
Submission to the Productivity Commission inquiry on Housing Affordability

Reserve Bank of New Zealand, August 2011

Executive Summary

Changes in house prices matter for the Reserve Bank of New Zealand (the Bank), both through their cyclical implications for monetary policy and the longer-term implications of the level of house prices for macroeconomic and financial stability.

Demand for housing can change, at times quite quickly, and, as in any market, it is important that the supply of houses quickly responds to changes in demand. Supply response moderates potentially damaging swings in house prices. Policy can have an influence on housing market outcomes through a variety of channels, in particular over the longer-term, by helping ensure that the regulatory regime facilitates the ready adjustment of supply to demand.

Lessons can certainly be learnt from examining New Zealand's most recent housing cycle, which is probably the most marked in our modern history. But policy development should be informed not just by the last cycle but also by previous episodes in New Zealand's history and by the richness of international experience. What matters most is getting long-run policy prescriptions right and this requires learning from a wide variety of sources rather than from any single episode. The right policy framework should probably be focused on supply conditions in the housing market, although a sensible tax structure is also likely to matter.

New Zealand has probably had too few houses, coming to market too slowly. The usual conclusion when the real price of a good has trended upwards is that supply has lagged demand. Research evidence suggests that residential construction has been relatively responsive to rises in house prices (at least relative to OECD norms). Residential construction is, however, also very sensitive to increases in construction costs. This has inhibited the construction of new homes. Over the last decade, the cost of construction of new homes in New Zealand has risen substantially more than the general increase in the costs of goods and services.

Supply constraints matter a lot for determining housing market outcomes (see Glaeser et al 2007 and Huang and Tang 2010). This is particularly so for countries or regions with fast growing populations, like New Zealand. In the long run, evidence suggests that significant supply constraints lead both to bigger house price booms and eventually to nastier house price corrections.

Many other factors have influenced house price cycles in New Zealand. Big swings in migration (by OECD standards) have been an important factor. At the margins, changes in relevant tax parameters, as well as the stance of monetary policy, will have been important at times. With housing supply slow to adjust, these were among the factors that helped trigger initial increases in house prices. Higher prices in turn fuelled expectations of further appreciation, which served to reinforce demand for housing at even higher prices.

As the Reserve Bank has acknowledged previously, with the benefit of hindsight, monetary policy may have been too slow to tighten in the early stages of previous business cycles. Rapid growth in fiscal transfers late in the cycle probably also provided a boost to income that sustained the house price boom a little longer than otherwise might have been possible. Both these mattered more than they should have because of the way demand shocks and supply constraints interacted to trigger the house price boom in the first place.

Policy should focus on regulation that gets supply conditions in the housing market right and removes barriers that impede productivity gains in the construction sector. Such a policy framework should produce lower, and perhaps most importantly from the Bank's perspective, less variable house prices over the long-run. We are not experts in the details of housing supply issues, but we would encourage the Commission to focus on ways to put in place a regulatory environment that (i) enhances productivity in the residential construction sector; (ii) supports land availability; and (iii)

promotes a residential construction sector that is responsive to price signals.

Taxation regimes can affect house price movements and house price cycles, but our judgement is that they have not been of decisive importance compared to supply factors, migration factors or fiscal and monetary policy. At times, tax provisions, in conjunction with other shocks, may have served to amplify or extend a housing boom that had initially been triggered by quite unrelated factors. Our reading of the international literature suggests that the presence or absence of a capital gains tax is not a decisive factor explaining house price behaviour here or in other countries.

The liberalisation of access to finance since the 1980s will have had a significant impact on debt levels, as well as the distribution of debt. Of course, the typical interest rate in New Zealand has been relatively high compared to international standards. Over the longer-term, changes in access to finance should not have a large or sustained effect on house prices. The ability to use additional land for housing (or use existing land more intensively) and the value of that land in alternative uses, probably matter most. Over long periods, and allowing for productivity growth, the prices of other inputs to housing construction like wood, steel and of course unit labour costs, should probably not grow much differently than the general level of prices in the economy.

In a second-best world where supply issues remain intractable, limiting excess demand pressures, which can come from unexpected swings in population growth through channels such as migration inflows, could mitigate big swings in house prices. Implementation lags would pose challenges, but more generally, this issue helps highlight the scope for better co-ordination of government policies that affect housing supply and demand.

Lower maximum marginal tax rates on personal income have reduced the benefit available to those (including owners of rental housing) able to deduct interest against other taxable income. Inflation indexing the tax treatment of interest (something the Reserve bank has long advocated) would further reduce those benefits, eliminate a distortion in the income tax system, and have incidental benefits for

the housing market. A more appropriate tax treatment of the inflation would probably largely eliminate reported tax losses on residential rental properties even near the peaks of housing booms (when rental yields tend to be lowest).

Introduction

The Reserve Bank welcomes the opportunity to make this brief submission to the Productivity Commission's inquiry into housing affordability. This submission should be read together with the wide range of data illustrated in the Commission's issues paper.

The guidance laid out in the 'Housing Issues' paper from the Productivity Commission cuts across many dimensions. Here, we examine the housing market in aggregate, focusing on demand and supply factors. We do not address the impact of housing affordability issues on lower income New Zealanders, nor do we explore important regional housing issues. Such issues are typically beyond the scope the Reserve Bank's expertise.

In our judgement, the responsiveness of the supply of new houses is a critical factor behind house prices when housing demand shifts.

House prices and the Reserve Bank of New Zealand

The Reserve Bank has statutory responsibilities that span monetary policy, financial stability and prudential supervision. Given the way that the New Zealand housing market has behaved, understanding the housing market is essential for carrying out our responsibilities. The Reserve Bank has commented on issues that relate to housing in its submissions to the Commerce Select Committee (2007), the Finance and Expenditure Committee (2007) and the Savings Working Group (2010). The Reserve Bank's responsibilities relate to house prices in two important ways: (i) the cyclical movements in house prices over the short- to medium-term and the way they influence demand and monetary policy; and (ii) changes in the level of house prices that affect the value of mortgage collateral and could, under certain stressed conditions, pose issues for financial stability.

Large swings in house prices over the cycle matter primarily to the extent that they change consumption behaviour, by easing collateral constraints or leading households to think that their real wealth has increased. The associated wealth effects can bring forward consumption (see De Veirman and Dunstan (2008) and Smith (2010)), residential investment decisions and drive up inflation (as firms increase their output price in response to stronger demand).¹ Many of the Reserve Bank's *Monetary Policy Statements* have documented the impact of movements in New Zealand house prices on the economy and monetary policy. If anything, these effects seem to have been a little stronger in New Zealand than in some other advanced countries.

House prices swings can often be costly. They can distort the allocation of resources, detract from economic efficiency and, at times, threaten financial stability. Moreover, as figure 1 illustrates for the United States, over a very long period of time, real house prices tend to be stable around a very modest growth rate – the swings in real prices dominate any trend movement.

Large rises in the level of house prices are also often associated with increased household leverage. If those higher prices prove unsustainable, the resulting fall in house prices can generate financial stability risks (as recently happened in the United States and Ireland) or, at least, act as a sustained drag on private demand and economic activity (as appears to be the case in a number of other advanced economies at present).

Figure 1

Long-term real house prices in the US



Source: Robert Shiller as used in *Irrational Exuberance* (2000). Updated quarterly.

Appropriate focus for the inquiry

Turning to the inquiry into housing affordability, we think the focus should be on the long-term structural issues. We also think the inquiry should be careful not to over-weight the most recent cycle in house prices. This is because the increase in real house prices in New Zealand pre-dates the latest boom, in contrast to the United States and some other countries which had relatively stable and flat house prices up until around 1997.

But it can be difficult to identify and distil the appropriate policy response to long-run issues. New Zealand's previous housing cycles and cross-country evidence are useful in this regard. Although data issues can distort comparisons, cross-country evidence might help shed light on the possible role of inflation, financial liberalisation and tax policy and, more broadly, on what can realistically be achieved in the area of housing policy.

The demand side

When supply is relatively constrained in the short-term, swings in demand matter a lot for the determination of house prices. Lots of factors influence changes in the demand for housing, but factors such as migration and demography appear to have been particularly important in New Zealand. The Reserve Bank has noted the impact of migration on, not just the previous housing cycle, but also

¹ **Movements in house prices can be reflective of shocks to other parts of the economy, such as those from commodity prices booms. De Veirman and Dunstan (2008, 2011), for example, explore differences between shocks to financial wealth and shocks to housing wealth.**

those of the 1970s and the 1990s (see our submission to the Commerce select committee 2007, for example). Indeed, New Zealand has tended to have large swings in migration flows. Moreover, the response of house prices to migration appears large relative to international experience. Coleman and Landon-Lane (2007) estimate that house prices rise 10 percent in response to an increase in migration equivalent to one percent of the population. Of course, net migration flows are, at least in part, an endogenous response to changes in the underlying behaviour of the economy. But in spite of the difficulties in identifying the relative contribution of different factors, it is important that the implications of big swings in the population growth rate for house prices, and macro stability more generally, are recognised.

Another demand-side factor in the latest cycle was rapid growth in fiscal transfers late in the cycle, targeted at groups who were probably among those purchasing houses with large mortgages. These transfers probably provided the income to sustain the house price boom a bit longer than would have otherwise been possible. Generally, we think less pro-cyclicality in fiscal policy helps.

And expectations dynamics in housing markets matter. While supply was initially slow to respond sufficiently strongly to increased demand, total residential investment as a percentage of GDP ended up being quite similar to that in other countries with similar population growth (including the United States) across the boom period as a whole. But faced with large demand shocks supply appears to have been slow to respond. This allowed prices to rise quite materially, which appeared to fuel expectations of ongoing future house price rises. It is reasonably well accepted that expectations of future house prices are weakly anchored and hence quite easily displaced. The prevalence of publications touting the attractiveness of rental property as an investment option increased as the boom went on, not decreased.

Monetary policy can also play a role. If interest rates are set too low for too long, that will affect demand for housing and house prices. As we noted in our 2007 submission to the Finance and Expenditure Committee, with hindsight we may have been too slow to tighten monetary policy against a backdrop of a relatively strong economic performance. In terms of cyclical demand, we can certainly lean against

the wind regarding asset prices, and leaning early is better than leaning late (see Bollard 2004, for more discussion). Internationally, in the wake of the events of the last decade, some central banks that had held to the hypothesis that asset price bubbles are too difficult to identify and that a central bank should simply mop up the mess after the bubble has burst, have shifted their ground. That said, preemptive moves to try to manage house price booms using monetary policy risk exacerbating stresses on the tradable sector of the economy. Raising interest rates in this context will increase demand for New Zealand dollar-denominated assets, increasing the exchange rate and putting pressure on the bottom line of both exporters and import-competing manufacturers. It would be preferable to have the sort of housing market that was less prone to exaggerated price fluctuations in the first place.

Following the financial crisis, there has been considerable international interest in the possible role of various macroprudential instruments in helping to manage the consequences of credit cycles. Macroprudential instruments are various prudential requirements placed on the balance sheets of banks or other financial institutions. The objective of these tools would be to promote greater financial system resilience in the face of the credit cycle, or perhaps, rather more ambitiously, to directly lean against the credit cycle. While many of these tools are broad in focus, there has also been interest in some instruments that would directly relate to housing lending such as administrative restrictions on maximum loan-to-value ratios. This latter instrument has been widely employed throughout Asia and has been adopted more recently in Canada, and in some European countries. However, there is as yet limited experience with these tools in a developed country context.

The Reserve Bank's work suggests that macroprudential instruments could possibly have a role to play in helping manage the credit cycle, although their influence is likely to be 'at the margin' and to date remains largely untested. While the international research is continuing, such tools are generally seen as best directed toward bolstering financial system resilience in the face of credit growth being used rather than to directly influence the growth in credit or asset prices. The possibility of using such instruments in

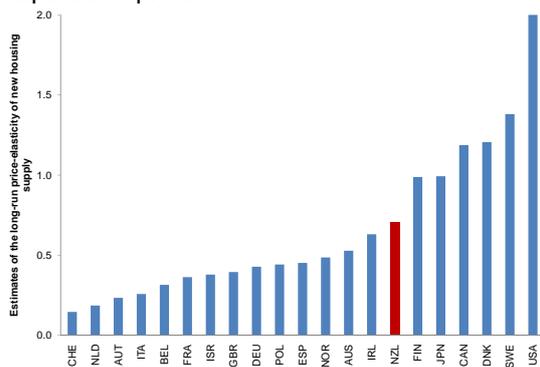
the future should not replace a continued focus on the underlying drivers of house prices, particularly housing supply constraints.

The supply side

It is now well established in the international literature that different housing supply regimes go a long way to explaining differences in cyclical house price behaviour (see Glaeser et al 2007 and Glaeser and Ward 2009, for example). These effects are particularly important in countries or regions where populations are growing comparatively rapidly. There is strong evidence of this in the United States at both the state and county level (see Huang and Tang 2010). When demand for any product is prone to significant changes, it is especially important that supply can respond relatively quickly.

The Reserve Bank is not an expert on the microeconomics of regulation of the housing and construction market. However, our interpretation of work by Arthur Grimes and others (see Grimes and Aitken 2006 and Grimes and Liang 2007, for example) and the recent series of OECD papers (see Caldera and Johansson 2010, the 2011 OECD Survey of New Zealand and Cheung 2011) is that the importance of regulatory regimes applies with force to New Zealand. The OECD work shows that while New Zealand's residential construction is relatively responsive to house prices (figure 2), investment in the residential capital stock is particularly sensitive to increases in construction costs (figure 3) that inhibit the supply response.

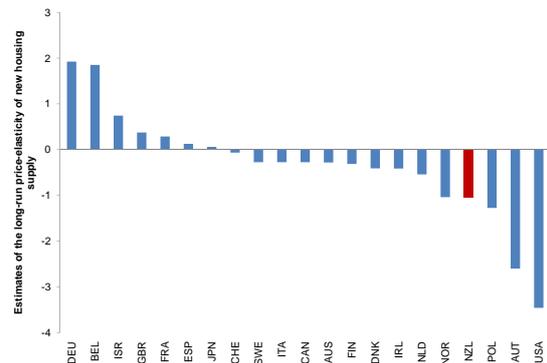
Figure 2
OECD Estimates of long-run housing supply response to prices



Source: Sánchez and Johansson (2011). A larger number indicates a more responsive supply.

Overall, that seems to mean that our housing supply has not been very responsive when there have been big swings in housing demand. As a result, on international metrics, our house prices look high, and have increased very substantially in the last decade. Supply constraints are therefore a key area warranting policy attention (see RBNZ submission to the Commerce Committee 2007 and Cheung 2011).

Figure 3
OECD Estimates of long-run housing supply response to construction costs



Source: Sánchez and Johansson (2011). A larger number indicates a more responsive supply.

The key supply factors appear to be the availability and price of land for residential purposes and construction costs. The Resource Management Act, and the way it is applied by local councils, may be playing a role. One solution that is often advanced regarding land prices is for metropolitan planning agencies to ease their urban limits and, more generally, to ensure that residential zoning practices are more directly responsive to market price signals. This will help ensure that land is used for the most economically valuable purposes, as revealed by prices. Issues have also been raised around the most appropriate way for local council to cover the infrastructure costs around new housing, and whether the move to greater lump-sum development levies may have played a role in inadvertently exaggerating house price fluctuations.

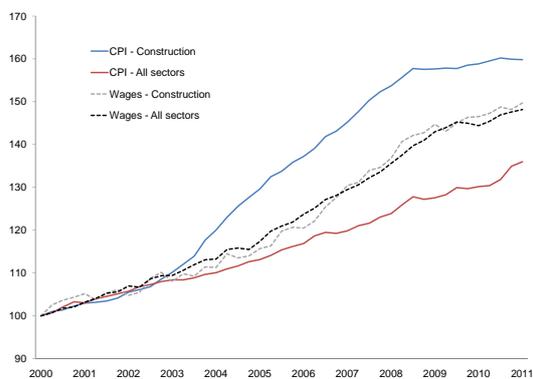
Regarding construction costs, figure 4 shows that the CPI sub-index for construction has risen by much more than the index for all consumer products, while the increase in hourly wages for construction workers since 2000 has been only slightly higher than for the full workforce. This is

² CHRANZ (2011) provides deeper insight to this issue.

suggestive of low labour productivity growth in construction relative to the rest of the economy (and New Zealand's labour productivity has not been high in the rest of the economy either).² Over the very long term, and allowing for productivity growth, the prices of other inputs to housing construction like wood, steel and of course unit labour costs, should probably grow in line with the general level of prices in the economy.

Some reasons for this productivity differential probably include the lack of scale in dwelling construction, with many dwellings being built as one-offs, largely to individual specifications. A lack of innovation in construction methods may be another problem. While it is not clear to what extent the poor productivity performance of the construction sector reflects regulatory constraints, we nonetheless encourage the Commission to look carefully at this issue.

Figure 4
Wage and price levels in construction relative to the aggregate economy



Source: Statistics New Zealand - Quarterly Employment Survey and CPI

Tax issues

Housing is a favoured investment from a tax treatment perspective. This is especially so for unleveraged owner-occupiers (see Hargreaves 2008), since owner-occupiers do not pay tax on the imputed rental value of the equity in their houses (although they do pay rates). The inadequate tax treatment of the inflation component of interest, whereby all interest received is taxed and all interest payments by investors are deductible, compounds the distortion and extends it to the rental property sector. With an inflation target centred on 2 percent per annum, a significant chunk

of the any interest rate reflects simply the expected general rise in the price level (rather than a real income or real cost).

The tax treatment of housing and savings products varies widely across countries. Tax regimes can be shown to influence both the level and volatility of house prices (see Hargreaves 2008 and van den Noord 2003, for example), especially when supply responses are sluggish. But countries with a variety of tax regimes experienced similar housing booms in the mid to late 2000s. Moreover, it is not clear that, in aggregate, housing is more tax favoured in New Zealand than in other countries. For example, householders in the US can deduct owner-occupier interest payments for tax purposes and in most cases face no capital gains tax. In addition, relatively high local government rates in New Zealand compared to other countries, act as a tax on property ownership.

Some have also argued that the increase in the maximum marginal tax rate in 2000 (perhaps in combination with the change in the inflation target in 2002) played a major role in the last cycle. We are sceptical for a variety of reasons outlined in our 2007 work. At most, we believe it was an exacerbating and amplifying factor. At the time, the underlying regulatory model made new housing supply relatively slow to respond and expectations of persistent future price increases became entrenched for a time. We also doubt that loss-offsetting in and of itself, was more than an amplifying factor, because rental yields at the start of the housing boom were high enough (and interest rates relatively low) that large losses were limited. More generally, however, correcting the tax treatment of interest to assess or deduct only real interest would remove the distortion in this area.

One tax issue that periodically receives considerable attention is capital gains taxation. Houses bought by investors with the intention to resell are already, in principle, caught by the income tax net, but New Zealand does not have a general capital gains tax. The Reserve Bank has never taken a stance on the general merits or otherwise of capital gains taxes. We have fairly consistently noted (including in the Supplementary Stabilisation Instruments report (Blackmore et al 2006) and the 2007 submission to the Commerce Committee) that there is little evidence internationally that countries with

capital gains taxes have experienced less marked cycles in house prices. In the 2007 document, we noted that, in practice, capital gains taxes are only levied on realised gains (rather than accruals), which creates additional distortions and that capital gains taxes usually largely exclude owner-occupied houses, even though unleveraged owner-occupied housing is the most lightly taxed component of the housing stock. We summed up that “capital gains taxes are common internationally but are hard to design and implement in a way that works well”. To avoid establishing new distortions, any capital gains tax should only tax real capital gains and needs to treat gains and losses relatively symmetrically.

Financial liberalisation

The liberalisation of access to finance since the 1980s has allowed a rise in aggregate debt levels, and affected the distribution of debt. As in many other similar developed countries, it is likely that financial deregulation affected the savings and housing finance decisions of New Zealanders (see Coleman 2007 and Hull 2003). Together with lower inflation and lower nominal interest rates since the early 1990s, deregulation allowed householders to service more debt with a fixed proportion of their income. With housing supply slow to adjust, easier access to finance, especially in the presence of other demand shocks, resulted in large increases in house prices. Higher prices fuelled expectations of further appreciation, which served to reinforce higher housing demand.

Over the long term, changes in access to finance should not have a large or sustained effect on house prices. In much of the United States, for example, with historically relatively liberal access to housing finance and similar debt-to-income ratios as in New Zealand and Australia, real house prices (and house price-to-income ratios) are materially lower than those in New Zealand (see New Zealand Productivity Commission 2011, p.13 and p.15). The more important factors are probably the ability to use additional land for housing (or to use existing land more intensively), and the value of that land in alternative uses.

Policy focus

What does this mean for the appropriate focus for policy? Policy should focus on the first-best solution – providing a regulatory environment that gets the underlying supply conditions right. New Zealand needs to ensure that land use can change relatively readily towards the most valuable use for that land, especially if its population is to continue to grow relatively rapidly. New Zealand also needs a regulatory environment that enables a highly productive residential construction sector. In combination, such changes to the supply conditions would help limit the risk of large future swings in house prices when demand shifts occur. House price swings of the sort that we have seen recently are damaging to New Zealand’s overall economic performance. At times, house price cycles can also unnecessarily complicate macroeconomic policy and pose avoidable risks for individual and system-wide financial stability.

Avoiding tax preferences for housing and removing the distortionary tax treatment of interest are also measures that would tend to enhance the policy environment in which housing markets can function. In a second-best world where supply is not particularly responsive, policy might also look at whether there is scope to manage migration inflows of non-New Zealanders in a way that limits the contribution to cyclical demand pressures. However, implementation lags are likely to pose challenges. Possible stabilisation advantages would need to be weighed carefully against potential disruption to the medium-term migration programme and policy would need to take a whole of government approach. More generally, better co-ordination of government policies that affect housing supply and demand would be helpful.

Looking ahead, the Reserve Bank can respond, if and when future house price bubbles build up, using several macroprudential instruments. These could include increasing capital requirements for banks, using macroprudential capital overlays or applying more restrictive loan-to-value limits during booms. But these are tools for when booms are already well under way and systemic risks are beginning to mount. A better underlying policy environment would reduce the risk of unduly large housing price cycles in the first instance. A more responsiveness housing market will not only better meet the changing demands of New Zealand

households, but will also reduce the extent to which the behaviour of the housing market is a cause for concern among macro-policymakers.

References

Blackmore, M, P Bushnell, T Ng, A Orr, M Reddell and G Spencer (2006) "Supplementary stabilisation instruments: Initial report to Governor, Reserve Bank of New Zealand and Secretary to the Treasury".

Bollard, A. (2004), *Asset Prices and Monetary Policy*. Address to the Canterbury Employers' Chamber of Commerce, Christchurch.

Caldera Sanchez, A. and A. Johansson (2011), "The price responsiveness of housing supply in OECD countries", *OECD Economics Department Working Papers*, no. 837, OECD: Paris.

Cheung, C. (2011), "Policies to Rebalance Housing. Markets in New Zealand", OECD.

CHRANZ (2010) "Auckland Regional Housing Market Assessment Vol 1: Main Report", Report prepared by Darroch Ltd.

CHRANZ (2011), "Why have residential construction costs increased more than costs in other sectors of the New Zealand economy?"

Coleman, A (2007), "Credit constraints and housing markets in New Zealand", Reserve Bank of New Zealand Research *Discussion Paper* 2007/11

Coleman, A and J Landon-Lane (2007), "Housing markets and migration in New Zealand: 1962-2006", Reserve Bank of New Zealand Research *Discussion Paper* 2007/12

Department of the Prime Minister and Cabinet (2008) Final report of the house prices unit: house price increases and housing in New Zealand, Wellington.

De Veirman, E and Dunstan, A (2008), "How do housing wealth, financial wealth and consumption interact? Evidence from New Zealand", Reserve Bank of New Zealand Research *Discussion Paper* 2008/05.

De Veirman, E. and Ashley Dunstan (2011): 'Time-Varying Returns, Intertemporal Substitution and Cyclical Variation in Consumption', the *B.E. Journal of Macroeconomics* (Topics), forthcoming.

Glaeser, E, J Gyourko and A Saiz (2007), "Housing supply and housing bubbles", *Journal of Urban Economics*, 64(2), pp 198-217

Glaeser, E and B A Ward (2009), "The causes and consequences of land use regulation: evidence from greater Boston", *Journal of Urban Economics*, 65(3), pp 265-78

Goldman Sachs (2010). "A Study On Australian Housing: Uniquely Positioned Or A Bubble?". 6 September 2010

Grimes, A and A Aitken (2006). "Housing Supply and Price adjustment", Working Paper 06-01, Motu Economic and Public Policy Research

Grimes, A and Y Liang (2007), "Spatial Determinants of land prices in Auckland: Does the Metropolitan Urban Limit have an effect?", Working Papers 07-09, Motu Economic and Public Policy Research

Hargreaves, D (2008), "The tax system and housing demand in New Zealand", Reserve Bank of New Zealand Research *Discussion Paper* 2008/06.

Huang, H and Y Tang (2010), "Residential Land Use Regulation and the US Housing Price Cycle", University of Alberta Working Paper Series

Hull, L (2003), "Financial deregulation and household indebtedness", Reserve Bank of New Zealand Research *Discussion Paper* 2003/01

New Zealand Productivity Commission (2011). "Housing affordability - Issues Paper". June 2011.

OECD, (2011). "Economic Survey of New Zealand 2011".

IMF (2008) 'Box 3: 'How overvalued are New Zealand house prices?', New Zealand: Staff report for the 2008 Article IV consultation, IMF Country Report No 08/163, p17.

Reserve Bank of New Zealand (2007), "Submission from the Reserve Bank of New Zealand to the Commerce Committee on the inquiry into housing affordability".

Reserve Bank of New Zealand (2007), "Reserve Bank of New Zealand Board Submission to: FEC Inquiry into the Future Monetary Policy Framework".

Reserve Bank of New Zealand (2010), "Reserve Bank of New Zealand Board Submission to: the Savings Working Group".

Sanchez, Aida Caldera and Asa Johansson (2011), "The price responsiveness of housing supply in OECD countries", *OECD Economic Working Paper* No. 837.

Smith, M (2010), "Evaluating household expenditures and their relationship with house prices at the microeconomic level", Reserve Bank of New Zealand Research *Discussion Paper* 2010/01.

Stephens, D (2007), "Bubble, schmubble", Westpac Economic Research.

Van den Noord, Paul (2003) "Tax incentives and house price volatility in the euro area", *OECD Working Paper* No. 356.

White, W (2009) "Should Monetary Policy 'Lean or clean'?", Federal Reserve Bank of Dallas, *Globalization and Monetary Policy Institute Working Paper* No. 34.