: Sumner and Erdmann (2020)

Ma, Li and Wu (2017) investigated the critical role of housing markets in macroeconomic fluctuations (particularly during the Global Financial Crisis of 2007-09). They explored the housing dynamics and business cycle correlations for a variety of countries, including Australia (for the period 1959: Q3-2012: Q2), Canada and the U.K. The paper concluded that house prices in the home-ownership sector are highly volatile, and they show a strong correlation with the business cycle.

Interestingly, rents are more stable than house prices, with a lower correlation with the business cycle. It is crucial to hold divergences in rent/house price trends in mind (and in the Australian case, rents have lagged house price increases since 2015, and there appears to be a further divergence into 2021).

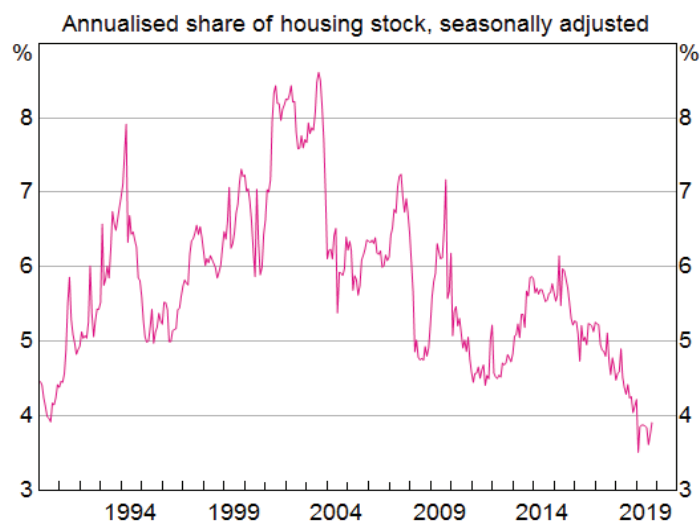
The findings of Ma, Li and Wu (2017) further suggest that, conventionally, residential investment leads the business cycle. In contrast, non-residential investment moves with the business cycle in a contemporaneous manner. However, the results point that in the case of Australia, the leading role of residential investment is less pronounced and more variable than for the U.S. and Canada.

A further study by Kydland, Rupert and Šustek (2016) deals with a broadly similar focus. They examined the role played by housing

dynamics over the business cycle. They noted that the statistical patterns established differed depending on whether the housing impetus was measured by the number of housing starts or by the value of the residential investment. The results show that the construction of housing (as seen by the number of housing starts) led GDP in several countries, including Australia (from 1959 - 2006) as well as the UK and Canada. However, when the housing impetus is measured as residential investment, the lead role of housing is observed only in the US and Canada. Moreover, in other places, the residential investment coincides with the cycle. The results show that in the Australian context, housing starts lead the economy by two quarters while housing completions and GDP move together (as GDP starts to fall, completions fall too).

Debelle (2019) has also highlighted how housing turnover has fluctuated since 1990 (see figure 4). Clearly, the expansive housing boom in the first half of the noughties boosted construction and further induced consumption expenditures in the economy as turnover rose to record levels. Subsequent turnover peaks have been less pronounced but appear to coincide with, and reinforce, broader cycles in growth rates (housing turnover effects on household spending are pro-cyclical and reinforce upswings and downswings).

Figure 4: Australian Housing Market Turnover Rate*



* Includes estimates of unreported transactions recent observations and subject to large revisions

Source: Debelle (2019)

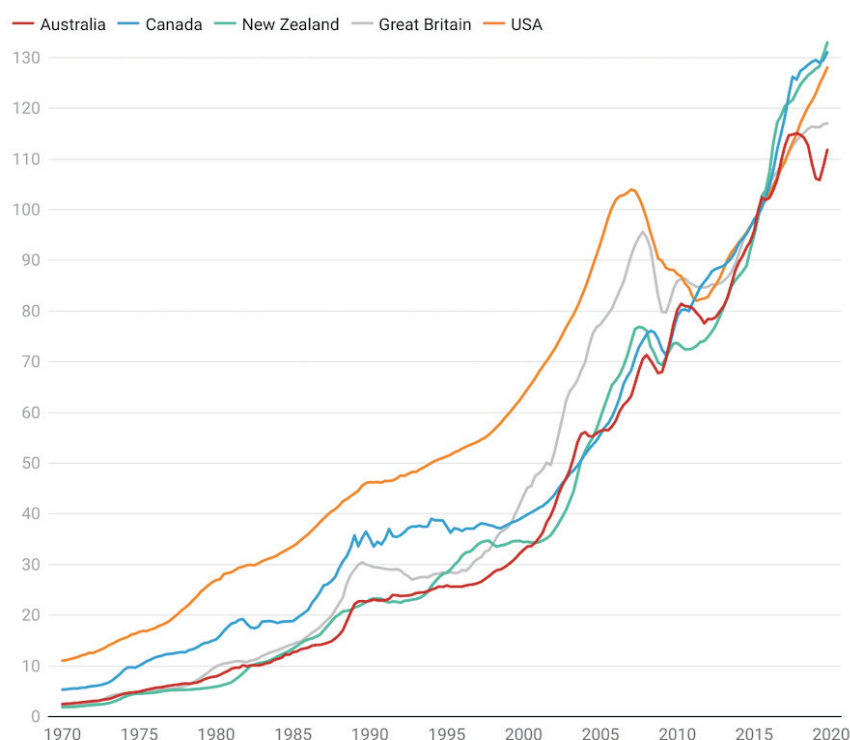
House Price Changes: Supply and Demand Imbalances

Prior to the 1970s real house prices remained flat, and intermittently fell, in almost all the major OECD economies. The policy choices to grow home-ownership, at the start of the 20th century in Australia, in the USA in the 1930s, in Canada and the UK in the 1960s were advocated and launched in eras of stable house prices as home ownership offered enforced savings that would support households in their older years. It was a vehicle for saving, and not speculation. Figure 5 below indicates how much that has changed since the start of the 1970s with only the decade 1988-1998 showing limited price growth. In this millennium price growth has been faster and the evolution of the price pattern has displayed more frequent burst and dips in inflation rates.

It would be reasonable to interpret the half century of nominal house price changes depicted in Figure 5 as reflecting the interaction of effective demand (influenced by monetary policy, interest rates, tax policies, income and population growth) and supply

sides of housing markets. Economies such as Australia (and the UK, Canada, and the USA) all saw significant deregulation within national capital markets, leading to greater competition to lend (that arguably heightened boom period demands) but also wider access to global capital markets. In consequence, national mortgage lending was no longer constrained by the volume of domestically raised retail savings. It would fly in the face of decades of economics research to suggest that financial deregulation and monetary policy have had minimal effects on housing price outcomes. However, over the last decade central banks (as noted above) have, in recent years, talked down the roles of monetary policy in driving real house prices and also argued that it is not the role of central banks to seek to shape the evolution of asset prices, notably house prices. These two, related, issues require greater scrutiny, first as policy commentators needlessly split into 'supply' and 'demand' side explainers of house price changes and as central banks begin to show some shift from their singular focus on overall inflation targeting in setting monetary policy objectives.

Figure 5: Nominal House Price Indices



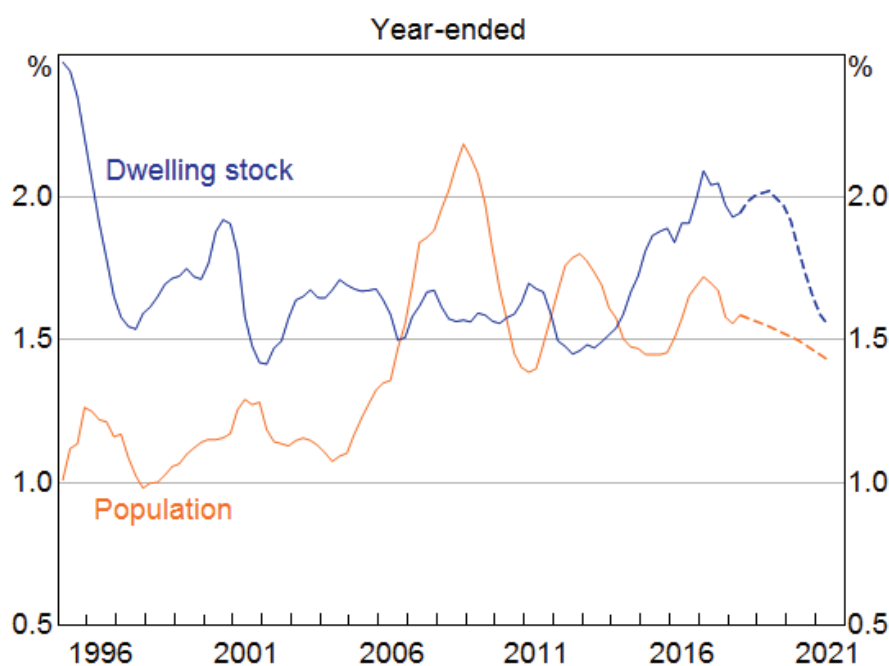
Source: OECD (2021), Housing prices (indicator). doi: 10.1787/63008438-en (Accessed on 28 July 2021)

Sluggish Supply Inherent to Housing.

Housing construction is an inherently complex process, and it is only in an economy with near perpetual near equilibrium and perfect developer foresight that it would be likely that flow supply would match flow demand. Housing shortages, or excess demands often characterise the system. Good economic, and housing market policy making, must explicitly consider whether the housing supply system is configured to match plausible demand levels.

In an important paper recognising the importance of the housing market in the Australian economy, Lowe (2019) argued that house price patterns (and ‘corrections’) do not primarily reflect interest rates and unemployment/employment but inflexible supply-side responses to population growth after the mid-2000s. He further noted that after the GFC (despite its modest impacts on Australia) it took a decade for home-building to respond, and also noted that by 2017 the number of dwellings in Australia had been increasing at the fastest rate in more than two decades, with prices abated by extra supply (see figure 6).

Figure 6: Australian Dwelling Stock and Population Growth*



* Dotted lines represent forecasts

Source: Lowe (2019)

This explanation, even if the observations on supply stickiness are accurate does not exculpate demand side influences, including monetary policy. And in relation to supply side stickiness it is much too glib to assert that planning/zoning controls are everywhere and always at the heart of supply side inelasticity. ‘Planning’ effects, that undoubtedly exist in some contexts, are the natural villain of

a theoretical framing for monetary policy that assumes markets are predominantly competitive, well-organised and equilibrating. That framing directs attention to ‘planning’ rather than housing market imperfections and it also serves to underpin the central bankers post 1990’s mantra of focussing on overall inflation targets rather than the sectoral and distributional impacts of monetary policy.

Concerns about Asset Prices in Monetary Policy-Making.

The Reserve Bank of New Zealand and the European Central Bank have, in 2021, adopted more explicit attention to housing market outcomes, and price rises in particular. The RBA have subsequently (RBA, 2021) rejected such explicit attention to house prices and adhere to their pre-COVID (and 2021 house price boom) position. The conventional central bankers' wisdom is that their role is to keep overall inflation and, more recently, unemployment within target rates and not to be concerned about the trajectories of particular asset prices, including housing. In 2019 the Deputy Governor, Guy Debelle (2019) noted that "Housing price increases clearly have a distributional impact, but monetary policy is not well placed to address that."

However, the patterns of consumption and investment that follow from monetary policy changes have secular growth and productivity effects as well as influencing short-term income and employment stabilisation. If a central bank is aware that its distributional effects are adverse and/ or that its policies essentially stimulate rentier rather than productive investment should they turn a blind eye and simply claim 'not our problem'?

Central banks recognise that monetary policies have such effects. For instance, Draghi (2015), in discussing the effects of unconventional monetary policies, noted that "The use of these new instruments can have different consequences than conventional monetary policy, in particular with respect to the distribution of wealth and the allocation of resources, it has become more important that those consequences are identified, weighed and where necessary mitigated". Both the RBA and APRA signal concern with the burdens of high housing costs but deny any policy responsibility for assuaging such difficulties. So, in the absence of central measures to moderate house prices increases where in government are the consequences of monetary policies being identified, weighed and mitigated?

Neither the RBA nor the Treasury appears to have any simulated estimates of supply and demand effects for the national or major metropolitan housing markets. So, are effects assumed rather than identified? Where are the thought through housing system policies that would mitigate the housing sector redistribution and price inflation effects that are so manifestly obvious in Australian housing markets? So, is there no coordinated, evidenced fiscal and sectoral policy discussion for the national housing market that interfaces with the central bank's (RBA's) policy measures?

In retrospect, this omission seems somewhat unwise and appears to be a structural failure in the governance of Australian economic policy that underestimates the significance of housing assets in the economy. Rodrik (2015) makes a cogent case that a combination of neglect in understanding US housing and mortgage markets and an over-reliance on efficient market models in financial and monetary policies were important contributory factors to the initiation of the GFC. Circumstances are now different but there is a worrying lack of evidence and a remaining propensity to equilibrium market thinking in Australian monetary policy. Placing the onus for housing system failure in Australia on local planners is at best ideological and at worst intellectually dishonest. We return to this issue in the policy conclusions.

Demand: Migration and Speculation

Macroeconomic policymakers have tended to emphasise other 'causes' of inflation. Much work, through and after the COVID-19 pandemic needs to be done, on demand side drivers.

What has driven the significant recovery of house prices through 2019, and indeed the 10% plus (national) rise in house prices over the year to August 2021. Population growth has diminished with the cessation of immigration. However, it is estimated that from March 2020 until mid-2021 some 600,000 Australian citizens have returned from overseas and boosted housing demands, often using substantial cash holdings to drive demands and prices. Australia needs a coherent research

programme modelling and disentangling supply and demand drivers and influences at national and major metropolitan scales.

These patterns have a fundamental importance in shaping the links between housing market outcomes, house prices and economic instability through two major processes:

1. The expectations and sensitivity of households, investor's and developers towards house price outcomes influence economic outcomes and stability.
2. Housing prices and the associated wealth effect dynamics influence consumption patterns and economic stability.

First, suppose households and investors in the economy are sensitive to housing price outcomes. In that case, their expectations about house price movements may become important so that they shift from being the passive recipients of the gains of rising home values to more active speculators in housing markets so that booms, busts, and bubbles, and all their associated instabilities become part of the housing to economy transmission process.

The evidence for Australia, and particularly the major metropolitan areas, has been that significant speculative demands for housing have operated over much of the last two decades (MacLennan and Miao, 2019). Rising prices are widely assumed in economics to reduce demand (and encourage supply). However, housing is different. Price increases can, in the short term, accelerate first time purchase as households fear price rises are escalating home-ownership options away from them. In addition, as expected future house price appreciation is an important element of the user cost of housing and homeowners place considerable emphasis on past trends in forming future expectations, housing price growth implies a lower user cost which further stimulates demand. More significantly investors may be attracted by strong, prolonged price appreciation in particular markets. Indeed, the pursuit of capital gains has largely driven the dominance of 'Mum and Dad' landlords in Australia's private rental sector, arguably

crowding out institutional investors who require income-based returns and are generally conservative about possible future capital gains. In addition, households with equity may seek to own and rent dwellings as combined net rental and capital uplift returns exceed other alternatives. The significance of domestic buy to let/investor landlords, though diminished as a share of purchasers since 2017, is well established in Australia (REFS). Strong, secure price signals also become beacons for investment to internationally mobile 'housing' capital and the significance of overseas (especially Chinese) buyers in Australian housing markets in this millennium is well established (Financial Stability Review, 2016).

What is less widely recognised is that these processes have operated across major metropolitan areas internationally and the IMF (2019), up to end 2019, have identified a degree of delinking of house prices in major metropolitan economies from the economies they are set in and, at the same time, some convergence in price dynamics across major, open metropolitan areas across the OECD countries.

Rising home equity, financial deregulation and the globalisation of flows of human capital, ideas and housing capital have substantive changed the operational dynamics of housing markets since the 1990's. Rising real house prices make economies less stable, as speculative demands for housing are somewhat more fickle than the demands for space and accessibility. Additionally, rising prices ahead of incomes are likely to involve more marginal buyers and rising mortgage stress, as discussed in the next section.

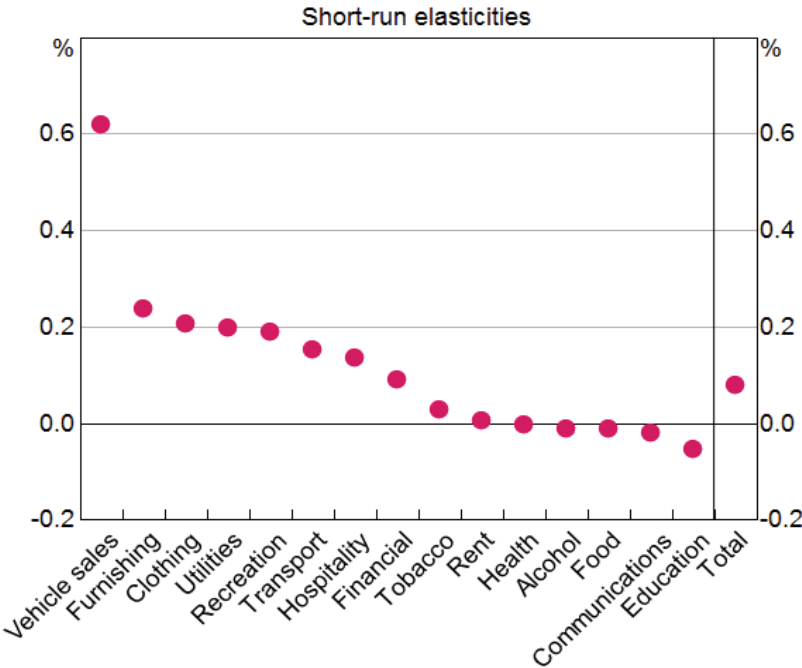
Secondly, even without growing propensities for speculative behaviour, with 'passive' homeowners, rising housing prices that transform into rising stocks of wealth may then unleash effects of rising wealth on household consumption and investment behaviour (and of course also reinforce a 'feel good' factor shaping consumer confidence). May et al. (2020) note that assets held by households grew steadily after 1989 until the GFC, fell sharply after the GFC, and have subsequently risen (with a dip

in 2018 and early 2019) to record levels. After rising nearly 60% (in the period between 2013 and 2017), the growth in household wealth fell in late 2018 and early 2019 due to declining housing prices. The ‘feel good’ factor arising from sustained periods of rising house prices, and its electoral dividend, is principally why politicians tend to favour rising house prices. If, further, financial sector innovation and reform allows households to ‘withdraw’ housing equity, the potential for rising house prices to raise household expenditure arise.

The significant feedback effect of housing market outcomes on the economy (and the studies noted here do not disaggregate equity withdrawal and other rising housing wealth effects) is reflected in a number of studies (RBA, 2019; May et al, 2020). These studies show that strong household wealth growth induces consumption of non-housing goods to rise faster than household income. This also implies a fall in the national savings ratio. The empirical findings of May et al. (2020) illustrate that in the long run, a 1% rise in the value of housing wealth leads to around 0.16% rise in household consumption. Moreover, half of this

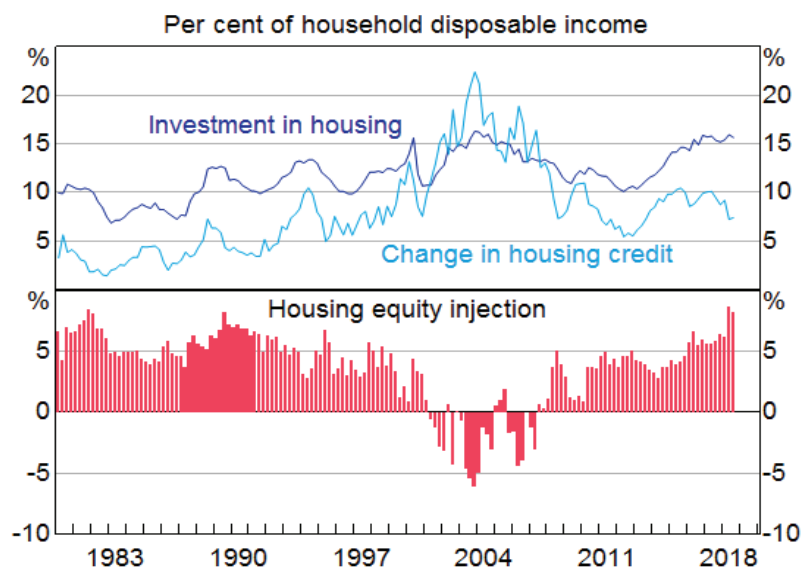
consumption feedback takes place in a span of two quarters. Further, they show that the rise in the net wealth of households helped sustain the spending (during the period 2013-17), when the growth in households’ disposable income was weak. Lowe (2019) reported effects of similar magnitude. Their findings suggest that as the net housing wealth of the households rises by 10%, their consumption level shows an increase of roughly 0.75% in the short run. Moreover, in the long run, it elevates by 1.5%. Additionally, they indicated how the housing wealth effect impacted different sectors of the economy. Spending on motor vehicles and household furnishings (though this may reflect higher turnover also associated with periods of rising housing wealth) were most significantly impacted but for many types of spending the effect is not significantly different from zero (see Figure 7 below). It is important to note that neither of these studies explore the counterfactual case, in other words the consumption effects of a more equal spread of housing wealth growth. There is, at the very least, a credible question that more equal distributions of wealth growth would have had larger weighted effects on consumption and spending.

Figure 7: Impact of Wealth Effects on Economic Sectors by Consumption Category*



* Effect of 1% increase pay capital housing wealth over six months
Source: Lowe (2019)

Figure 8: Australian Housing Equity Injection*



* Disposable income excludes unincorporated enterprises and is before the deduction of interest payment

Source: Lowe (2019)

Earlier research for other countries reviewed in Maclennan (2012) notes that housing equity withdrawal may often be quickly re-injected into housing repair, modernisation and extension projects and that some households use it to diversify asset portfolios by buying financial and other land and property assets. The importance of equity withdrawal, (that may occur when households sell homes and do not use all of the equity received in subsequent house purchase or when households borrow against the security of their housing assets), has also grown and varied over the last 30 years (see Figure 8 above).

Different methodologies for estimating equity withdrawal exist and RBA have used an overall 'macro' measure (investment in housing net of changes in housing credit). This suggests a decade after the start of the millennium when equity withdrawal was a significant overall factor in the economy.

Cross-national studies, including Australia, highlight the complexity and importance of these relationships. Kishor and Marfatia (2017) examined the dynamic relationship among house prices, income and interest rates in 15 OECD countries (including Australia, Canada, UK). The study shows that the responsiveness

(or elasticity) of house prices to income changes in Australia and Canada is significant and is around 50% higher in contrast to the United States and the United Kingdom.

Further, they note that in the long run, there exists a negative relationship between interest rates and housing prices. They point that such a negative relationship particularly holds for OECD nations with the lowest income elasticities. However, in Australia and Canada, they find a counterintuitive, positive, and significant relationship between interest rates and house prices. Such a result is counterintuitive because housing affordability rests on mortgage costs and, therefore, interest rates. It also raises questions about the efficacy of using interest rate rises to 'cool' housing price pressures in the Australian context. There are two possible explanations for this counter intuitive result. First, neither Australia nor Canada incurred the rapid post-GFC downturn in housing market activities and prices as experienced by most of the countries in the sample of this study. The second explanation to it is that it is possible that nations that have 'high real interest rates reflect expectation about future expansion in real economic activity and that may also show up in higher real house prices.'

House Prices, Housing Equity, Business and Financial Cycles

In the section that follows, the monetary policy and financial sector implications and drivers of housing market activities are explored. Research on the relationships between business cycles and housing prices may include such influences as well as other housing market drivers. The institutional differences across countries in the complex design of mortgage products may also provide insights into the relationship found between house prices and interest rates. Countries, where interest rates have strong and statistically significant impacts on house prices, are typically found to have adjustable (variable) rate mortgages as the main borrowing instrument. Australia, like the UK and in contrast to the U.S., has predominantly adjustable mortgage rate markets.

Claessens et al. (2012) explored relationships between house price and equity outcomes with business and financial sector cycles and disruptions for a sample of 21 “advanced” OECD member nations along with 23 emerging economies. They identified persistent statistical links between the different phases of business and financial (credit, housing, and equity) cycles. Specifically, recessions associated with financial disruptions, notably house and equity price busts, tend to be longer and more profound than other recessions. Conversely, while recoveries following asset price busts tend to be weaker, recoveries associated with rapid growth in credit and house prices are often more robust. These findings emphasize the importance of linkages between financial market developments and housing outcomes. In particular, their study highlights the significant role played by the growth of house prices and asset price busts before recessions in determining both the duration and the depth of recessions.

Claessens et al. (2012) also argue that in this millennium developments in housing markets are more important than other forms of equity (or equities) in shaping the length and magnitude of cyclical outcomes as compared to equity. This arises because housing increasingly represents a large share of wealth for most households.

As new financing techniques have developed, housing is becoming an increasingly important form of collateral against which households can borrow and adjust their consumption patterns (as house prices vary) more readily than for other sources of equity. A further consideration is that equity prices are more volatile than house prices, implying that changes in house prices are more likely to be permanent than for other equity types (Cecchetti, 2006; Kishor, 2007). If changes in housing wealth are believed by households to be more permanent then they can be expected to adjust their consumption more when house prices increase (decline), leading to larger increases (declines) in output during recoveries (recessions) associated with house price booms (busts). In studies with micro data, housing wealth has indeed been found to have a larger effect on consumption than equity wealth does (Carrol et al., 2006). Consequently, house price adjustments can be expected to affect aggregate consumption and output more than equity prices.

Anundsen et. al (2016) took the focus beyond cyclical effects of housing wealth-financial sector interactions to consider (following earlier seminal work on the U.S. experience by Mian and Sufi, 2014) how housing-economic-financial interactions shaped major crises such as the GFC. They established, (in a panel of 20 OECD member nations including Australia for the period 1975–2014) the importance of house prices and credit in affecting the likelihood of a financial crisis. Their study finds that booms in credit to both households and non-financial enterprises are important in evaluating the stability of the financial system. In addition, the study found that global housing market developments have predictive power for domestic financial stability. Finally, econometric measures of bubble-like behaviour in housing and credit markets suggest that they have positive and statistically significant effects on the probability of significant financial sector instability (Anundsen et al. 2016; Bauer and Heaney, 2017; Jorda et al: 2015, 2016; and for an early review Jurgilas and Lansing, 2012) The probability of a financial/economic crisis increases markedly when bubble-like behaviour in house prices coincides with high household debt leverage.

Research on house price/housing wealth effects (discussed further in Part 3 below) has suggested that they have grown in magnitude over time and they are procyclical. In consequence they are likely to increase the amplitude of income and employment cycles in the economy, boosting booms and prolonging recessions. Households are most likely to withdraw housing equity in the upswing and peaks of activity; diminished house price expectations and negative equity hold back recovery from downswings. Rising house prices that translate into net housing wealth gains clearly raise extra difficulties in managing the economy and, when they induce or reinforce overheating, they will induce, or support interest rate increases that may have negative effects on business investment in other parts of the economy. We could not find a published estimate of the extent to which increased interest rates induced by rising house price effects (above those necessary with zero rates of house price inflation) have damaged investment in business and human capital.

This review has summarised how understanding of the roles of housing in economic instabilities has expanded from a traditional focus on how housing starts/investment linked to business cycles to a broader recognition that housing prices, equity and debt effects, in much changed mortgage markets and financial systems, have shaped different, broader and deeper instability effects on economies. The OECD and the IMF, since the early 2000s, have paid increasing attention to housing prices and business cycles, as much to understand systemic risks of major crises, as to nuance more recurrent anti-cyclical policy. Work at BIS, and the IMF, does recognise that housing market changes can lead to or follow GDP changes and, broadly, housing market downturns play critical roles in one recession out of two.

The role of housing markets is often reinforcing. The patterns of the GFC where poor mortgage market regulation in the USA spilled over into a global banking crisis, courtesy of bad asset purchase decisions by leading banks, should

not be universally anticipated at the first hints of a cyclical downturn.

On the other hand, the financial authorities and central banks of the OECD countries have sensibly developed a much greater interest in the scrutiny and safety of the housing market. Namely, they argue that housing systems need to be resilient to potential external and cyclical shocks that have sometimes imparted unrecognised dimensions to 'housing policies' that look longer ahead and may run counter to fiscal and expenditure programmes of other parts of governments. There is a significant policy question in this for Australia, as already signalled above. Have successive Commonwealth and other governments lacked the will to implement fiscal, land, and housing policies to reduce house price inflation and its consequences and left the RBA, and indeed ordinary Australians, to face the consequences? Before firming policy questions from this Part, it is crucial to consider in more detail recent developments in mortgage markets, prudential borrowing, and monetary policies and their housing consequences.

3.3 Mortgage Markets, Potential Instabilities and Monetary Policy Responses

Both housing development activity and homeownership are dependent on the costs and availability of finance. Further, as stated earlier, the ability of property owners (whether individual owners, private or non-profit landlords) to use their accumulated housing equity to underpin other spending depends on the instruments and approaches of mortgage lenders. Muellbauer (2012) aptly noted that 'Credit supply conditions in the mortgage market are the elephant in the room.' He added that it is essential to take cognizance of the credit conditions to discern how the household consumption pattern, household debt, and housing prices behave in economies like Australia. Besides, for economies exposed to a significant degree of household debt, the consideration of credit conditions becomes vital.

House price changes are about more than demand drivers and the housing supply system. They are much influenced by the nature of national and global capital markets and the regulation and structure of national housing credit institutions, and the monetary policies that impact them.

Changing Mortgage Markets.

There has been a longstanding change in the Australian financial sector and, after the 1980s, the development of an increasingly globally connected and deregulated housing finance sector. Jorda et al. (2016) described and assessed the broad sweep of change in the provision of bank credit (and related key retail finance providers) in the now deregulated financial systems such as the US, the UK, New Zealand, Canada, and Australia. In the half-century after 1960, household borrowing has come to dominate bank credit, absorbing two-thirds of increased credit in that period. Furthermore, the study shows that during the same time, the level of debt held by households in Australia grew by around 75 percentage points of GDP. They found that since 1960:

- Banks and households have been heavily leveraging-up through mortgages. Mortgage credit on the balance sheets of banks has been the driving force behind increasing credit or debt to income ratios (now referred to by many as 'financialisation'). In relation to GDP, non-mortgage bank lending to companies and households has remained relatively stable,

with virtually all the increase in the size of the financial sector stemming from a boom in mortgage lending to households.

- The leverage ratios of households (measured by the ratio of mortgage debt to housing equity) have grown significantly in a large number of economies. Around two-thirds of the current banking business is composed of the intermediation of (retail) savings to the household sector to purchase real estate (mainly housing).
- The repercussions of mortgage booms going bust are characterised, internationally, by slowing of economic growth rates. Consequently, mortgage credit lending holds sway in shaping present-day business cycle dynamics while non-mortgage advances have a marginal influence.
- Mortgage credit has important implications for financial instability in the developed economies, and hence for macroeconomic policies. This is mainly because mortgages, with riskier loan features, have growing weight in total financial sector activity and this has shifted the locus of systemic crisis risk towards mortgage lending booms.

Table 2 below highlights the increase of total bank lending to GDP ratios from the 1960s to the GFC. It illustrates how the total lending is split into mortgage and non-mortgage components as well as household and business components.

Table 2: Bank Lending to GDP Ratios (1960-2010)

Country	Total Lending	Mortgage	Non-mortgage	Households	Business
Australia	1.13	0.70	0.42	0.77	0.36
Great Britain	0.82	0.55	0.27	0.67	0.16
USA*	0.88	0.54	0.34	0.48	0.39
Canada	0.62	0.35	0.27	0.55	-

Note: Column 1 reports the change in the ratio of total lending to GDP expressed as a multiple of the initial in value between 1960 and 2013 ordered from largest to smallest change. Column (2) to (3) reports the change due to real estate versus non-real estate lending Column (4) and (5) instead report the change due to lending to household versus lending to businesses. The USA entry with * includes credit market debt.

Source: Jordà et al. (2016)

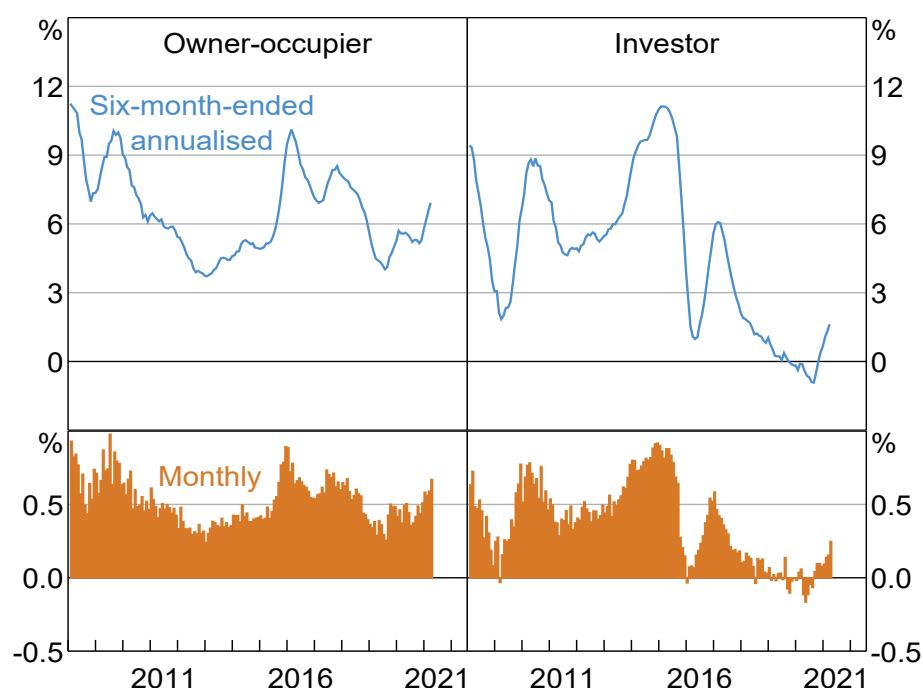
Exposure to Housing Debts

These figures make it clear that, up until the GFC, Australian housing markets operated within a highly leveraged financial system with the major banking institutions heavily dependent on mortgage intermediation as their business. These patterns, as indicated above, have developed even more strongly since 2010 and, if anything, left Australian Governments confident in their high degree of housing debt exposure. Or would complacency be a better characterisation than confidence? The near unique economic/trade history of Australia as a key resource and food provider to China and the Pacific Rim over the last quarter century has insulated the Australian housing finance-market nexus from any real (as opposed to calculated) experience of system stress testing. Of course, within that context credit supply has enabled rising house prices and, as outlined below rising prices and mortgage amounts ahead of incomes have raised lending risks. Jorda et al. (2015) take a rather different long run view from the RBA and suggest that, as in other countries, loose monetary conditions in Australia have shaped mortgage and house

price booms. Macro-financial vulnerabilities, concerning the high levels of household debt as well as declining housing affordability have become a matter of serious concern after housing booms.

It is widely acknowledged that low interest rates over the decade to 2016 did increase households' capacity to borrow and made it more attractive to borrow to buy an asset whose price was appreciating. Since then, more attention has also been paid to the availability of credit and, as indicated in the Figure below, there has been a marked reduction in the growth of housing credit, and especially to 'investors', and that growth rate slowed further into 2020 (though has shown signs of recovery in early 2021). Much of that slowdown was demand driven but the outcomes for homeowners reflect both a slowing of housing demand growth (that recovered through 2019) and the tightening of mortgage allocations as lenders became more concerned with high loan to value and loan to income ratios. The RBA reported that by 2018, on average, the maximum loan size offered to new borrowers had fallen by around 20% since 2015 (Lowe, 2019).

Figure 9: Owner Occupier and Investor Housing Credit Growth



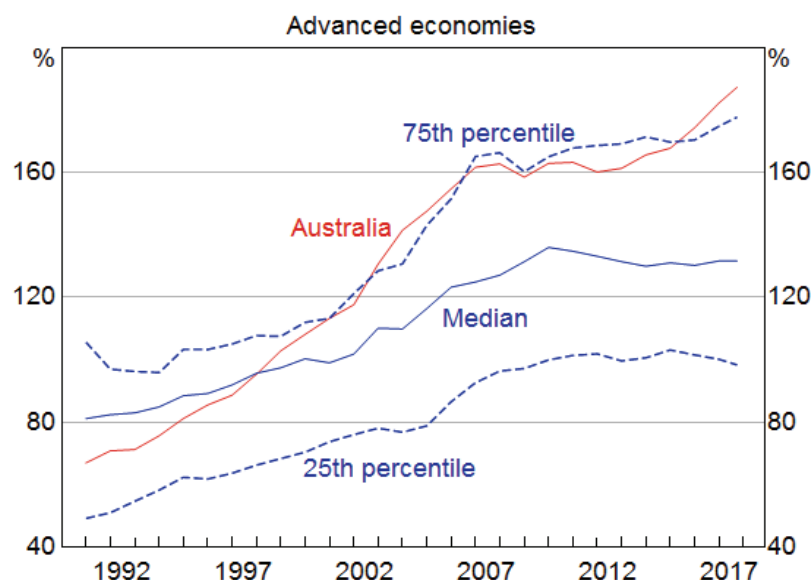
Source: RBA Chart pack (July 2021)

Even though there has been a marked reduction in the growth of housing credit to investors, growth in mortgage lending has undoubtedly sustained growth in individual homeownership as well as facilitated the long rise in housing prices. This has had predictable consequences, most obviously indebtedness.

The emergence of housing debt and its associated macroeconomic and financial sector risks across the OECD is well documented in André (2016). Within that framework, to 2016 and subsequently, Australia appears to have particularly high measures of housing-mortgage market instability risk. Reviews by Bullock (2018)

and Lawless (2020), confirm Jorda's (2016) findings that household debt in Australia has risen substantially relative to income over the last three decades, from 70% in 1990 to close to 190% by 2020. It is important to note, as discussed further below, that since the GFC, the debt to income ratio has not risen (and indeed has fallen in some periods) for households at median income and the 25th income percentile (see figure 10). The poorer half of Australia has been less able to access increased credit over the last decade and this may well reflect that they are increasingly rationed out of homeownership and access to cheap credit. This is a fundamentally important observation in relation to both inter- and intra-generational equity in Australia.

Figure 10: Household Debt to Income Ratios

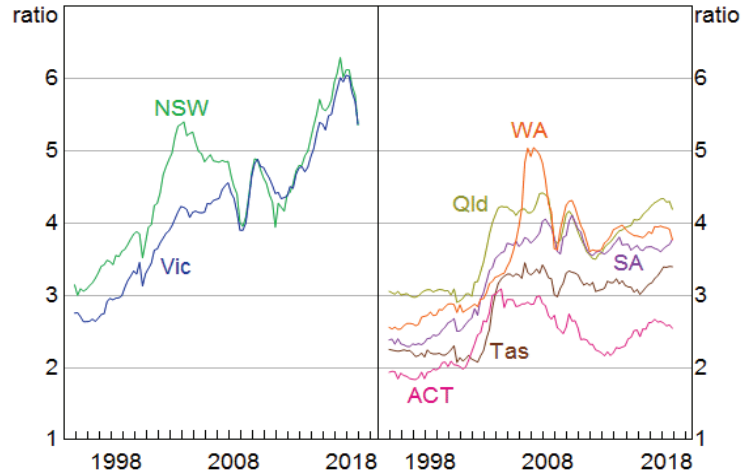


Source: Bullock (2018)

The available evidence suggests that, both before and after 2007, Australia's internationally fast rising household debt-to-income ratio has been largely due to a rise in mortgage debt. Rising mortgage debt to income ratios is an inevitable concomitant of house prices rising faster than incomes. The same, long period has seen substantial growth in ratios of house prices to incomes (Figure 11). The patterns show house price to income ratios doubling over the two decades to 2018 and rising markedly higher in Victoria and NSW than in other states.

Figure 11 makes two very significant policy points. First, financial and monetary policies are Australia-wide, but the house price and affordability outcomes differ across different markets. The real economy of job change, population growth, and of course, land and housing supply also matters in changing housing prices. Second, the rising house prices that lead to higher debt to income ratios and threaten financial stability are precisely the same market outcomes that shape the housing affordability problems of younger and poorer Australians. Instability and affordability problems are two sides of the same coin. Here we focus on the debt/instability issues.

Figure 11: Australian House Price to Income Ratios*



* Average dwelling prices to average annual household disposable income

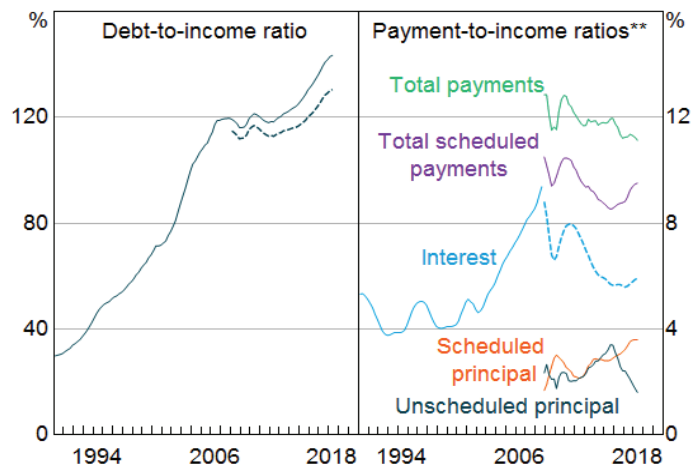
Source: Lowe (2019)

It is clearly established that the housing prices have risen along with a rise in household debt to income ratios, and these rises were largely driven by increases in mortgage debt. The household mortgage debt to income ratio has risen steeply to around 150% in 2020 from nearly 120% of income in the middle of 2000s (Bullock and Orsmond, 2019).

Figure 12 below shows the ratio of household mortgage debt to income and measures of how debts have been serviced. The mortgage debt-to-income rose until the mid-2000s, flattened for a few years after the GFC, and reassumed its

upward rise after 2013. Household deposits have increased over time too but Bullock and Orsmond (2019) estimate that even taking into account these 'buffers' the debt-to-income ratio has still risen substantially. It can also be argued that they have also, with rising prices, increased housing wealth, so that their net housing debt position is markedly less exposed (apart from very recent buyers) than for gross housing debt. Nevertheless, in both income flow and assets, Australian households have become increasingly exposed to high and rising mortgage debts (Kearns, 2017), making them more exposed in the event of future adverse exogenous shocks to the economy.

Figure 12: Household Mortgage Debt Indicators*



*Excludes non-housing debt; between debt-to-income line nets out amounts in redraw facilities; dotted lines are calculations based on debt balances which also exclude offset accounts; income is household disposable income before housing interest costs

**Rolling four-quarter average; unscheduled principal is the charge in aggregate mortgage prepayment

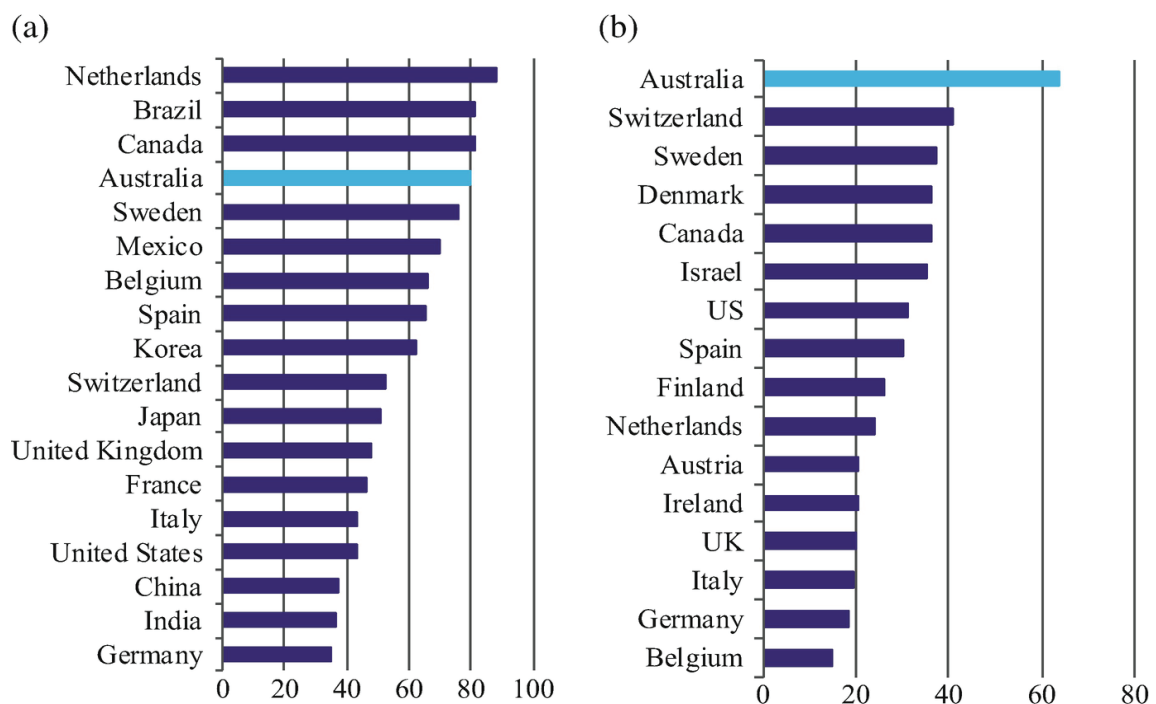
Source: Bullock (2018)

Systemic Risks

A similar conclusion is relevant to the banking sector and the financial system so that increased housing debt exposure measures may imply higher systemic risks for the financial sector. The Australian financial system is heavily weighted towards housing lending. Figure 13 (left panel) below indicates that the Australian banking system is highly concentrated. Given that the balance sheet structure of all the banks are almost identical, a problem for one is likely a problem for all (Bullock, 2018).

Further, Australia leads the international economies in the extent to which mortgage debt is provided by the banking system. Within the Australian banking system, more than 60% of banks' lending is now for mortgages (rising from 20% in 1990) – Figure 13 (right panel) illustrates Australia's high mortgage lending concentration. By international standards, Australian banks, and in consequence the financial system, are particularly exposed to any threats to repayment difficulties and credit quality in the stock of mortgages.

Figure 13: Banking System and Mortgage Lending Concentration

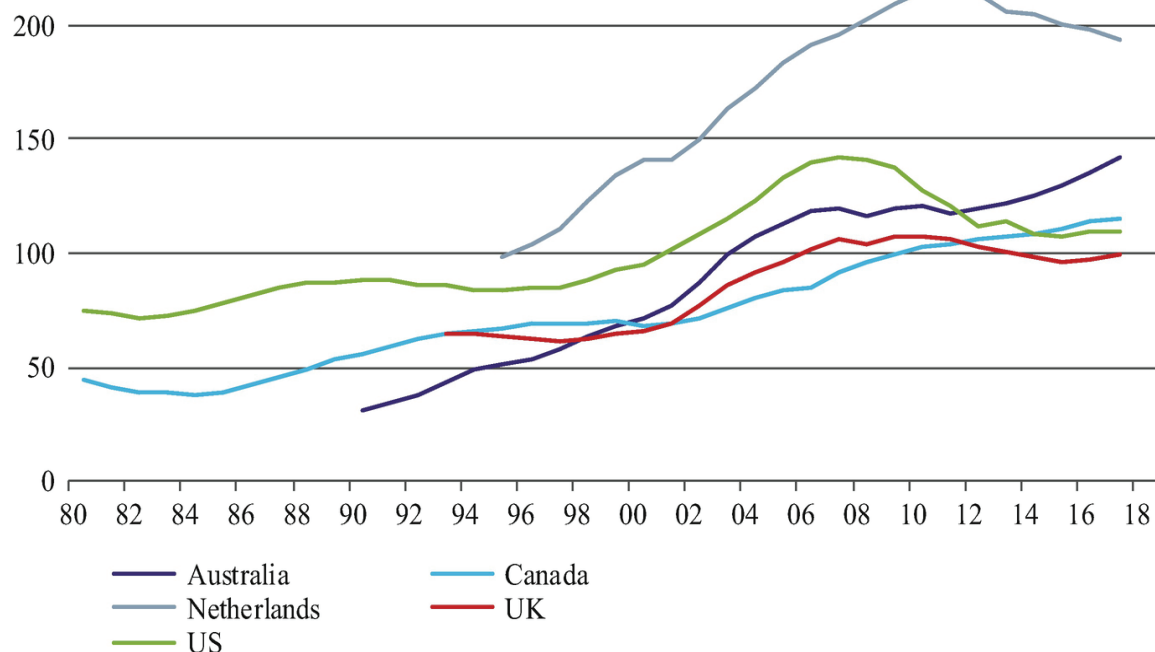


Source: Bullock and Orsmond (2019)

The comparative evolution of mortgage debt to household income ratios for five comparator OECD countries in Figure 14 below shows how the mortgage debt issue has grown as a dimension of macroeconomic and financial policy since the early 1990s. It also reveals that Australia is now, unlike other countries, still strongly increasing mortgage debt to income ratios. This raises critical policy questions of

whether the failure to contain house prices and raise financial sector risks is being adequately dealt with in policy and how such measures impact housing outcomes.

Figure 14: Household Mortgage Debt to Income Ratio



Source: Bullock and Orsmond (2019)

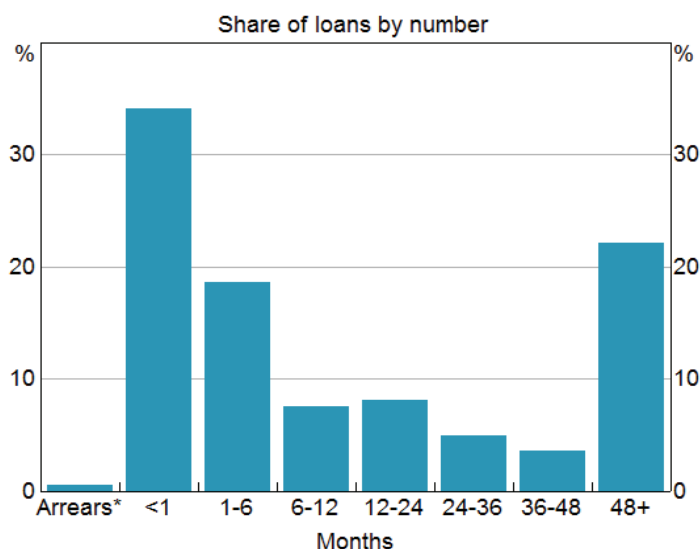
Before turning to mortgage market management through ‘macroprudential’ measures it is important to report the evidence that stresses that ‘vulnerabilities’ should not be over-emphasised. It was noted above that growing deposits/other liquid assets reduce system risks, but by no means remove them. Standard and Poor’s Global Ratings Report for Australia (2021) notes low rates of mortgage industry insurance claims and personal bankruptcies in Australia in comparison with the USA and Canada.

Lowe (2017) explored in some detail the relationships between ‘Household Debt, Housing Prices and Resilience.’ In examining the distribution of, and growth of, housing debt across households, he concluded that:

- The rise in the debt-to-income ratios (as noted above) has been most pronounced for higher-income households.
- The proportion of borrowers with debt to income ratios exceeding 3 had risen from 12 to 20% between 2002 and 2014

- The ratio of debt to income has increased for households of all ages, except the ones belonging to the youngest (15-24) category, who typically have low levels of debt.
- Borrowers of all ages have taken out larger mortgages relative to their incomes and they are taking longer to pay them off.
- Older households are also more likely than before to have an investment property with a mortgage and it has become more common to have a mortgage at the time of retirement (although we note that this may also reflect higher rates on household splits after the age of 50 leading to later life house purchase (Ong and Wood, 2019).
- Reserve Bank data on securitised loans shows that nearly two-thirds of housing borrowers are at least one month ahead of their scheduled repayments and half of borrowers are six months or more ahead (Figure 15). But a substantial number of borrowers have only small buffers if things go wrong.

Figure 15: Australian Mortgage Repayment Buffers



*90+ days in arrears

Source: Lowe (2017)

Debt Buffers and COVID-19

Although it is important not to over-emphasise potential financial instabilities and that debt buffers exist it is equally important to be alert to potential difficulties. COVID-19 raises new difficulties for households with limited buffers.

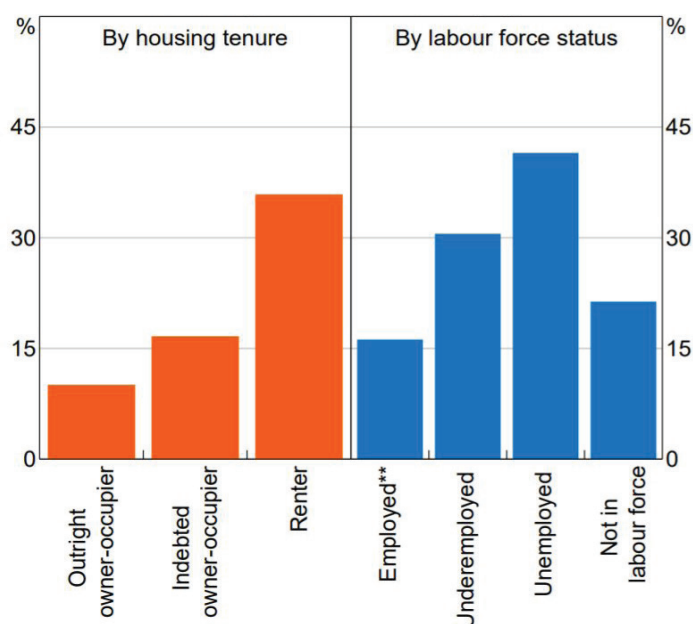
The Financial Stability Review (2020) assessed the circumstances of the early period of COVID-19 impact and concluded that in the period ahead, many households will find their finances under strain due to efforts to contain the virus. They concur with Lowe's (2017) analysis that some households will be able to draw on significant financial buffers, including large mortgage prepayments, but the majority, and especially the most, highly indebted households have only small buffers and so are more vulnerable to lost income. The report notes that regardless of age, income or employment status households with small buffers report experiences of financial stress.

There are sharp differences across housing tenures. They note that by 2018 more than one-third of renting households typically report in surveys that they have experienced financial stress (difficulty paying bills, going without

meals) - see figure 16 below. The most stressed households by 2018 were those whose lower incomes make them likely to be renters rather than owners. They are often less-skilled and younger workers with precarious jobs including casual workers, and those in industries most affected by the COVID-19 containment measures, such as accommodation and food services. Recent research by Leishman et al (2020) used the Australian HILDA survey and other datasets to model the potential impacts when the JobKeeper, and Coronavirus supplement income support measures end. They found that 61% of the 758,000 households living in affordability stress are private renters, and that without the income support measures this number would have risen to 1,336,000. They also noted that around 50,000 households in Australia are living in housing affordability stress but are themselves also property investors.

Arrears and vacancies may rise sharply when government assistance ends, and this may impact property price/mortgage stability for landlords in due course. Owners with a mortgage and outright owners have reported significantly increased payments stress through 2018.

Figure 16: Financial Stress Incidence by Housing Tenure and Labour Force Status*



*Experience at least one of the following difficulties due to a shortage of money: missed bills, missed rent or mortgage payments, sold something, unable to hit home, went without meals or ask family or welfare groups for help

**does not include underemployed

Source: Financial Stability Review (2020)

These observations suggest there is a substantial macroprudential management problem that has been allowed to evolve over the last two decades. The failure to contain housing prices has built bank-led mortgage provision that now has some difficult foundations to repair. The likely prospect of prolonged low interest rates to 2030 provides some comfort. Bullock and Orsmond (2019) concluded that, by 2019, stress tests for likely ranges of income and interest rate changes suggest that banks were sufficiently well capitalised to handle any foreseeable rise in loan delinquencies. That is, any substantial downturn in the housing market would have implications for the economy rather than the stability of the financial system.

Debt and Inequality

Other policy questions remain unanswered. Even if the macroprudential policy measures (discussed in the next section) assuage instability, what do the debt patterns noted by Lowe (2017) mean for key housing policy questions? If mortgage debt growth is only

available to richer Australians and house prices continue to rise, will increased wealth inequality and reduced social mobility be inevitable? Will inter-generational divergences rise? Will mortgages be repaid, and housing assets used for retirement wellbeing and support if longer and later mortgages are induced by stabilisation measures? Inflation targeting and financial stability may remain the key roles of the RBA but concerns about inclusion and inequality need to feature more in the delivery of their Mission. And finally, as discussed in the concluding section of this paper, how has the system coped with the COVID-19 pandemic: a system shock beyond the scale of those envisaged in stress testing. Before that discussion, it is important to consider how monetary and financial policies have been amended to cope with the housing system that has evolved. In many respects, it can be argued that these policies have been significantly more important for housing outcomes in Australia than the set of sector and social security policies that are conventionally labelled housing policies.

3.4 Prudential Lending, Borrowing Costs and Stability

Macroprudential Policies

Since 2014 APRA and the RBA have given much more explicit attention, without setting targets, to the trajectories of house prices and the likely stability implications of rising mortgage borrowing, with the latter the key focus of concern. The conventional wisdom, noted above, of the 'western' world has been that central banks should not target controlling or shaping the detailed paths of asset prices, including housing. After 2014 APRA committed to increasing its supervisory oversight of mortgage lending, particularly in relation to 'higher-risk mortgage lending such as high loan-to income loans, high loan-to-valuation (LVR) loans, interest-only loans to owner occupiers and loans with very long terms' (Financial Stability Review, 2018).

Further regulatory measures on the required attributes of loans and characteristics of borrowers emerged to 2019 and they were supported, for instance in reducing credit demand and supply to the investor sector, by fiscal measures. The nature of these measures is set out in tables A1 and A2 (see appendix), that also summarises the UK and Canadian experiences.

Debelle (2018) concluded that the measures of housing lending aided in lowering the riskiness associated with new borrowing as well as increased economic resilience to the impacts of future adverse shocks. He notes that while the steps undertaken to address the risks have resulted in sluggish housing credit growth, there are no indications that the measures have excessively constrained the aggregate credit supply (evident by 5% growth of housing credit). These remarks were made just as the housing market was slowing through 2018 to mid- 2019 and subsequent experience to the onset of the COVID-pandemic may have been less reassuring.

A number of measures have been deployed:

- Different interest rates are now charged across the various types of mortgages and interest only mortgages more than other home-owner instruments, with the consequences indicated below.
- Investor lending growth showed a sharp and immediate slowing in response to the cap on IO lending. The share of IO loans in the flow of new lending declined sharply from 40% in March 2017 to 17% by September 2017.
- The share of new lending with LVRs greater than 90% has declined for both owner-occupiers and investors.

The RBA claimed that by 2018 there had been a sizeable shift in the composition of the stock of housing lending though interest-only loans still comprised 27% of the stock, having been around 40% in 2016.

Pressures towards safer lending have been applied to homeowners as well as investors. Loan sizes to new borrowers have been reduced 'on average, by around 20%'. They further note that 'for those who are constrained the effect can be quite large'. They also note that the work of the FSR (2018) highlights that the effect of the measures had been most potent in 'high investor regions'.

Figure 17: Variable Housing Interest Rates

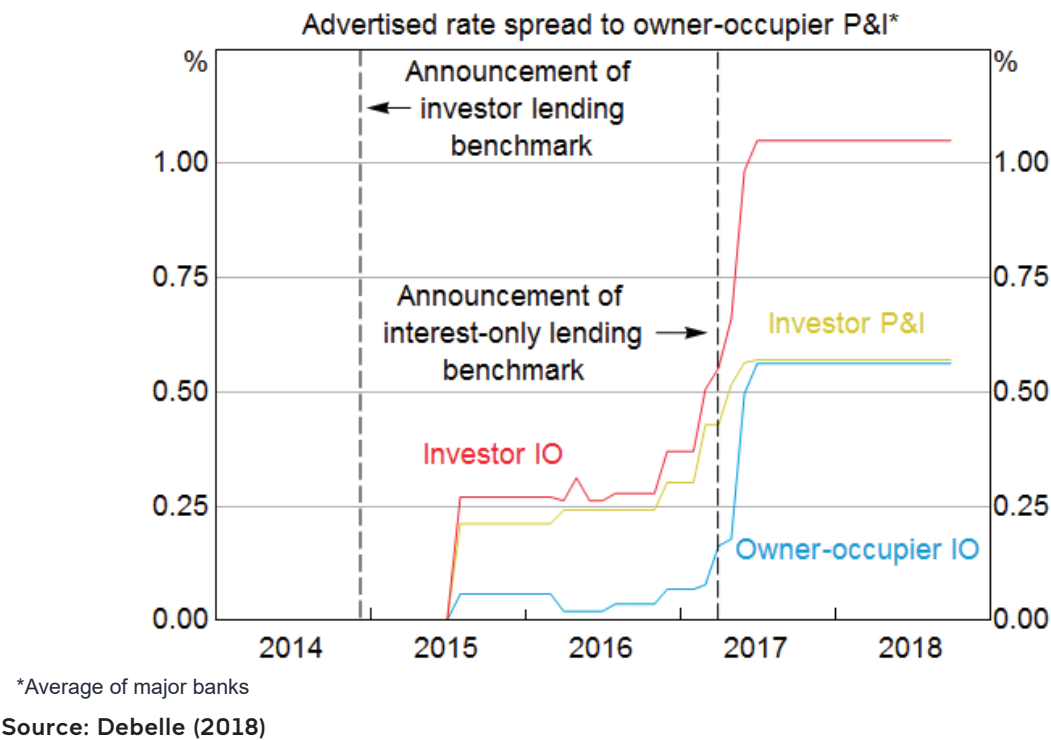
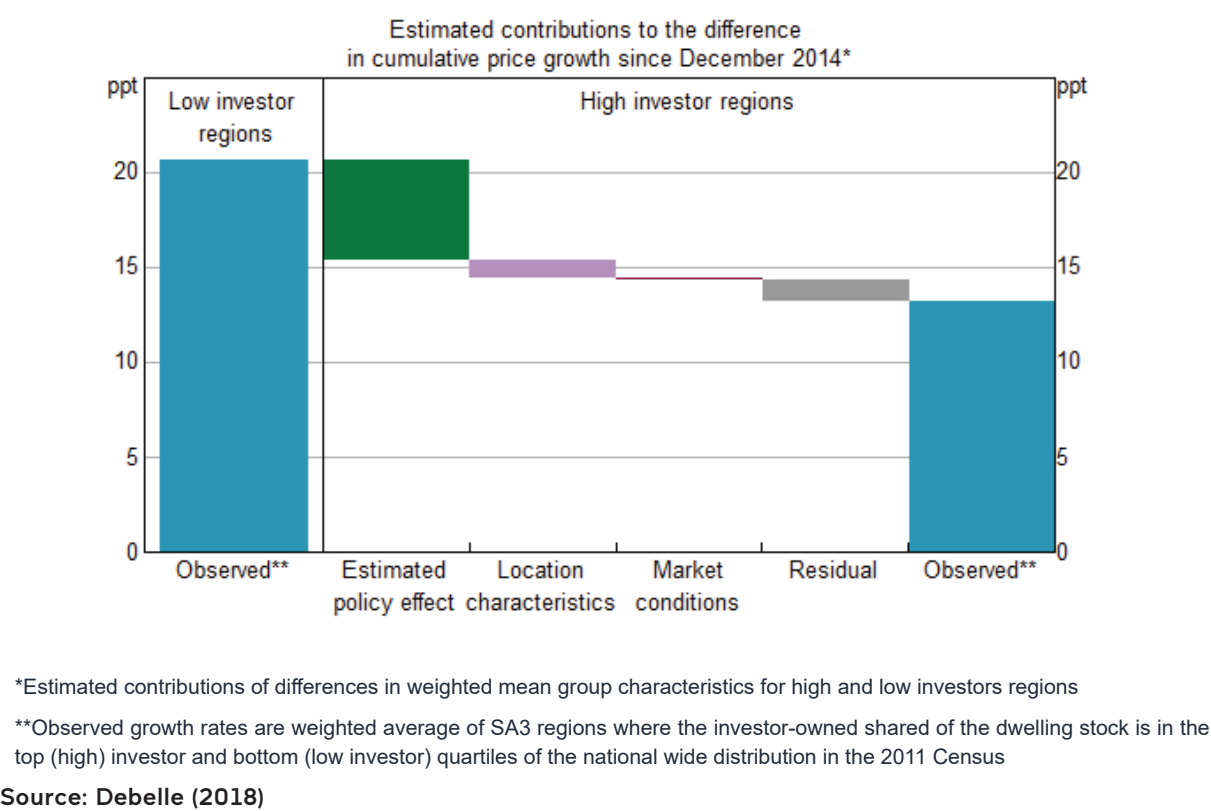


Figure 18: House Price Growth in High and Low Investor Regions



There can be little doubt that the fiscal and regulatory changes outlined above reduced speculative pressures from the investor sector and improved the safety of the stock of mortgages. These were changes in the direction of a better designed financial system that would also shape housing stability. But were they enough? Did they need to be aligned to broader monetary policy measures and indeed housing supply and infrastructure strategies to shape an integrated housing market strategy for the nation. The marked upward shift in house prices after mid-2019 raises, and indeed after the 3rd quarter of 2020, some important questions in that regard but the system test is still to come. It is not how the sector has coped through the first year of COVID-19 (with such large-scale income supports for home-owners and bank forbearance) but how the whole housing market performs when these market supports will be removed.

Bullock, M., & Orsmond, D. (2019) draw attention to how these prudential policy changes impact selected housing market outcomes, for instance the various restrictions constrain whether or not new buyers qualify for a mortgage and the size of loan marginal borrowers. This has important housing policy implications, not least when the Commonwealth government then allocates the bulk of its housing policy funds to grant aiding first time home buyers (so is the public sector now paying for the riskiness of the mortgage -housing system it has created?). Is all the nation paying for the safety of existing homeowners, as rental affordability and conditions deteriorate? Is the manageable system achieved by increasing inequalities between owners and renters and younger and older Australians?

We touch on some of these issues in our concluding part. It is also important to understand that housing markets, mortgages and regulatory regimes are now operating in a markedly changed monetary policy environment where the core policy tool, interest rates, have lost their potency.

3.5 Changing Monetary Policy and the Housing Market

Conventional Connections

The central banks' monetary policy choices (whether conventional or unconventional) play a critical role in impacting the real economy. The RBA (2020) has produced a concise, clear note explaining the meanings of 'conventional' and 'unconventional' and describing how the latter approach has gained significance in Australia in recent years.

The fundamental aim of central banks is to maintain the stability of prices, as measured by overall inflation indices rather than specific asset prices. Price stability (or near stability) is considered a prerequisite to realising strong economic growth and employment performance whilst maintaining the stability of the financial system. The Reserve Bank of Australia targets sustaining the inflation rate close to 2-3%, on average, to avoid persistent price fluctuations. In order to achieve the inflation target, the conventional monetary policy approach of the central bank has involved adjusting the short-term interest rates on the money market, thus impacting the overall interest rates. In turn, these adjustments have a bearing on inflation, investment, production, and employment levels in the economy (Board of Governors of the Federal Reserve System, 2016).

However, there is much debate on the significance of different transmission channels through which these monetary policies bring about real economic change. While a great deal of academic literature has focused on the effectiveness of monetary policies in achieving the central banks' inflation and unemployment targets, very little attention (especially in the Australian context) has been paid to the connections of monetary policies and housing markets.

Some studies (for instance, La Cava et al., 2016) that have concentrated on the role of housing and mortgage markets in the transmission of monetary policies in Australia have identified the relevance of the cash

flow, wealth, and interest rate channels. The changes in the central banks' interest rates directly influence the housing sector by impacting the price of borrowing and the cost of capital (the user cost of capital) for borrowers; this is the interest rate channel.

The *cash flow* channel operates by altering the amount of liquid money (i.e., cash) available for spending by reducing the repayment amount on variable rate mortgages. Thus, boosting consumption in the case of an expansionary monetary policy. In this vein, the empirical findings of Calza et al. (2013) suggest a significant influence of adjustable-rate mortgages in inducing monetary policy led consumption responses. Their study on 19 OECD economies (including Australia) suggests that economies with a larger share of adjustable-rate mortgages have a greater propensity to show a higher average consumption response. In addition, a recent study by He and La Cava (2020) in the Australian context also shows that local areas with more mortgage debt exhibit more significant house price responses to monetary policy alterations by the central bank. These results are further affirmed by the findings of Cloyne et al. (2020), who study the US and UK markets and show that an expansionary policy (fall in interest rates) leads to a significant increase in consumption for those households who have a mortgage.

While the studies show a greater importance of the structure and volume of mortgages in the functioning of monetary policies, recent studies have begun to highlight the relation of house prices and inequality with central banks' interest rate movements.

La Cava et al., 2016 show that expansionary policies (lowering interest rates) may lift housing prices and household wealth (and housing wealth) in Australia and consequently stimulate households to increase their consumption. This is the wealth channel of monetary policy. Ozkan et al. (2017) provide empirical evidence for the US and highlight that changes in house prices induced by monetary

policy shifts transform into consumption changes due to wealth effects. Further, He and La Cava (2020) show a negative relationship between interest rates and Australian housing prices. This results from falling interest rates inducing increased housing demand. Their results also show that higher house prices lead to an increase in housing wealth inequality. The negative relation of house prices and interest rates is also established by Baur and Heaney (2017) in their empirical study involving eight (state) capital cities in Australia. Additionally, Wadud et al. (2012) provide evidence on the housing monetary policy links in the Australian Context. They point out that an expansionary policy by the Reserve Bank of Australia boosts the housing output. In contrast, a contractionary policy leads to a substantial fall in housing activity.

After considering the main findings of existing research, it becomes evident that it is essential for policymakers to consider the importance of housing and mortgage markets in monetary policy transmissions. If the Australian Commonwealth and State governments are to join up the dots in shaping an essential housing market strategy for the nation, including a real supply-side strategy, the macro to meso perspective in analysis and policy formulation becomes essential.

Unconventional Settings

As we begin to have more convincing research framings of conventional monetary policy effects on metropolitan markets (and it is important to recall that three-fifths of Australian output is produced in the three largest metropolitan areas, so this always requires a macro-metro framing), the world of monetary policy has changed.

The global financial crisis of 2008 was an extraordinary event that constrained monetary policy's standard transmission channels because short-term interest rates moved towards the zero-lower bound (ZLB). Moreover, the interbank and credit markets froze (Lenza et al., 2010). Bank rates at the lower bound limits discretion of the central banks in the event of an unanticipated

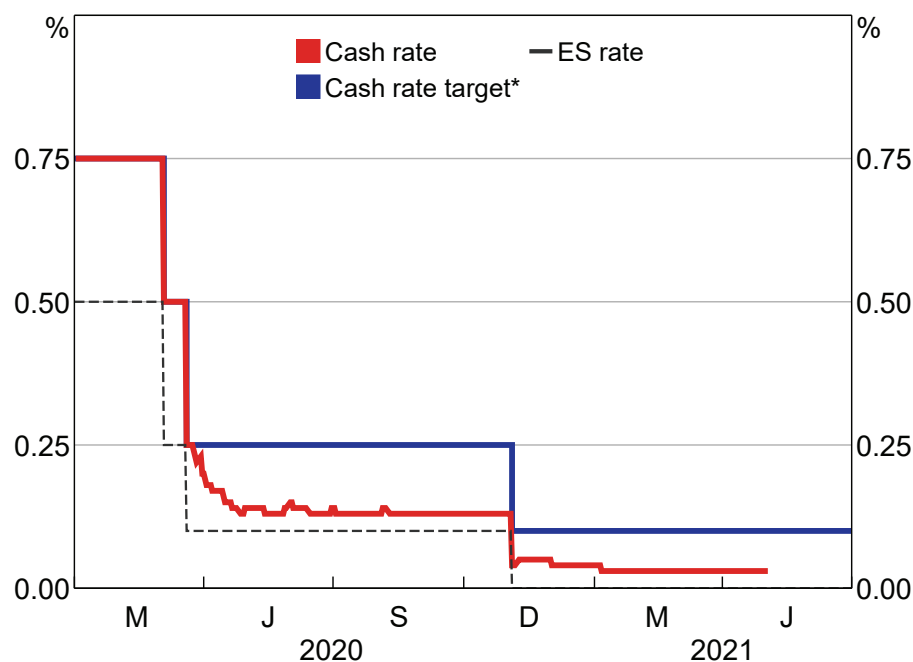
negative shock in the economy and risk financial stability. At this constraint, conventional monetary policy is held in a liquidity trap, as examined by Keynes (1936).

Post 2008, the central banks of developed economies engaged in liquidity provisions by adopting unprecedented tools known as Unconventional Monetary Policies (UMP). As has already been noted above, the Australian economy remained insulated during the global recession of 2008. However, the Reserve Bank of Australia had to adopt unconventional measures to respond to the exogenous shock caused by COVID -19 in mid- March 2020.

Unconventional monetary policy refers to the set of non-standard measures the central bank can engage in to hold sway over the money

supply in the real economy. Such policies involve the design of new instruments (say large-scale asset purchase, forward guidance); and the use of traditional instruments in a new way (for instance, negative official interest rates and refinancing). Among the set of UMP measures adopted by the Reserve Bank of Australia, the most prominent ones included a push in the policy interest rates (cash rate) close to the zero lower bound (see figure 19), defining a target on the three-year government bond yield of around 0.25% (25 basis points), reinforcing the policy of forward guidance, carrying out a government bond buying programme (see the rise in bond holdings in figure 20), and offering Term Funding Facility (TFF): a long term funding to the banks at a low cost (Debble, 2021).

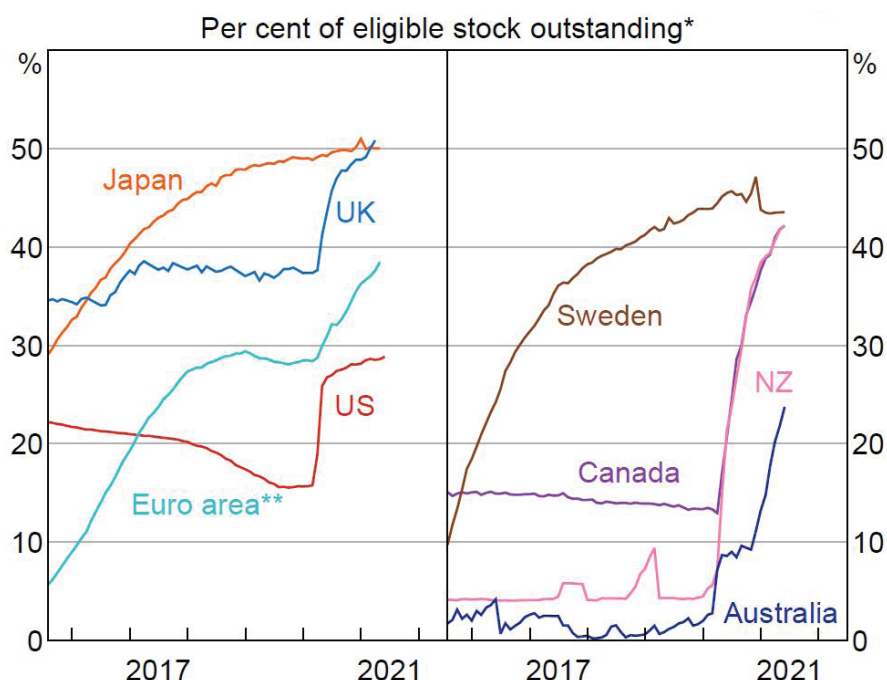
Figure 19: Australian Cash Rate plunged towards the Zero Lower Bound (ZLB)



* Assumes unchanged future policy settings

Source: Debelle (2021)

Figure 20: Expansion in Central Bank Bond Holdings



* Data include nominal and inflation-linked bonds issued by central governments that are eligible for purchase in the secondary market under central banks' government bond purchase programs (for Australia, this is nominal Australian Government Security only); data for euro area also include eligible bonds issued by local and regional governments

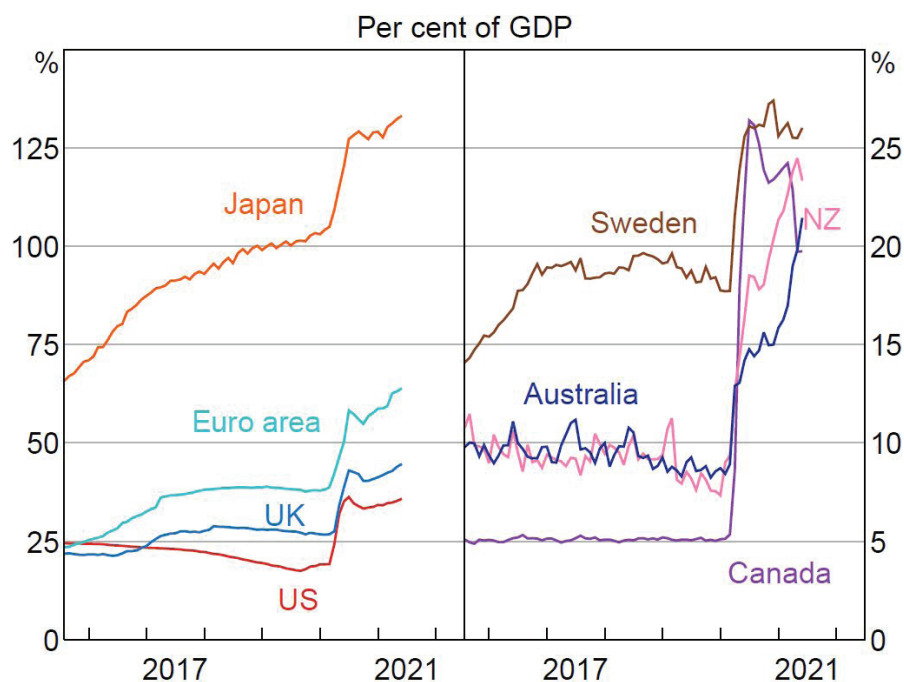
** Holdings data for euro area only include bonds held as part of asset purchase programs; holding data for other central banks also include bonds held for operational or liquidity purposes

Source: Central Bank Balance Sheets and Bond Purchases- RBA Chart Pack (July 2021)

As Australia's central bank adopted unconventional monetary measures in response to the COVID-19 induced macro shock, its exercise of indulging in Quantitative Easing (asset purchase programme known as QE) corresponded to an exponential expansion in its balance sheet over 2020 – 2021 (see Figure 21: rise in central bank total assets and Table 3: RBA balance sheet). In the process of QE new money is created at the central bank and exercised to acquire financial assets (usually government bonds), in the secondary markets (Borio & Disyatat, 2009). Consequently, QE leads to central banks' balance sheet expansion (Lenza et al., 2010).

In relation to the housing markets, one of the most pronounced effects of such QE that has been established by empirical studies (such as Joyce et al., 2011, Gagnon et al., 2011, Huber and Punzi, 2016, Ghiaie et al. 2020) is the 'portfolio substitution effect' (also called the portfolio balance channel). This channel starts with the asset purchase programme of the central bank, which takes in a specific class of assets, for instance, government bonds. The bond-buying program of the central bank inflates the demand of these assets in the secondary markets. Without a corresponding increase in the supply of these asset classes, their price escalates. This lowers the return on these assets (prices go up and yields down – Figure 22).

Figure 21: Enlarged Central Bank Assets after QE



Source: Central Bank Balance Sheets and Bond Purchases- RBA Chart Pack (July 2021)

Table 3: RBA Balance Sheet (\$ Billion)

	29-Feb-20	24-Mar-21
RBA Assets	184	392
AGS	0	157
Semis	0	32
TFF	0	92
Liquidity Operations*	84	18
RBA Liabilities	184	392
ES balances**	2	158
Government deposits	32	70

* Reverse repo, FX swap and near-maturity bonds.

** Excluding balances held for payments settlements after hours

Source: Debelle (2021)

Figure 22: Fall in the 3-year Australian Government Bond Yield*



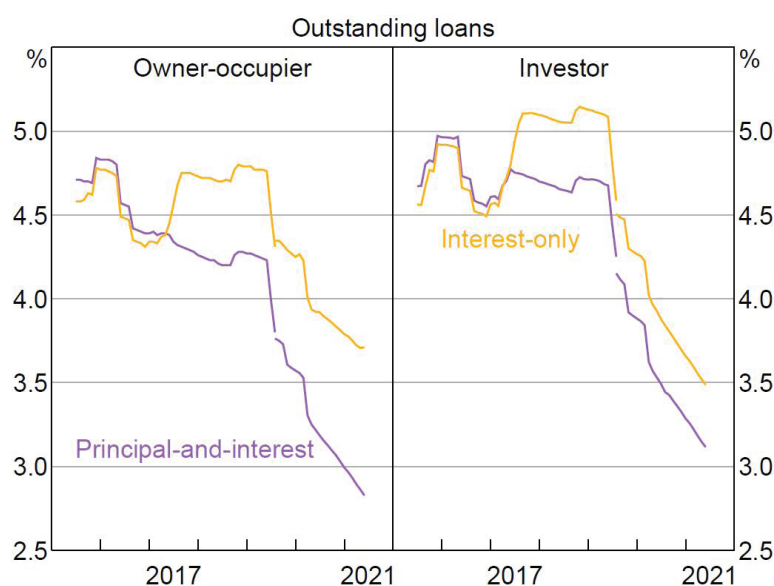
* Three-year yield target bold is the April 2023 treasury bond until 20 October 2020 and the April 2024 treasury bond thereafter

Source: Debelle (2021)

Consequently, the government gets to borrow at a lower cost. The market participants start rebalancing their existing portfolios in the direction of investments that would yield better marginal returns. This leads to a rise in the nominal prices of an array of riskier financial assets, including equities and houses. Since these assets also function as collateral for mortgages as well as

for consumer credit, unconventional programmes such as QE also aid in easing out credit constraints (Stiglitz, 2015). A lower return on the government bonds drives credit towards the inter-bank market, increasing the supply of capital and mortgages, thus pushing down the effective mortgage interest rate. As a result, borrowing and housing demand by borrower households rise (Ghiae et al., 2020).

Figure 23: Housing Interest Rates*



* Average of variable-rate securitised loans to 2019; thereafter, average of fixed and variable-rate loans, based on EFS data

Source: Debelle (2021)

Along with the liquidity provided through such unconventional market operations of QE, the Term Funding Facility (TFF) of the RBA has also lowered the cost of funding for the banking system and has led to lower borrowing costs for households and businesses (Debelle, 2020). In this manner, a wide range of market participants experience wealth effects (Rahal, 2016) due to their balance sheets' magnification. Ultimately this leads to a boost in the levels of spending and investment in the real economy.

In Australia, RBA's unconventional policy responses to the pandemic ensured that the cost of borrowing in the economy remained low. Moreover, these measures provided an environment that promoted credit growth. While there are immediate positive effects on levels of spending and investment due to QE, the steep rise in house prices can have unforeseen distributional consequences. While the portfolio balance channel of QE inflates the prices of assets (stocks, houses), it negatively impacts the people in the lower end of the income distribution. In general, wealthier households hold more financial assets and less cash (in relative terms) than those who are financially weaker (Albanesi, 2007). Consequently, a loose monetary policy (inflationary policies) would result in an increased level of inequality by causing the price of assets (house, equity and bonds) to rise and by decreasing the value of cash (liquid money). Inflationary policies will negatively impact liquidity, being more exposed to inflation. Policymakers need to consider the distributive influences of such unconventional policies that are operating through the housing markets as these might lead to intergenerational divergences and long-run instabilities.

Unconventional monetary policies (QE) could set a platform for a housing bubble by lowering the cost of borrowing. The artificial housing bubble could pose a serious threat to financial stability if the Australian economy witnesses an inflation spike post-COVID. While the RBA has tapered QE (New Zealand following suite), easy money is there to stay. To quote Lowe (2021) - "The central scenario remains that the condition for a lift in the cash rate will not be met

until 2024." Long-term low-interest rates can give rise to higher debt levels and add pressure on the supply of housing and mortgage debt. It is unsustainable to have such high levels of household debt in the Australian housing sector, given the already high exposure. Policymakers need to enact tighter regulatory frameworks to avoid longer-term ramifications of housing market exuberance. It is essential that the runaway growth in house prices be moderated and the artificial housing bubble be controlled to avoid long run risks to economic stability.

The academic literature has established a prominent role of housing (as an asset class) and mortgages in the transmission of unconventional monetary policy (Rahal 2016, Rubio 2014, Huber and Punzi, 2016, Smith 2013, Nuobu 2018). Hence, it becomes critical for the policymakers to ascertain the exact ways in which monetary policies (conventional and unconventional) influence the broader economy through housing markets. This has become more important in the Australian context as this is the first time that the Reserve Bank of Australia has indulged with unconventional measures at such a large scale. This has a direct bearing when contemplating a recovery period following the COVID shock (or any other crisis). During such periods, policymakers' pair monetary and fiscal policies and the economy is under the influence of multiple interactions between diverse policy actions. The fundamental framework of the Australian mortgage markets also needs to be taken into account by the policymakers as unconventional policies deliver different effects depending on the ways in which mortgages are financed. Rahal (2016) shows that the house price effects are larger in economies such as Norway which has a large percentage of owner-occupiers, and Sweden which has high loan to value (LTV) ratios.

Towards "Normal": Post-Crisis Transition

While unconventional monetary measures are providing important support to the Reserve Bank of Australia in achieving their near-term employment and inflation targets, it is vital to

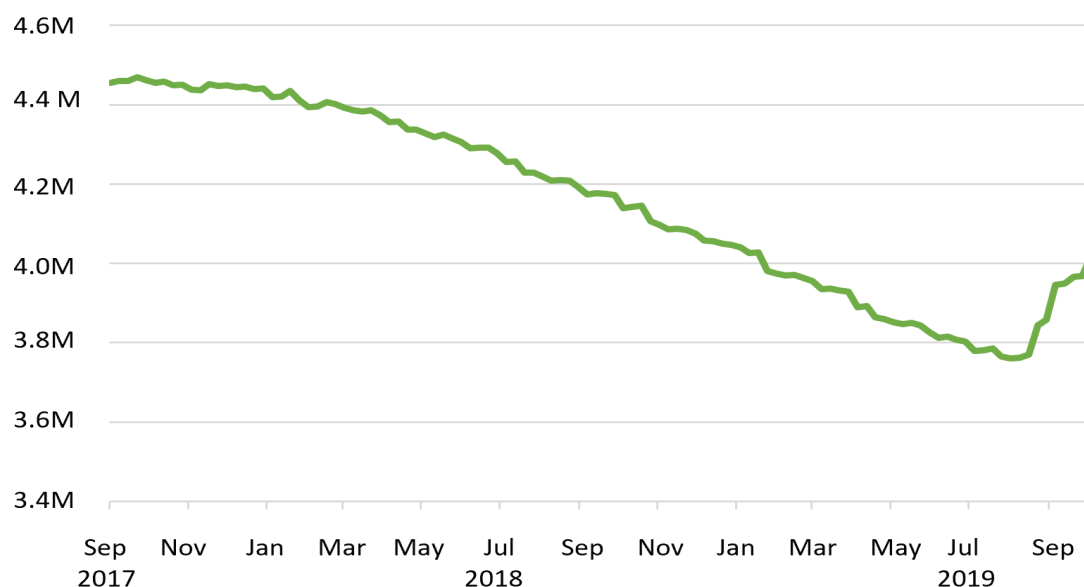
consider the long-run impacts that might be caused by the reversal cycle of the easing process as the crisis recedes.

Putting a check on the process of interest rate cuts and reducing the rate of reinvesting the principal and interest earned on matured government bonds are among the prominent reversal steps exercised by various central banks globally. In order to tackle the growing inflation, the US Federal Reserve went through the process of tapering QE throughout 2014 and undertook quantitative tightening (QT) by adopting a fifteen-month schedule to normalise its balance sheet from 2017:10- 2019:08 (see figure 24). The total assets declined to under

\$3.8 trillion. While the US Fed started carrying out QT, it retired this policy far earlier than the pandemic. It is crucial to note that after abandoning QT in 2019, its balance sheet was still around four times above its pre-QE level.

Given the nature of disruption caused by COVID-19 and the scale of QE done by the Central Banks this time, the path towards monetary policy normalization will not be swift and easy. Will the 'provisional' unconventional measures turn into a long-term intervention in the bond market? If not, then what will be the extent and timing of the wind- up process? Will such provisions keep aiding the wealthy, artificially?

Figure 24: US Fed Balance Sheet Normalisation Program (2017 – 2019)



Total assets (Less eliminations from consolidations): Wednesday level. The total assets of the Federal Reserve declined to under \$3.8 trillions

Source: Recent Balance Sheet Trends- Board of Governors of the Federal Reserve System

While the current unconventional policies pose many risks, putting a cap on these policies in the future would also have market implications. As is already evident, the rapid growth in housing prices (and other asset classes like equities) in consort with unsustainable debt growth elevates the risk of financial stability. While the housing market would be buoyed up with mortgages, an increase in the cost of credit/borrowing

at an international level due to the reversal process (QT) could spark an economic crisis and lead to instability. Moreover, there would be a decrease in the demand for assets like housing in the case of weakened credit growth as the central banks loosen their grips. If the prices of such assets start to fall, the economy will experience a negative wealth effect. Besides, the economy could experience a default cycle.

The real challenge for the RBA would be to administer its record- size inflated balance sheet in a setting of high government debt. While the RBA has taken the first step in the direction of rewinding its emergency monetary stimulus, it will have to adopt a planned exit keeping in mind the interconnectedness of housing and other asset markets with the economy at large. Another question that seeks an answer is - will the resilience of central banks be put to the test if another exogenous shock hits the economy? In that case, should the Australian government think about imposing a debt ceiling? What amount of government debt is sustainable in such a scenario? How high can it go? This needs to be addressed as indebtedness cannot keep rising endlessly without triggering fiscal difficulty and financial instability.

4. Conclusions

This paper has extended attention to examine several key channels between housing outcomes and the wider economy that may shape the stability of the economy and the financial system.

This review has emphasised the importance of housing in the Australian economy. Housing comprises almost a quarter of consumption, has become the major asset and source of debt for Australians and has direct employment effects of between 5 and 15% of total employment (depending on definitions and cyclical stage). Housing policy in Australia has been continually diminished since the 1970's and is now seen as a minor part of social welfare spending. Now, more than ever, the whole housing system requires to be centre stage in national economic and financial policy formulation.

Economic thinking about the housing (and this has been as much true of governments as housing lobbies) has typically focussed on the government efforts to meet (agreed) merit good needs for housing and facilitate home-ownership growth. It has not been about the housing system and how the overall housing market is driven by the economy or indeed how housing impacts aggregate demand, cycles and growth. This review of the literature suggests that Australia, with close to 19 out of 20 households finding housing in market systems, does not appear to have any coherent housing market strategy nor any integrated approach to housing roles in economic policy.

Major divides run through thinking for and governance of the housing system in the national economy. At the Commonwealth level, tax and expenditures that have a major influence on housing outcomes do not seem to be aligned to create the efficient system that monetary policymakers seem to presume to exist. The experience of Australia's three major metropolitan housing markets over the last 20 years, that are 'home' to half of GDP does not

suggest markets that are smooth transmission mechanisms responding effectively to light-touch macro policies. There are serious conceptual and 'grounded action' gaps between housing policies, fiscal policy, monetary and macroprudential policies. Housing policymakers claim they are not responsible for the effectiveness of the economy but dealing with 'social' issues, while monetary policymakers and prudential regulators state clearly that their role is not to balance the housing market nor to worry directly about affordable housing. Commonwealth Australia needs to grasp the housing system issue and to address the instability, fairness and productivity effects identified through this research project (and many other studies).

There are equally serious splits in policy governance between the different orders of government. State level governments may impact housing choices through their tax and spending policies. There is room for more coherent analysis and decision taking between State Treasuries and those running housing and infrastructure strategies. The macro-economic management of the housing system is even less transparent in some states than at the Commonwealth level. However, what is probably most critical at the sub-national level is formulating strategic housing supply plans linking housing, planning, infrastructure and a range of other state and local services. Federal decisions, for instance in relation to labour laws, or tax arrangements for housing, also impact supply. Better balancing of Australian housing markets requires Federal and State governments to work together as they have different autonomies that need to align for effective change. There is no clear-cut divide between 'demand' policies driven by the Commonwealth and 'supply side shortages' induced solely by state and local action. That falsely simplifies the dynamics and policy influences on housing markets that are always locally experienced but also open to state, national and global influences.

There is a near-universal agreement (not least supported by the last three decades of house price changes) that there are, at the national scale, chronic housing shortages and an undersupply of housing. Critics of state and local governments, who see them as responsible for Australia's house price inflation (see, most recently Philip Lowe's comments to the House of Representatives Committee in early August 2021), often then quickly leap from stressing a supply side difficulty to a causality in 'planning'. This growing 'conventional wisdom' is not backed by any serious Australian research. It could be just as readily asserted that housing supply systems are inherently sticky and that the problem is the failure of Commonwealth governments to contain economic and population growth to lower rates to avoid rising 'congestion' costs that reflect demand over-stimulation. Commonwealth and state policies, supply and demand influences are all part of understanding why Australia's housing system outcomes are increasingly problematic. To shape a new system-wide understanding of how Australian housing systems need to change, it is important for governments to take a longer view beyond four years. The issues involved are sufficiently important and complex that the Government needs to either create a new Commonwealth entity or strengthen the housing market remit of NHFIC to lead and prepare (jointly with RBA, APRA, state officials and key housing bodies) an annual housing outcomes report for the nation that would include a national level assessment of demand drivers and a 'state-of-the-housing-supply-chain' for each of the major sub-national state/metropolitan area. A major inquiry, even a Royal Commission, is needed to address how Australia could achieve better housing outcomes and a strengthened economic performance with a focus on the future economic and social roles of home-ownership. This review, along with the associated reviews of productivity and wealth distribution effects of housing outcomes, makes clear that the core policy approaches of the last decade have exacerbated housing

difficulties and impaired Australian economic outcomes. A number of more specific important 'macroeconomic' policy concerns emerged in the review and they are outlined below.

Australian and other research confirms that there are strong multiplier effects from housing investment (and indeed housing market turnover) that can boost income and employment. Using 'housing' in stimulus programmes is a plausible recovery strategy. However, the efficacy of actions depends, like any other infrastructure project, on how well-designed and delivered the stimulus strategies are. Present policy actions in Australia are focussed on boosting first home-ownership rather than rental housing for poorer Australians. Leaving aside any questions of 'fairness' a number of economic policy questions arise. First, in the short-term the implementation of programmes has been strongly associated with rising house prices for first owners with extensive proportions of the subsidy capitalised into house prices and land values. These price uplifts must translate substantially into development industry profits and landowner 'scarcity rents' and therefore attenuate the employment benefits of grant programmes substantially. Commonwealth and State governments should look to design stimulus strategies that are less inflationary and that unblock supply bottlenecks as, or before, demand is augmented. Second, although first homeowner take-up increases substantially with new grant programmes this gain in ownership numbers may be temporary as programmes accelerate those saving to buy in the future to buy now (and that is a policy success). However, if that action raises prices it reduces future purchase potential requiring those left behind in rental housing, or new households forming, to face even steeper ownership entry cost hurdles. That is, poorly designed first home-owner programmes can contribute to the longer-term decline in home-ownership rates. Fiscal policies in Australia with particular impacts on housing outcomes need an evidenced understanding of the real character of Australian housing markets.

The review evidence highlights the cyclical nature of housing markets in Australia, both in relation to investment and price changes. The housing construction cycle is, broadly, procyclical in Australia when activity is measured by housing starts and is closely related to changes in income, employment and interest rates. Similar factors drive cycles in turnover and price changes. Monetary policy changes have an important role in shaping housing market outcomes. Looking at the trends in the graphs of housing system change and real house price increases over the last fifty years is not simply a story of land use planning or monetary policy. It is the trace of the interaction of changing real housing system and monetary and other macroeconomic policies.

The role of housing price and wealth channels in Australian housing cycles, as for other advanced economies, has changed over the last three decades. Governments, and recently the RBA, appear to have become comfortable with how rising house prices appear to stimulate consumer confidence and spending. The empirical evidence is that households have become more adept at withdrawing and using housing equity over time, that financial deregulation has facilitated that process and that the growing share of housing assets in overall household wealth means that rising house prices now tend to increase upswing and boom effects making the economy less cyclically stable. In other advanced economies, and especially after the GFC, the downside of housing price effects has been that negative housing equity, consequent to post boom price falls, depresses consumption and prolongs recovery, hence exaggerating the downswing. Australia has, aside from specific local situations, avoided recessions over the last quarter century and hence has avoided prolonged housing downswings. Given the likely global macroeconomic context of the next decade it is now increasingly risky macroeconomic policy setting not to consider more adverse housing sector downswing scenarios in setting monetary and fiscal policies. Housing systems, housing finance markets and economic possibilities are

changing and different macroeconomic policy thinking may be required. Changed behaviours of Australian households, with home-ownership increasingly riven by speculative rather than savings behaviours, and the financial institutions that finance housing, may now reinforce cycles in ways different from the last century. And, critically, they may have created a system that is likely to be less resilient when external shocks disturb national progress. Such shocks, as manifested in the GFC, can threaten not just economic stability but the stability of financial systems.

In many respects the problems of 'Housing Affordability' and 'Housing Induced Instability' are two sides of the same coin. For many home buyers, rising housing prices reduce disposable household incomes and raise prospects of mortgage defaults should employment circumstances deteriorate and interest rates rise. Rising loan to value ratios increase risks for lenders and increased equity deposit requirements placed on borrowers to reduce lender risks may raise entry hurdles for those with no or little equity available from their savings or family support networks. The rising payment and debt burden for Australian households has, since the 1990's, driven increases in mortgage debt faster than other forms of debt and faster than incomes. Over the past 30 years, the household debt to income ratio has increased from around 70% to around 190%, and the RBA has recently acknowledged that Australians of all ages are borrowing more and taking longer to pay off their mortgages. In consequence, Australia now has a record high household debt to GDP ratio that is amongst the highest in the OECD. As a result, Australians are highly financially exposed to interest changes and house price falls. The Australian financial system is also exposed to housing sector change. All of the major banks have similar and internationally high proportions of residential mortgages on their balance sheets.

The role of the RBA in impacting housing market activity (output and prices) through interest rate policies aimed at a central inflation target and, emphatically, not-targeting

particular asset prices (embracing a ‘market knows best’ perspective) has been well established. Macroeconomic policy has tended to emphasise the short-term demand cycle and underplays longer-term effects on productivity inequality and stability.

In the last few years the RBA has also deployed ‘unconventional’ monetary policy, mainly quantitative easing. There is an emerging view in international literature that housing markets play particularly important transmission roles for quantitative easing that are not yet well researched nor understood. This review identified two principal unintended consequences of quantitative easing on the housing system. First, by lowering the cost of borrowing, the effect of unconventional monetary policy is to inflate the value of leveraged assets and reduce the value of cash – and this disproportionately benefits wealthier households. Second, by boosting central bank balance sheets, the scene is set for a future period of housing price instability. Given Australia’s high level of household indebtedness, this is a cause for concern and a source of potential instability and to date APRA have been, at least in public, largely silent on this emerging possibility.

The emerging Australian evidence suggests that quantitative easing has indeed skewed housing borrowing to households with equity and that the post September 2020 sharp rise in Australian house prices (running at 10% nationally over the last year) has been driven, partly by that policy approach, from the top and upper middle segments of the housing market. There is growing international recognition amongst economic and housing policy commentators, including central banks and other important institutions, including the BIS, the IMF, and the OECD, that policy settings pre-dating the Covid-19 pandemic and even the GFC have become problematic for some economies and exacerbated inequalities (Maclennan, Long and Leishman, 2021). The impacts of Covid-19 have been disproportionately felt by low-income households and renters, while uneven recovery together with access to cheap borrowing has

disproportionately benefitted higher income and wealthier cohorts. There is increasing awareness that there are longer term growth and productivity effects of high and rising housing costs (Maclennan, Leishman and Long, 2021). The financial instability potentials of present housing market outcomes are becoming worryingly riskier. This suggests that in relation to long term economic goals the OECD and Australian experience is that the housing market does not always ‘know best’ and that central banks now need more sophisticated targets that involve the major systems that transmit monetary policy influences, and especially labour and housing markets.

Changed monetary policy mechanisms need to address a housing market and finance sector that differs from the past and faces a period of uncertain domestic production and international trading difficulties. In New Zealand, the government has reacted to a similar house price boom, after decades of arguing that house price booms are supply-side phenomena, by instructing the Reserve Bank to pay greater attention to house prices in decision taking. The European Central Bank has adopted a similar stance. In Australia, the RBA has strongly rejected such approaches and, flying in the face of decades of evidence, has washed its hands of any responsibility for house prices and, without any coherent evidence, laid the responsibility on sub-national governments in general and the planning system in particular.

Last Word, Last Work

To achieve better housing and economic outcomes for Australia there needs to be a rethinking of the roles and responsibilities of centres of power in economic policy making. There needs to be a more collaborative economic governance for the housing sector in Australia if instabilities are to be reduced, productivity improved, and wealth and income inequalities tempered. Some commentators who share the concerns of this review are pessimistic that Australian politics has the capacity to take a longer-term and wider view of the consequences of house price inflation and poor quality housing.

However, as already noted, with present system outcomes problematic for an increasing proportion of renters and owners, a new political economy for Australian housing is in the making. The last work undertaken in this series of reviews, and still ongoing, maps patterns of renter, owner-occupier and investor stress in meeting housing costs. A new local geography of the stresses caused by present approaches to housing policies, mapped according to federal electoral constituencies, reveals a significant number of high stress seats – in twelve seats financially stressed households are in the majority (Thackway and Randolph 2021). They are often in outer metropolitan areas, are held by both parties and include a significant number of marginals. Politics will change Australia's approach to the housing system and the sooner the better. Funding and supporting a nation of battlers is one thing. Bankrolling a nation of house price gamblers is quite another.

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Appendix

Table A1: Prudential Measures

	Collateral	Income/serviceability		Amortisation restrictions	Capital
	LTV	LTI/DSTI/DSR	Other		Risk weights on mortgages/CCyB
Australia		10% investor lending growth benchmark - introduced by the Australian Prudential Regulation Authority (APRA) for authorised deposit-taking institutions (ADIs) December 2014. Removed from mid-2018, subject to institutions providing APRA assurances on the strength of their lending policies and practices.	Serviceability assessments standardised across ADIs (minimum 2% interest rate buffer and 7% interest rate floor – introduced by APRA in December 2014. Interest rate floor removed and buffer increased to 2.5% in July 2019.	Limit on interest-only lending (no more than 30% of new lending) – introduced in March 2017, removed from January 2019 for those ADIs which have qualified to have the investor lending benchmark removed.	
Canada	Higher down payment requirements for insured mortgages – introduced in 2015		Affordability test: stricter mortgage qualification criteria for (un)insured mortgages – introduced in 2016 (insured) and 2018 (uninsured)		
United Kingdom		LTI flow limit (mortgage lenders should not extend more than 15% of their total number of new mortgages at LTIs at or higher than 4.5) – introduced in 2014	Affordability test (when assessing affordability, mortgage lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if the interest rate were 3 percentage points above the reversion rate on the loan) – introduced in 2014		Stricter criteria for the eligibility of the 50% risk weight for exposures secured by mortgages on commercial real estate – introduced in 2014

Source: Hilbers, P. (2020)

Table A2: Fiscal Measures

	Taxes			
	Mortgage interest tax deductibility reduction	Stamp duty	Investment tax	Other
Australia		Stamp duties on non-residents (ranging 3–8%, varying by state) – introduced in 2016–19	Increase in the withholding tax rate to 30% (from 15%) on MITs to foreign investors attributable to residential housing – introduced in July 2019	
Canada		Reduction in mortgage interest and property tax deductibility – introduced in 2018		Speculation tax of 0.5% (only in BC) – introduced in 2018. Tax on vacant homes of 1% (BC) – introduced in 2016
United Kingdom	Reduction of mortgage interest tax deductibility for buy-to-let landlords (who will be required to pay tax on entire rental income but will also receive a 20% tax relief) – introduced 2017	Increase in stamp duties for individuals buying a second property (3%), including buy-to-let investors – introduced in 2016		

Source: Hilbers, P. (2020)