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New Zealand Macroprudential Policy and the Housing Market: Decision-making, Justifications and Evaluation

Simon Opit
SHORE and Whariki
Massey University

Laurence Murphy
School of Environment
University of Auckland

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Executive Summary

This report presents the findings of a review of the Reserve Bank of New Zealand's (RBNZ) macroprudential policy decision-making, its justifications, evidence and objectives. As part of the Building Better Homes, Towns and Cities Architecture of Decision-Making Special Research Area, the purpose of the report is to uncover the influence the RBNZ's decision-making has on the housing market, with a particular focus on pressing housing concerns, such as affordability.

A macroprudential approach to financial regulation treats the financial system as a whole and seeks to mitigate risk at a systems-level. The development and spread of macroprudential policies worldwide has been notable since the 2007-2008 global financial crisis (GFC). A particular focus on these policies has been ensuring the shocks within the housing sector do not spill over and threaten economic and financial stability.

The RBNZ's key intervention to regulate banking activities within the housing sector has been 'speed-limits' that limit high loan-to-value ratio (LVR) lending. These 'speed limits', introduced during 2013, were justified as a temporary measure to ensure that home mortgage borrowers would have the capacity to withstand any future shocks to New Zealand's inflated housing market. These speed limits were adjusted regularly as the RBNZ responded to market conditions. Crucially, the RBNZ's LVR restrictions were criticised for conflicting with broader social and economic housing policy objectives, by locking out potential first-home buyers from achieving home ownership. The RBNZ counter these claims in several ways: first, by arguing that they have no mandate to improve housing affordability; second, by adjusting its LVR policy to more precisely target investors; third, by claiming macroprudential regulations have helped first-home buyers, at least indirectly, by reducing house price inflation.

Nevertheless, the operation of macroprudential interventions in New Zealand remain an area of political debate. The ambiguity of the RBNZ's criteria for assessing the continued justification of its LVR policies with their more recent attempts to introduce new interventions, such as debt-to-income (DTI) ratio restrictions, has led some to claim LVR restrictions are here to stay.

The RBNZ have acknowledged there is tension between their macroprudential activities and other public policy objectives. The distinction between decision-making as technical or political is at the heart of this tension. In effect, the RBNZ's macroprudential policy has significant political implications for housing issues, but these powers are wielded as a purely technical measure to ensure financial stability of the banking sector. Consequently, the RBNZ's macroprudential policy is not a housing policy, yet through its interventions, the reserve bank is a significant actor within the housing market and through its decision-making affects critical housing issues, such as affordability and market accessibility for first-home buyers.

1 Introduction

Contemporary issues in the housing market are affected by a wide variety of social, economic and political factors. The Building Better Homes, Towns and Cities (BBHTC) National Science Challenge seeks to address the serious housing issues, such as housing supply and accessibility, that face New Zealand now and in the future. As part of the BBHTC challenge, the Architecture of Decision Making Special Research Area recognises the broad range of actors that influence housing issues and aims to understand the logics of their decision-making, their roles, practices and tools that generate housing outcomes, either directly or indirectly.

A relatively novel influence comes from the Reserve Bank of New Zealand's (RBNZ) governance of the banking sector through its macroprudential instruments. While the activities of the RBNZ are intended to regulate the banking sector and stabilise New Zealand's financial system, its actions have important consequences for the housing market. Its macroprudential policy is not a housing policy and, yet, it may exacerbate housing issues, especially concerning access to housing for first-time buyers. Consequently, the RBNZ's macroprudential policy is a critical aspect to consider when seeking to understand the broad range of actors whose decision-making can impact upon the housing market.

A macroprudential policy is an approach to financial regulation that treats the financial system as a whole and therefore seeks to mitigate risk at a systems-level (i.e., systemic risk). Prior to the GFC, financial stability was largely considered from a microprudential perspective, with the aim being to reduce the risk that individual institutions would fail (Altunbas *et al*., 2018). Following the GFC, there has been considerable international focus on reducing risks to the financial system as a whole (Galati & Moessner, 2018). The specific nature of the 2007 – 2008 GFC highlighted the critical relationship between housing markets, national economies, and the importance of global capital flows – a prominent feature of many post-industrial capitalist economics (Aalbers, 2009; 2016). Macroprudential instruments have consequently been geared towards managing and preventing housing booms (Galati & Moessner, 2018) and the building of resilience into housing markets and national economies (Squires & White, 2019). Macroprudential policies have worked to tighten financial constraints, with the particular aim of creating a buffer so that "shocks from the housing sector do not spill over and threaten economic and financial stability" (Sahay, 2014). Since 2013, the Reserve Bank of New Zealand (RBNZ) has developed its own macroprudential policy, which uses prudential instruments to manage the system-wide (systemic) risks that can develop during boom-bust financial cycles.

This report interrogates the RBNZ's macroprudential decision-making processes and policy objectives and dissects their influence on the housing market and on pressing housing policy concerns, such as affordability. In particular, the tensions between the Reserve Bank's financial objectives and central government's broader social and economic housing policy objectives are considered. Emerging international literature on macroprudential policy-making is used to explain the goals of macroprudential policies and these are discussed in relation to the RBNZ's own policy. The current instruments available in New Zealand and the RBNZ's operation of them are evaluated in relation to housing market trends. The report concludes by analysing the likely future operations and justifications for the operation of macroprudential instruments in New Zealand.

2 Intervention Decision-making and Justifications

2.1 Decision-making

The RBNZ's macroprudential policy interventions have arisen as a response to the financial stability risks associated with rising house prices and household debt. A range of macroprudential instruments have been introduced aimed at influencing the housing market to improve financial stability. The RBNZ governor at the time, Graham Wheeler, stated their goal was to "slow the rate of housing-related credit growth and house price inflation, thereby reducing the risk of a substantial downward correction in house prices that would damage the financial sector and the broader economy" (Armstrong, Skilling & Yao, 2019: 88). A key aspect of the RBNZ's macroprudential approach has been the implementation and regular fine-tuning of its so called 'speed limits', loan-to-value ratio (LVR) restrictions that control the size of new home loans relative to the collateral value.

As detailed by Rogers (2014), a picture emerged in the lead up to the announcement of LVR restrictions of growing systemic risks within the housing sector. During this time the IMF, OECD, and the three major international rating agencies all highlighted the risks to economic and financial stability associated with New Zealand's inflated housing market. The proportion of high-LVR lending within the housing and construction sectors was particularly worrying to the RBNZ. While "supply/demand imbalances" were seen as a central factor in rising house prices, the Reserve Bank felt that supply-side measures would take considerable time before reducing house price inflation (Rogers, 2014: 8). Consequently, the focus became demand-side responses. A conventional response would have been to raise the Official Cash Rate (OCR) to increase mortgage rates, but with low Consumer Price Index (CPI) inflation, raising the OCR prematurely was believed to threaten rapid appreciation of the New Zealand dollar. Furthermore, an OCR increase would have affected all sectors of the economy, yet risks were concentrated in the housing and construction sectors. With rising house prices threatening financial stability but not general inflation, a macroprudential policy was deemed the most appropriate response. In addition, prior to the GFC, the RBNZ's raising of the OCR had resulted in New Zealand banks accessing cheap foreign funds and offering low interest fixed rate mortgages. During the immediate post-GFC period, as financial conditions stabilised internationally, the Governor, Alan Bollard, expressed concern over the vulnerability of New Zealand Banks, due to continued exposure to offshore wholesale capital markets (RBNZ, 2009).

Constraining the amount of high-LVR lending made by banks and restricting borrowers from accessing high-LVR housing loans were seen to be the most appropriate macroprudential instrument for ensuring resilience of the financial system. By restricting high-LVR lending, households were expected to have more capacity to withstand any future financial shocks. Requiring borrowers to hold greater equity would also lessen the risks in bank balance sheets as it reduces the probability of defaults and bank loan losses from household lending.

2.2 Justification for Macroprudential Interventions

Providing evidence to justify the implementation of a specific macroprudential policy framework is challenging, especially when more than one instrument is being applied, as is often the case. Evaluating the effectiveness of specific macroprudential interventions requires analysis to determine whether the intervention has increased the resilience of the financial system or has countered financial cycles. Altunbas *et al*. (2018) assess that the evidence is currently mixed, with most research focussed on the impact macroprudential instruments have had on bank lending, rather than bank risk directly. Discussing the role of macroprudential regulatory authorities, Duncan and Nolan (2015) recognise the importance of maintaining the legitimacy of the regulator's authority to act quickly and unilaterally with their instruments. At the same time, their legitimacy also depends on restraining the regulator's authority by the limiting its powers and assigning it clear intermediate policy targets.

Controlling for systematic financial threats arising from housing market instabilities stands out as a leading rationale for macroprudential regulatory policies. As argued by Hartmann (2015), a key justification for the interventions has been to control the boom-bust cycles in real estate markets, which have been a major factor in previous system-wide financial crises. Indeed, the RBNZ's own macroprudential policies have been attentively focussed on the housing market, with LVR restrictions (the 'speed limits') being regularly tweaked in response to increasing house price inflation and levels of private debt tied to property within New Zealand.

Asking why housing matters in macroprudential interventions, Barwell (2017) states two rationales: (1) to protect the banks and the wider financial system from potential threats to their resilience originating in or being transmitted through the housing market; (2) to protect the housing market and those participating in it from destabilising swings in the provision of core services and transactions and valuations within that market. There is evidence that housing markets play a key role in financial crises. For example, Crowe *et al.* (2011) found that of the 46 systemic financial crises where house price data was available, greater than two thirds had been preceded by a boom-bust cycles in the housing market. Conversely, only about half of those crises had followed a stock price boom-bust cycle.

The work of Kuttner and Shim (2016) provide evidence to suggest that particular macroprudential instruments have specific effects on the housing market. Investigating the effectiveness of nine non-interest rate policies on house prices and housing credit with data from 57 economies, they found that tightening debt-to-income ratio (DTI) restrictions slowed real housing credit growth by around 4-6%. DTI restrictions are alternative macroprudential tool that place limits on lending amounts based on a borrower's stated income. Kuttner and Shim (2016) found that lowering the maximum DTI ratio had greater impact in slowing credit growth than making reductions to the maximum LVR. They suggest this may be because during housing booms, rising prices can partially or completely offset any tightening of the LVR through increasing the amount that can be borrowed. Significantly, none of the tools aimed at controlling credit growth had any discernible impact on controlling house prices. Additionally, the analysis indicated the significance of targeted housing related credit and tax policies. Since, based on their analysis an increase in housing-related taxes was associated with a 3-4% reduction in both real housing credit and house price growth rates, they argue such policies perform as housing market-specific macroprudential tools that can also promote stability.

Critically, Duncan and Nolan (2015) suggest that some outcomes from macroprudential polices may strain public tolerance and become politically challenging. They point out that the relevant externalities that interventions seek to remedy can be difficult to communicate. Consequently, the financial justifications for interventions can become politically problematic when they are seen to cause negative social outcomes. For example, they indicate how the financial externalities from macroprudential interventions, such as LVR and DTI restrictions on loans, could be perceived as preventing young families from purchasing their first home and reducing the value of properties owned by retirees.

2.3 New Zealand's Current Instruments

The New Zealand macroprudential policy framework is centred on what Borio (2009) describes as the 'time dimension' of macroprudential policy, which can be understood as leaning against procyclicality in the support of credit (Hargreaves, 2016). In summary, the RBNZ's macroprudential policy aims to promote greater financial system stability by:

- building additional resilience in the financial system during periods of rapid credit growth and rising leverage or abundant liquidity; and
- dampening excessive growth in credit and asset prices.

Essentially, the macroprudential policy is an attempt to smooth the boom-bust cycles of the financial system. To achieve their objectives the RBNZ utilise a suite of instruments to influence the financial system towards greater stability. This current suite of instruments will now be briefly outlined below.

2.3.1 Available Macroprudential Instruments

The RBNZ have a range of macroprudential instruments available to them through the Reserve Bank Act. How these instruments are deployed and the particular nature of risk that they are designed to target varies. The purpose of each instrument will be briefly outlined below, while the following section provides an overview of the actual operation of the current instruments in relation to their impact on the housing market. Table 1, illustrates the various instruments and the nature of the risk that they are intended to target.

Table 1: Macro-Prudential Instruments

	Type of Instrument	
Nature of Risk	**Generalised**	**Specific**
Banking sector leverage	Countercyclical Capital Buffers Core Funding Ratio	Sectoral Capital Requirements
Household sector leverage		Restrictions on LVR and DTI
Maturity transformation	Core Funding Ratio	

Core Funding Ratio

The core funding ratio (CFR) requires banks at a baseline minimum to source at least 75% of their funding from retail deposits, long-term wholesale funding or capital. The CFR applies to all locally incorporated banks. Adjustments to the CFR are intended to reduce the vulnerability of the banking sector to disruptions in funding markets by increasing the 'stickiness' of funding when in a pressured market and reducing the rollover risk on the stock of wholesale funding. Prior to the GFC, the RBNZ did not require New Zealand banks to hold a CFR.

The Countercyclical Capital Buffer

The countercyclical capital buffer (CCB) framework is a capital requirement that can be applied when excess private sector credit growth is deemed to be causing a build-up of system-wide risk. The CCB framework applies to all locally incorporated New Zealand banks. During a credit cycle upswing the CCB framework provides the banking systems with an additional buffer against sudden or large economic disturbances. The CCB can be released in these circumstances to help banks meet regulatory capital requirements without restricting lending services. When risk to the New Zealand financial system is deemed low, the CCB will be set to zero. During times of excessive private sector growth, banks may be required to hold the CCB.

Sectoral Capital Requirements

Sectoral capital requirements (SCR) are essentially a targeted version of the CCB. The SCR can be adjusted to require banks to hold extra capital against specific market sectors. The RBNZ may deem that particular sectors with excessive private sector credit growth are creating a build-up of system-wide risk and, therefore, require banks to hold extra capital against exposure to potential loan losses.

Quantitative Restrictions

The RBNZ describe quantitative restrictions as involving 'speed limits' that restrict the share of new high LVR lending that banks are permitted to undertake. They could also include outright limits on the proportion of the value of the residential property that can be borrowed and other measures, such as DTI limits, although this measure has, as yet, not been introduced. Unlike other macroprudential instruments, LVR restrictions primarily affect the credit cycle. The RBNZ call LVR restrictions a 'blunt instrument', because they affect all high-LVR borrowing against residential property. They suggest that using 'speed limits' rather than outright limits and through the limited use of exemptions, mitigates against the potential efficiency costs. They list high-LVR restriction exceptions on lending under Housing New Zealand's Mortgage Insurance Scheme (MIS), including the Welcome Home Loan scheme and Kainga Whenua program. These schemes are stated to be exempt because they are underwritten or guaranteed by Housing New Zealand and so present little risk to financial security.

2.3.2 Operations of Macroprudential Instruments

Implementing Loan-to-Value Ratios (LVRs)

A core component of the RBNZ's macroprudential policy are high-LVR lending restrictions, termed 'speed limits'. The RBNZ's speed limits approach, rather than using outright caps on high LVR lending, is considered by Bloor and McDonald (2013) to be unique to New Zealand. The approach has, however, been criticised for distorting the housing market, particularly to

detriment of first-home buyers (Pennington, 2015). The RBNZ has adjusted their LVR policy several times since they were introduced in 2013 as a response to inflating property prices and the systemic risks that bank lending within the property market posed to the New Zealand financial system. The Reserve Bank's initial LVR policy included a universal requirement of 20% deposits on loans. The restrictiveness of this regulation was criticised, including by the opposition parties at the time, Labour and the Greens, for locking out potential first-home buyers from owning a house (Meadows & Small, 2013). The party politics of the issue seemingly compelled Prime Minister John Key into action, pressuring the RBNZ Governor Grahame Wheeler to "carve out" some protections for first-home buyers (Hickey, 2013). Later, the New Zealand Treasury (2015) weighed in, expressing concern with some aspects of the policy and noting that the original LVR policy settings had likely encouraged an increase in investor activity within the housing market.

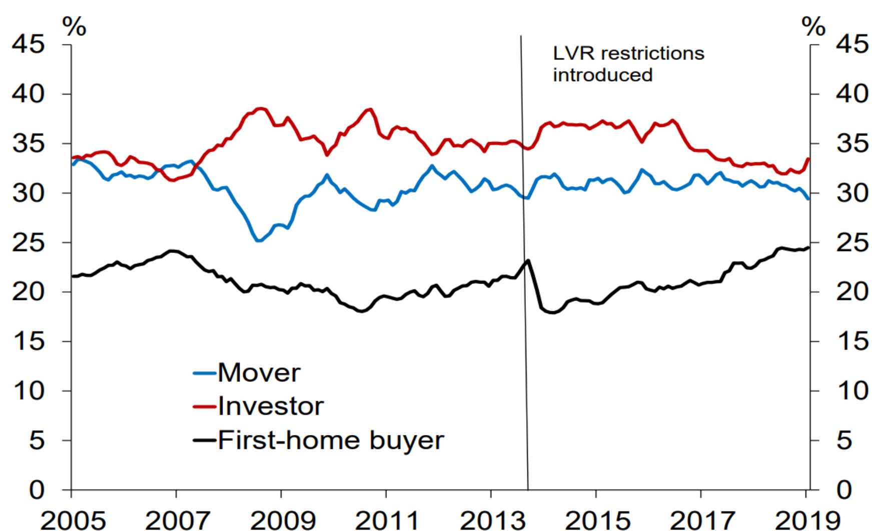
The RBNZ's response was that they had no mandate to improve housing affordability. Rather, under the Reserve Bank Act their macroprudential instruments must be directed towards promoting financial system resilience, stability and efficiency (Vaughan, 2013). Consequently, as elections drew nearer, Labour's finance spokesperson, Grant Robertson, proposed monetary policy reforms that would: (1) broaden the policy beyond just financial stability to include social objectives; and (2) introduce a committee decision-making structure that would include experts selected by both the Governor and the Ministry of Finance. While staying outside of the political debate, the RBNZ (2017a) has indirectly responded to this criticism, arguing that by reducing demand in the housing market and contributing to a slowing of house price growth, their LVR policy has aligned with broader public policy objectives.

There is evidence to support the RBNZ's claims that their macroprudential policy, while not directly concerned with housing affordability, has helped to reduce house price inflation. Funke *et al.*'s (2018) analysis of macroprudential and monetary policy interactions in New Zealand found that while monetary policy is influential on house prices, it appears not to have driven significant house price inflation in New Zealand. Meanwhile, the RBNZ's LVR restrictions were determined to have a large impact on house prices, but only a small impact on consumer prices – as discussed, this was an important factor in the RBNZ's decision-making. The RBNZ's 'speed limits' approach was estimated by Funke *et al.* (2018) to have reduced house prices by around 3.8%. Furthermore, the authors argue that clearer guidance from the RBNZ on the duration and decision-making for its LVR restrictions would have likely led to greater reduction in house prices. Nevertheless, the reduction of house prices alone is a poor metric of the availability of affordable housing, as a fall in house prices provides no guarantee that first-home buyers will have any greater ability to purchase a home.

Since their introduction in 2013, the RBNZ has adjusted its LVR ratio restrictions as New Zealand's financial environment has developed. The progressive inflation and more recent stabilisation of the housing market has been the driving factor of these adjustments. The RBNZ has introduced additional LVR constraints as it wrestled with the instability of specific segments of the housing market. Initial LVR restrictions were found to have largely impacted first home buyers access to mortgages and seemingly mostly spurred greater property investment activity, since, compared to the latter, the former are most likely to be younger, have less savings and have not benefited from previous house price inflation (RBNZ, 2019a). Impacts on first-home buyers are also likely to be more durable, since, in a rising market, the impact of LVR restrictions on investors is usually only temporary, as house price inflation will boost their asset values – something first home buyers do not benefit from. The impact on sales of housing to different buyer segments following the introduction of LVR restrictions and

subsequent adjustments are plotted on Table 2. By 2015 the RBNZ Recognised that the LVR restrictions were not appreciably affecting property investor activity, the segment considered the greatest risk to financial stability. Subsequently, restrictions were incrementally increased and targeted towards these buyers.

Figure 1: Share of house sales by buyers type (RBNZ, 2019a)



These restrictions were focussed on property investment loans, with tighter limits introduced specifically in the country's hottest property market, Auckland, where a 30% deposit requirement for investors was introduced in November 2015. A third round of restrictions was introduced in October 2016, including a nationwide 40% deposit requirement for existing property owners (RBNZ, 2016). The impacts of this nationwide LVR restriction on investors can be seen in Table 2, as this buyer segment quickly fell following this period. However, the strategy of spatially differentiating limits, by increasing limits purely within Auckland, proved to be ineffectual and, it has been claimed, likely assisted in reigniting housing market pressures elsewhere – as property investors sought easier targets for speculation (Hargreaves, 2018a).

The RBNZ determined there had been a tempering of financial stability risks associated with the housing market since mid-2016 (RBNZ, 2017a). Consequently, in 2018, the Reserve Bank made modest adjustments to its restrictions, easing the amount of high-LVR lending banks were permitted to make. Specifically, the RBNZ increased from 10% to 15% the amount of new mortgage lending banks were permitted to make to owner-occupiers borrowing more than 80%. Banks could also now lend to residential property investors at LVRs of 65% (up from 60%) for no more than 5% of their new lending. The RBNZ state that gradual adjustments to restrictions are intended to prevent resurgences in the housing market and deteriorations in lending standards.

The RBNZ has also been concerned about the risk of high-LVR lending 'leaking' to non-bank entities (Rogers, 2014). Since the Reserve Bank only has jurisdiction over registered banks, the LVR restrictions do not apply to non-deposit taking finance companies, offshore lenders and non-institutional lenders. Borrowers are therefore able to circumvent LVR restrictions by

borrowing from these sources (Islam & Yahanpath, 2015). Setting up a temporary 'speed limit' approach is relatively unique amongst LVR restriction policies. RBNZ Manager of Macro-financial Policy at the time, Hargreaves (2016), argues the apparent impermanence of the restrictions helps to disincentivise shifting lending outside the banking system (e.g., via securitisation), since the costs to set up new lending business models become unjustifiable. Rogers (2014) also claims that the RBNZ believes the risk of regulatory leakage to these sources is mitigated by the temporary nature of the restrictions, minimising the benefits to unregulated lenders entering the market. Yet, as restrictions have become both tighter and prospectively more permanent, the viability and activity within this sector has increased. Thus, the potential for high-risk lending to continue within the broader macroeconomic system, through alternative/secondary non-bank lending, may undermine current macroprudential regulation. Indeed, the non-bank loan taking sector has increased its housing lending by 65% in the past two years – although it remains responsible for only around 2% of total lending (Edmunds, 2018; RBNZ, 2019a)

Pursuing Debt-To-Income (DTI) Limits

The Reserve Bank note, in their Financial Stability Report for November 2016, that while LVR restrictions are increasing bank balance sheet resilience, they have expanded their lending to customers with high DTI ratios (RBNZ, 2016). They caution that a high concentration of these loans within bank portfolios risks accentuating any housing market downturn through cumulative forced sales and widespread credit losses. Consequently, they propose that restrictions on high-DTI lending could be justified to reduce the share of riskier lending on bank balance sheets and the vulnerability of the banking system and wider economy to a significant housing market downturn (*ibid*).

However, with a somewhat cooled housing market in 2017, property sector actors, including the Real Estate Institute of New Zealand, questioned the justifications for maintaining LVR restrictions and for the plan to introduce DTI limits. The Prime Minister at the time, Bill English, mostly agreed that it was time to review the requirements for macroprudential measures that were intended to be temporary, stating, "if you bring something in as a temporary measure, then you should be clear about what's involved in removing that measure" (Grieveson, 2017). Equally, Mr English stated that DTI limits seemed unnecessary, stating "we don't see the need for further tools … if there was a need for it we would be open to it, but we don't see the need at the moment" (Howard, 2017).

The Reserve Bank has pursued the extension of its macroprudential to include 'serviceability restrictions', which would likely involve DTI limits. In its consultation paper for the potential extension the RBNZ (2017b) state that while their LVR restrictions have been effective in reducing systemic financial risks from highly-leveraged housing loans on bank balance sheets, LVRs relate to only one dimension of housing loan risk. The other key component is the borrower's capacity to service a loan. A measure of this capacity is the debt-to-income (or DTI) ratio. High DTI ratios can be precarious for borrowers and increase the probability of loan defaults during times of rising interest rates.

The RBNZ claim that a DTI limit would further stabilise the banking system and reduce the potential for an economic downturn to resonate through the housing market. They state:

[A] DTI limit would reduce credit growth during the upswing and reduce the risk of a significant rise in mortgage defaults during a subsequent severe economic downturn. A DTI limit could also reduce the severity of the decline in house prices and economic growth in that severe

downturn (since fewer households would be forced to sharply constrain their consumption or sell their house, even if they avoided actual default (RBNZ, 2017b: 2).

They suggest that the importance for DTI limits has increased over the past 30 years, and particularly since 2014, as the amount of high DTI ratio loans has increased sharply over this time. Nevertheless, they state that they would not currently employ a DTI limit at this time if it was already available to them. Rather, they would like the instrument to be available if house prices prove resurgent and if this resurgence is accompanied by further increases in the volume of high DTI lending.

The RBNZ elected to undertake public consultation on their proposed DTI ratio instrument, inviting submissions on their proposal in 2017 (RBNZ, 2017b). The Reserve Bank received 25 submissions in total, with the majority expressing a clear view against introducing the instrument. All major banks made separate submissions, as well as the New Zealand Bankers Association, with other submitters including the Property Institute of New Zealand (PINZ) and New Zealand Property Investors Federation (NZPIF). The New Zealand Manufacturers and Exporters Association and another individual submitter affiliated with several majority-exporting companies submitted in support of DTI limits, particularly as an additional tool other than adjusting the OCR. Other submitters included financial consultancies and non-affiliated individual submitters.

The major banks all made public submissions which roundly rejected DTI ratio restrictions, with the New Zealand Bankers Association cautioning that it was a "blunt instrument" and "not … a good determinant of affordability" when used in isolation and with ANZ stating it is an "unsophisticated" tool that is "fundamentally flawed" (National Business Review, 2017). Similarly, ASB stated that they would "never consider assessing a customer's ability to service a loan based on DTI alone" as it is "very crude measure of affordability" (ASB, 2017). PINZ also made a submission in opposition, suggesting the tool would create "a two-tier market … those with equity … and those without" and furthermore it would "restrain new home building at a time when housing supply is a significant economic and political priority" (PINZ, 2017). The NZPIF submitted in opposition to the proposal, arguing that difficulty in predicting the housing market may lead to the RBNZ to inadvertently create additional problems through the timings of its introduction and withdrawal of the limits. If limits are applied, the NZPIF state they should not apply to rental property providers, as these investors do not incur additional living expenses when purchasing a rental property and can therefore securely afford higher levels of debt. As a consequence of DTI limits, the NZPIF warn, restrictions would result in fewer rental properties and "severe hardship for tenants that cannot afford to buy a home" (NZPIF, 2017: 3). Both PINZ and NZPIF submissions show the impacts on stakeholders within the housing sector that macroprudential tools can have and the broader economic and political aspects that these stakeholders argue the RBNZ should consider.

In summary, the majority of the submitters were not in favour of DTI limits because they were seen as a blunt instrument and that the RBNZ would not have the required level of information to operate it effectively. Within its report on the consultation the RBNZ acknowledged that the majority of submissions were not in favour of introducing serviceability restrictions such as DTI limits into their suite of macroprudential instruments (RBNZ, 2017c). They concluded that the application of serviceability restrictions would not be required at the present time "but could still have a role to play in the future" (RBNZ, 2017c: 8).

2.3.3 Supporting Evidence for RBNZ Interventions

In developing supporting evidence for LVR 'speed limits' the Reserve Bank conducted research and consultation throughout 2013. A detailed review of this process and the projected implications of the RBNZ's eventual measures is provided by Rogers (2014) in the bank's March 2014 Bulletin report.

Finding specific evidence supporting the effectiveness of the RBNZ's macroprudential policy framework is challenging. While the RBNZ have seemingly reacted to housing market trends with regard to their 'speed limits' approach, the drivers of such trends are difficult to disaggregate. While it is difficult to provide a formal counterfactual analysis of the total policy impact of LVR restrictions, certain metrics can be suggestive of the policy meeting its objectives. Hargreaves (2016) suggests that the level of high-LVR loans being made and remaining on bank balance sheets is one tangible metric of financial system resilience. A counterfactual analysis of the LVR restrictions conducted by Price (2014) provides evidence that, after a six-month period, the restrictions have likely reduced house price inflation by as much as 3.3 percentage points and lowered housing-related credit growth by 0.9 percent points. These measurements follow Bloor and McDonald's (2013) initial estimates of what the effect of LVR restrictions might be. There are a number of caveats to this data presented, such as, the potential for the measurement to represent a transitional period of market reaction and the unsuitability of the method for measuring longer-term impacts. Indeed, the housing market later proved to rebound several times beyond the introduction of LVR restrictions, with multiple subsequent adjustments to the 'speed limits' in response.

In their November 2017 Financial Stability Report (RBNZ, 2017a), the Reserve Bank outlined their criteria for judging the correct level of LVR lending restrictions required[1]. They state the following three criteria:

- Evidence that house price and credit growth have fallen to around the rate of household income growth.
- A low risk of housing market resurgence once LVR restrictions are eased.
- Confidence that an easing in policy will not undermine the resilience of the financial system.

A number of commentators on New Zealand economic policy have drawn attention to the ambiguity of these criteria, including former head of financial markets at the Reserve Bank, Michael Reddell. In his blog Croaking Cassandra[2], he argues that the second and third criterions are not specific and provide little basis for holding the RBNZ to account and that the first criterion, while more exact, portrays current ratios of price and debt to income as an apparent equilibrium with little evidence (Reddell, 2017). Kiwibank senior economist Jeremy

[1] It is also interesting to note that the language used in discussing their LVR lending restrictions strongly implies the RBNZ's desire to maintain some level of LVR lending restriction long-term or indefinitely. For example, they state "LVR restrictions were intended to be temporary" and that it only "expects to *relax* them once financial stability risks from banks' housing exposures have reduced" (emphasis added) (RBNZ, 2017: 4). Both statements lack clarity over whether the restrictions remain a temporary measure and whether they will be partially relaxed or fully relaxed if conditions continue to improve.

[2] https://croakingcassandra.com/

Couchman recently suggested that arguably all three criteria have now been met, but that it is not definitive (Hargreaves, 2018b).

Through 2018, there were signs of a stabilising housing market and an apparent reduction in systemic financial risk. This has led to questions regarding the longevity of the RBNZ's LVR restrictions. While the RBNZ has begun to ease restrictions in response to the apparent improving financial stability (Howard, 2018), questions have been asked of the bank's transparency in its decision-making and ambiguous criteria for imposing and removing the supposedly temporary restrictions (Hargreaves, 2018b).

2.3.4 Future justification

More recently, the RBNZ has resisted the withdrawal of its LVR restrictions in the face of the banking sector's claims that, with a cooling housing market, the rationale for their introduction, originally asserted as temporary, has receded. However, within the property sector there is speculation that it is now unlikely that LVR restrictions will ever be fully rescinded (e.g., Hargreaves, 2018a). Indeed, even with the feedback from their consultation being mostly opposed to the introduction of serviceability restrictions, the current Governor Adrian Orr announced that the Reserve Bank are "positively pursuing" the addition of DTI restrictions through the RBNZ Act Review (Walls, 2018). There is, therefore, considerable evidence to suggest that the RBNZ are unlikely to independently surrender their authority to apply macroprudential instruments. It seems more likely they will pursue additional regulatory instruments.

Since coming to power in 2017, the Labour-led coalition government have advanced their policy of reforming the Reserve Bank Act. In February 2019, Finance Minister, Grant Robertson, announced the first 'remit' change for the RBNZ that will see a new dual-mandate of employment and price stability objectives, as well as, signing a 'charter' between the government and Reserve Bank Governor Adrian Orr that will govern the decision-making of the Bank's new 'Monetary Policy Committee' (RBNZ, 2019b).

In a review of their LVR policy, the RBNZ comment upon the various tensions between LVR restrictions and social objectives. They also broach the subject of the longevity of the restrictions and how this is impacting upon mortgage provision leaking into the non-bank sector. They acknowledge the growth of non-bank mortgage taking but believe that the scale of this disintermediation is not threatening the effectiveness of the LVR restrictions. Based on the current rates, they suggest the LVR restrictions will remain effective in increasing bank resilience "for a longer period than originally expected" (RBNZ, 2019a).

3 Conclusion

This report has provided an overview of the development and current implementation of the RBNZ's macroprudential regulatory policy. The range of macroprudential instruments available to the RBNZ and the evidence of their impact have been assessed. Clearly, from the design and role of these instruments, and in the wake of the GFC, housing and the property market are a clear focus of New Zealand macroprudential regulation. As elsewhere, housing is treated as a critically important potentially destabilising macroeconomic influence that

attracts particular focus for macroprudential supervision and regulation. Indeed, the most common justification for macroprudential interventions is to control the boom-bust cycles generated in the property market and to prevent contamination of financial markets from vulnerabilities in the property sector, as was evidenced by the United States subprime mortgage market precipitating the GFC.

Under the powers contained within the Reserve Bank Act 1989, the RBNZ have negotiated through contract with the government a range of instruments to serve their macroprudential aims. Central to the Bank's current macroprudential activity has been their 'speed limits' on high-LVR lending; restrictions on the loan amount as a ratio of the deposit provided. RBNZ have been responsive in changing the conditions of their policy based on evidence of its apparent outcomes and changing market conditions. LVR restrictions have been criticised particularly for their potential to restrict first-home buyers from accessing a mortgage through raising deposit requirements and for reigniting property markets around New Zealand through introducing Auckland-specific LVR restrictions. Since the ability for families to enter home ownership has been, and remains, a highly contentious area of policy, the RBNZ adjusted their LVR restrictions to differentiate between first-home buyers and property investors to correct the apparent imbalance. The RBNZ framed this correction as technical adjustment to respond to the greater risk posed by property speculation, rather than owner-occupiers. However, due to the political debate during this time, it is arguable that the RBNZ may have also been responding to political pressure to alleviate the pressure their macroprudential regulation was having on first-home buyers.

Another concern has been regulatory leakage of high-risk lending to non-bank entities. The potential for this was downplayed by the RBNZ due to the temporary nature of the measures, yet with their growing permanence lending activity in the non-bank sector has increased. More recently, the RNBZ has pushed to introduce DTI limits for its macroprudential policy, but after consultation decided, it would not be supported or necessary at the current time.

The criteria and evidence used by the RBNZ to support their macroprudential policy and the use of their instruments have been stated by the bank (see RBNZ, 2017a), but are ambiguous and mostly do not provide the possibility for quantitative assessment of their justification. The RBNZ has indicated that established macroprudential instruments and bank reporting and compliance systems will likely remain available to them long-term (Spencer, 2018), which has led to a growing expectation amongst some within the finance sector that it is likely LVR restrictions may never be fully rescinded (Hargreaves, 2018a). The RBNZ have indicated that their macroprudential policy does create tensions with other public policy objectives, particularly access to bank lending for first-home buyers. However, in acknowledging this, they judge the overall benefits of enhancing banking system resilience and supporting sustainable economic growth to be currently an acceptable trade (RBNZ, 2019a).

The LVR and the proposed DTI limits continue to stimulate political controversy in their deployment. The distinction between decision-making as technical or political is at the heart of this conflict. In effect, the RBNZ's macroprudential policy has significant political implications for housing market stakeholders – not least, first home buyers – but these powers are wielded as a purely technical measure to ensure financial stability of the banking sector. Questioning the extent to which the RBNZ's macroprudential policy should align with broader social and economic government policy objectives is currently quietened by the separation of RBNZ decision-making from government policy-making. Since the RBNZ is empowered to operate to influence the housing market as a technical agent with only macroeconomic

stability as its regulatory responsibility it remains shielded from the social outcomes of its decision-making.

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