

Symposium: The Global Financial Crisis

# Housing and the Global Financial Crisis: US versus Australia

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## Abstract

*In the housing cycle which started in 1996, Australian house prices have risen more than those in the US, prima facie suggesting that Australian prices should fall sharply. This paper questions that simple hypothesis. The reasons explored are: Australian prices have risen significantly less than those in coastal California, the more valid comparison; the Australian housing finance system contains fewer of the structural weaknesses of the US system; fundamentals in the form of the decline in real interest rates explain most, but not all, of the price rise; and macro-economic conditions for housing in Australia are more favourable to weathering the global financial crisis.*

## Introduction

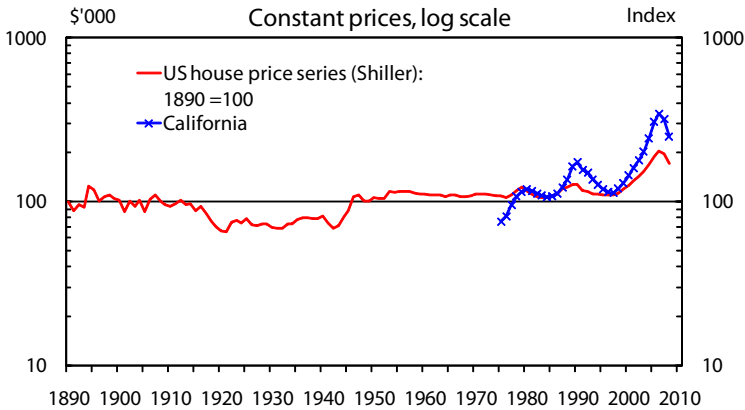
The housing cycle has played a central part in the economic cycle culminating in the Global Financial Crisis (GFC) of 2008. In the US and across most markets, the boom preceding the GFC featured elements common to past booms, namely sharp rises in house prices, some significant increases in housing activity and some deterioration in lending quality.

In the case of the US, the price cycle has been significant in historical terms: prices rose 60 per cent (or by an average 4.8 per cent per annum) in real terms between 1996 and their peak in the September quarter 2006; this makes it a more significant rise than experienced in past cycles, and relative to the long term trend growth in prices for the US of about 1.6 per cent (Figure 1). For the US, the recession has featured some extremely sharp price falls, with the OFHEO and Case-Shiller measures of house prices showing prices falling 9 per cent and 30 per cent respectively between the September 2006 peak and the December quarter 2008 (Table 1). In Australia's case, from 1996–2007, prices rose 87 per cent in real terms: this also represents a more significant rise than that experienced in past cycles (Figure 2) and is an acceleration from the trend rise apparent since 1975 (2.9 per cent) and indeed since the 1950s (Figure 2).<sup>1</sup> In part because of the magnitude of the rise, some forecasters (such as Keen 2009a, who predicted a 40 per cent fall)<sup>2</sup> have been punting that prices in Australia might fall by similar magnitudes to the US. Does this follow?

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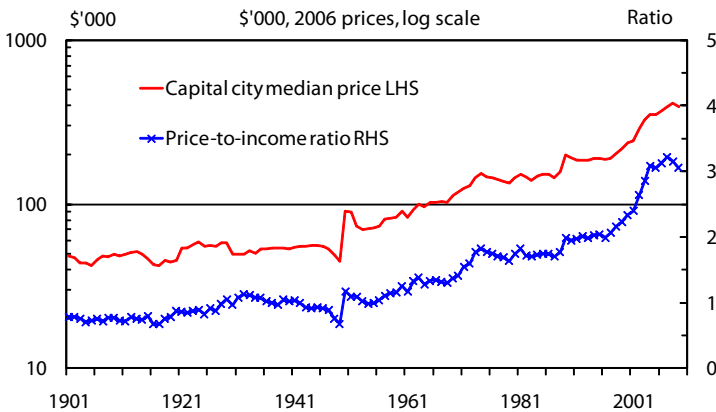
**Figure 1: US House Price Series 1890–2008  
and California 1975–2008**



*US house price series is deflated by the US CPI and indexed at 1890 = 100, and is from Shiller (2009); the California series is OFHEO series, deflated by the US CPI. The series has been indexed to the US price series at 1980 when price levels for US and California were at the same level.*

The first point to note is that when making comparisons, it is more relevant to compare coastal Australia with coastal California than with inland US cities which dominate the average for the US. California prices have shown more significant rises (+155 per cent) and falls (-30 per cent) than Australia in this cycle and also in preceding cycles (Figure 3 and Table 1).

**Figure 2: Australian Median House Price Series  
and Price-to-Income Ratio, 1901–2008**



*The capital cities median house price series and price-to-income ratios for Australia are from Stapledon (2007), updated for 2008. The price to income series is an estimate of the value of all housing to nominal GDP, the latter being the only consistent income series for the period from 1901.*

The second point to note is that the US housing finance system is fundamentally different from that operating in Australia or in Europe. The differences are highlighted in Table 2. The Australian system is the product of a history of minimal government intervention: what limited intervention there was, was phased out in the early 1990s when the NSW State Government-owned equivalent of Fannie-Mae collapsed with significant losses.<sup>3</sup> By contrast, the US system is the product of a history of heavy and on-going intervention,<sup>4</sup> the key feature being the subsidised securitised mortgage market. The central question for debate is the degree to which the US housing finance system contributed to the excesses in the boom, and to the sharpness of the subsequent fall in prices. US Federal Reserve Governor Ben Bernanke has conceded that the incentives in the US system are prone to promoting the extremes observed in the US housing market and that fundamental reform is required (Bernanke 2009). According to Bernanke, the key weakness is the lack of sufficient incentive for mortgage originators to assess risk adequately, related to the ease with which they have been able to pass the risk in securitised mortgages to unwary investors. This weakness accentuated the natural tendency for risk to be under-estimated by all parties in periods of boom.

**Table 1: Change in House Prices (constant prices, per cent)**

	Trend rise 1975–2008	Trough to peak rise 1997Q1–2006Q3	Change 2006Q3–2008Q4	Change 2007Q4–2008Q4
US (Case-Shiller)	n/a	87%	-30%	-20%
US (OFHEO)	1.6%	60%	-9%	-6%
California	3.2%	155%	-30%	-21%
Australia	2.9%	87%	4%	-7%
UK	2.2%	140%	-14%	-17%

*US and Australian series as per Figure 1 and Figure 2 below respectively.  
UK series from Nationwide (2009)*

The difference in risk-taking will be reflected in the volume of mortgage defaults it produces and these have been significantly higher in the US. This is crucial for the price story for forced sales that follow default, and foreclosure of mortgages produces a large discount to house prices (Campbell et al. 2009) and would explain the precipitate decline experienced in US house prices in 2007–2008. On the buyer side of the equation, banks typically tighten up on their lending when the market weakens which has a pro-cyclical effect on prices. The severe damage to the US banking system has overlaid this, causing a drying up of funds available to borrowers and further adding to the short-term downward pressure on prices. Hubbard and Mayer (2009) suggest that US house prices, having overshot on the high side in the boom, have now swung too far on the downside. The full story is yet to be told but the mortgage default rate in Australia is significantly lower, and while banks have tightened their lending criteria, funds were still flowing to borrowers in the Australian market.

**Table 2: Features of Housing Finance Systems in Australia and the US**

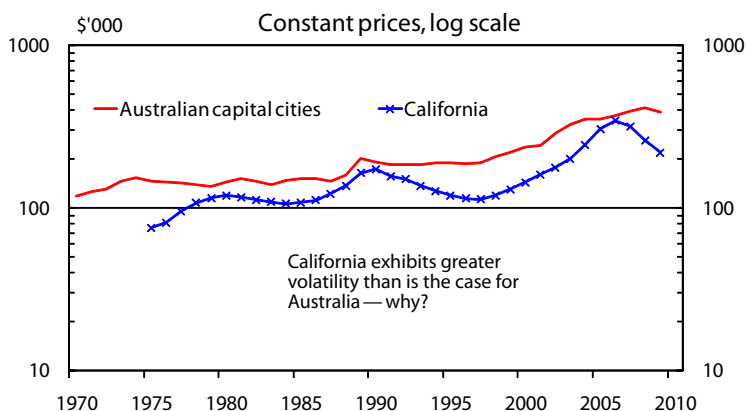
	Australia	US	Comment
<b>Variable rate mortgages</b>	Dominant — credit foncier loans.	Less prevalent — because of subsidy to fixed rate mortgages	US-style fixed rate mortgages pose funding risk for banks. The savings and loan crises in the 1980s and 1900s were in part caused by the mismatch of S&Ls short-term deposits and long-term, fixed rate mortgages.
<b>Fixed rate mortgages</b>	Minimal — 3–5 years. Market penalty if payout.	Majority — 25–30 years. No penalty if payout: mandated by government.	
<b>Securitisation of mortgages</b>	Minimal — no government involvement	Significant — heavy government involvement	Encourages excessive risk in lending.
<b>Non-recourse loans</b>	No — no government involvement	Yes — government regulation	Encourages risk-taking by borrowers.
<b>Policy encouraging sub-prime mortgages</b>	No	Yes	Legislates risk-taking.
<b>Assistance to home buyers</b>	Yes — grants to 1 <sup>st</sup> home buyers	Yes — mortgage interest tax deductible	Both forms encourage risk-taking.
<b>Home ownership</b>	70% home ownership (2006 Census)	69% owner-occupied (2006 Census)	Similar historical trends despite different sets of policies.

*ABS Census has 69.8% of dwellings owner-occupied in 2006 (ABS 2009: 211). US Census (2009) has 68.8% owner-occupation in 2006. In the period 1900–1940, both countries had lower owner-occupation rates (52% and 46% respectively) and post-WW2 experienced significant, parallel rises (US Census various; ABS Census various).*

The third point of debate is the tendency to assess the ‘fundamental value’ of housing in terms of some historical ratio of prices to income. Some respectable organisations (e.g. OECD 2005) have put their names to these assessments of fundamental price which, despite being suitably qualified, have then been quoted as forecasting significant falls in house prices.<sup>5</sup> The problem with this approach is that, while income is expected to be a major influence on prices, there is no theoretical reason for any fixed relationship between prices and income, or between rents and income, even if in some markets (e.g. inland US cities) a fairly stable relationship can be observed. In theory, what we expect to see is a relationship between rent and price (rental yield) and interest rates. In the case of Australia (Figure 2 and Figure 4) what can be observed is that both rents and prices have risen ahead of incomes in the past 50 or more years — the former underpinning a substantial portion of the rise in prices. In between, rents outstripped prices up to the 1980s, causing the rental yield to rise in line with the rise in real interest rates (Figure 5). The reverse has occurred since, prices running ahead of rents and the yield falling, but that fall closely paralleling the decline in real interest rates which has occurred since the mid-1980s. Housing cycles typically comprise a portion based on fundamental factors such

as interest rates and some over-shoot. The more exaggerated forecasts for declines of the order of 40 per cent in prices would, in the absence of substantial declines in rents, have rental yields for Australia back at the levels of the mid-1980s when real interest rates were significantly higher than is the case in the 2000s. Such a scenario does not seem plausible.

**Figure 3: Australia Capital City House Prices 1970–2008 and California 1975–2008**

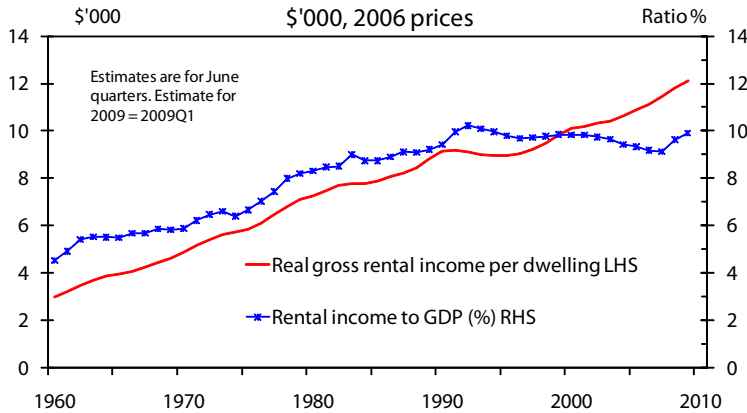


California series as for Figure 1. Australian capital cities series as for Figure 2.

The final consideration is the macroeconomic environment in which the housing cycle is occurring, which should be expected to have some bearing on the performance of the housing market. The Reserve Bank of Australia had been steadily tightening monetary policy in the period May 2002–March 2005 and then more aggressively till September 2008, after which it dramatically cut interest rates. The lift in interest rates was designed to moderate the significant terms of trade shock boost to the economy in this period but, whether by design or chance, it meant that monetary policy was leaning against housing asset prices. In the case of Sydney, house prices and activity actually peaked in 2004, after which prices drifted lower and activity weakened sharply. The net result was that the market went from over-supply to one of tight supply in 2008, evidenced by significant upward pressure on rents. The Perth market, enjoying more of the direct benefit of the mining boom, continued to rise after 2004 and consequently, it has been more exposed to the change of economic fortunes in 2008. Overall, however, the market was more characterised by ‘under-supply’ rather than the ‘over-supply’ situation facing most segments of the US market.

In terms of monetary policy, having leant against the asset market, the RBA had considerable scope to ease monetary policy and cushion the housing market. By contrast, US monetary policy appears to have had limited capacity to cushion the downturn. As Leamer (2008) observes, the US arguably used stimulatory monetary policy to boost activity in 2003–2006, fuelling the over-building, ultimately at the expense of activity and prices in the period from 2007 on.

**Figure 4: Real Gross Income per Dwelling and Ratio of Rent to Income 1960–2008**

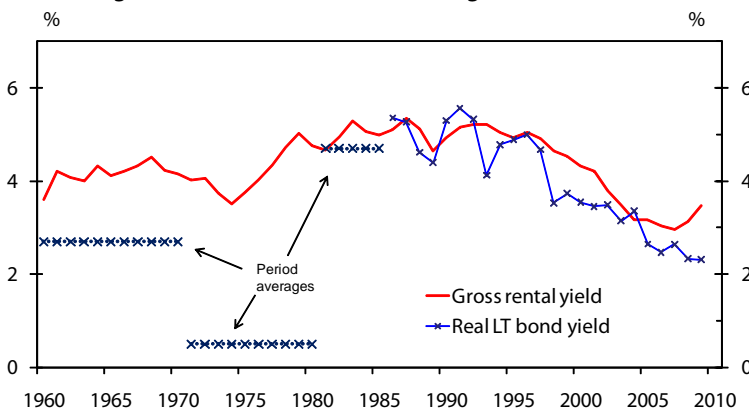


Series from Stapledon (2007). Real gross rental income per dwelling is ABS national accounts estimate of gross rental income for all private dwellings (rental plus 'imputed' for owner-occupied) divided by estimate of number of dwellings, and deflated by consumer inflation index. Rental-to-income ratio is gross rental income to nominal GDP.

In short, housing cycles in the US and Australia do have a history of close parallels, but the devil is in the detail. In this case, the different structure of the housing finance systems and the different macro-economic environment in 2008–2009 are expected to make a crucial difference to potential outcomes.

The paper proceeds as follows. The next section outlines in more detail the recent history of house prices. Then the next three sections discuss the housing finance systems, the debate about fundamental price and the divergence in macro-economic conditions. A conclusion is then drawn that Australia is not following the US pattern.

**Figure 5: Australia — Gross Dwelling Yield 1960–2008**



Gross rental yields from Stapledon (2007); gross rental income divided by estimate of total value of all dwellings. Real long-term bond yield is the CPI-indexed bond yield for 10 year Australian government securities from 1986–2008 (RBA 2009). This long-term security incorporates a view of future variable rates. Earlier period estimates are actual 10-year bond yield less actual inflation. Period average for 1971–1980 was 'negative'.

## Australian versus US House Prices

The evidence points to a historically significant period of rises in house prices across most world markets in the period 1996–2006 (Hubbard and Mayer 2009: 7). In Australia's case, capital city median house prices rose 87 per cent in these years. This compares with a 3.6 per cent per annum trend rise in prices in the period since the mid-1950s, and it also contrasts with a trough to peak rise of just 35 per cent in the preceding house price cycle in the late 1980s. The 1996–2006 housing price rise generated a rise of over 50 per cent in the price-to-income ratio.

In the case of the US, median prices rose 60 per cent in the period 1996–2006, so on the surface Australia's experience is comparable with that of the US. From that peak in 2006, US house prices had by December quarter 2008 fallen 9 per cent or 30 per cent on the Case-Shiller estimates, leading to expectations in some quarters that Australia can be vulnerable to comparable price falls.

The caution with international comparisons is that we need to compare like with like. The rise in US house prices in the period 1996–2006 is more significant for the US when compared with its history. Over the period from 1975, the trend rise in US house prices was 1.6 per cent, well below the 2.9 per cent recorded for Australia since 1975 or the 3.6 per cent since 1960. But the interesting story is within the US. A significant portion of the US market is inland cities and studies have consistently found very great divergences in both the level and rate of change in house prices between coastal and inland cities/regions in the US (Meen 2002; Glaeser et al. 2003).<sup>6</sup> The reason is that the price of inland houses is predominantly the cost of the structure, with land abundant, cheap and a small portion of the cost. By contrast, land is a more significant component of the cost of housing in coastal cities, in large part because of the premium attached to proximity to the coast, but also reflecting favourable demographic and income factors and a greater propensity for regulations constricting supply in those markets.<sup>7</sup> In the period since 1975, whereas the US market showed average growth of 1.6 per cent, Californian growth was 3.2 per cent.

That Australia and California show comparable long term price trends should not be a surprise. A feature of Australia is that it is highly urbanised and, with minor exceptions, the urban areas are located on the coastal fringe. Also demographic and income factors have shown comparable trends. This makes Australia more like California in character, and California is a more valid comparator than the US 'average' which is dominated by the inland cities. In terms of cycles, however, prices in California appear to show more pronounced volatility than is evident in Australia, or Sydney by itself.<sup>8</sup> In the late 1980s cycle, the trough to peak rise for California was over 60 per cent compared with 35 per cent for Australia, and then the peak to trough decline was 35 per cent compared with 8 per cent for Australia. In terms of the 1996–2006 cycle, the cumulative rise was 155 per cent — significantly more than the substantial 87 per cent rise recorded for Australia. The final story on the peak to trough decline on the downside is yet to be told but as of December 2008, prices in California had declined 30 per cent compared with just 7 per cent for Australia.

## Financial Environment and the Housing Finance System

If we compare the Australian and US financial systems, they have many elements in common. Firstly, as in all developed economies, the banks in both countries are subject to Basle capital adequacy requirements and are supervised by government regulatory agencies. In the case of Australia, there is one supervisor for all banks and non-bank deposit-taking institutions, but there are multiple regulators in the US. The general view has emerged that the single regulator is a factor explaining the better performance of the Australian banking system. The quality of regulation is a difficult variable to assess.

The second broad point is that each has in common 'greed', which has in some quarters (under the label of 'extreme capitalism') been blamed for the financial crisis in 2007–2008. Other elements in this category are sophisticated financial instruments which have been a factor in 'hiding' the propensity for leveraging investments in the periods of excess. In terms of these arguments, Macfarlane (2008) has made the general point that greed has always been there and has been a factor contributing to some degree in all cycles, and that complex instruments have been around for a long time. He argues that economists 'have to do better than that (in explaining the crisis) if we are to come up with a better system for the future'.

Macfarlane argued that incentive systems which overly discounted risk were the problem — he specifically highlighted (commission-based) mortgage originators, credit rating agencies paid by the issuers of credit (mortgage securities), and performance-based (short term profit-based) pay structures in financial institutions. And it can be argued that these incentive issues are more inherent in the 'housing finance system' which operates in the US *vis-à-vis* that operating in Australia. In almost all respects, the systems operating in the two countries, as set out in Table 2, are very different.

Central to the US 'housing finance system' is the securitisation of mortgages. Bernanke (2009) observes that there were many attempts to establish mortgage securitisation in the US before it was finally established in 1938 when the US Government set up Fannie-Mae. The key here was that Fannie-Mae effectively provided a public subsidy to this market by providing free mortgage insurance (guarantee on mortgage payments). The objective of mortgage-backed securities was to provide a source of funding for housing, and it allowed US banks and other loan originators to shift mortgages off their balance sheets. By contrast, most mortgages are held on banks' balance sheets in Australia. Mortgage securitisation did grow in Australia in the 1990s, but the cost of commercially priced mortgage insurance has limited its attraction for banks. One feature of the US banking system that encouraged support for securitisation of mortgages was the need to provide scope for US banks to diversify their lending risk. A mix of US Federal/State regulations to promote 'competition' historically restricted banks from operating beyond one state, and in a large number of states promoted single branch banks — the upshot of this was the creation of a banking industry structure with large numbers of banks operating in small geographic areas. By contrast, in the absence of such regulations, the Australian banking system is dominated by banks operating across all states



with large branch networks and an in-built capacity to carry more diversified risk portfolios. The US has been gradually liberalising controls, which has seen the emergence of banks with large branch networks. However, the US system still contrasts sharply with the industry structure in Australia dominated by national banks with large branch networks.

The benefit of mortgage securitisation is the capacity to raise non-retail deposits for housing and to spread risk. The downside is misalignment between the incentives of investors and mortgage originators (Bernanke 2009). This is overlaid on the difficulties faced by employers (e.g. banks in the Australian context) in setting employee incentives which appropriately balance effort (selling mortgages) against level of risk taken on. These difficulties can be expected to accentuate any propensity for lenders/originators to exacerbate cyclical excesses in the housing market. In 1968, the US partially privatised Fannie-Mae, introducing private equity capital but retaining public control and leaving the clear perception of government being there to underwrite losses. This partial privatisation introduced an incentive for equity investors to exploit the government guarantee, further exacerbating the situation. In the 1990s, the US Government used existing legislation to activate policies 'requiring' lenders to grant mortgages to low-income households which would not have qualified under normal rules, adding an additional regulatory incentive or pressure for high risk or sub-prime lending.<sup>9</sup>

On the borrower side, other features of the US system are likely to encourage buyers to take on excessive borrowings, overlaying the natural tendency on the part of buyers to do so in periods of rising prices. Non-recourse loans allow a mortgagee, if the value of the property is less than the mortgage, to walk away and the mortgagor has no recourse to the mortgagee for the shortfall. In Australia and more normally, the mortgagee would have a liability for any shortfall. Tax deductibility of interest payments on owner-occupied housing reduces the effective interest cost and is also an inducement to take on larger loans. In theory, the offset is that capital gains are taxed but, in practice, the effective capital gains tax is close to zero.<sup>10</sup>

Australia does not have these housing-related regulations but it does have some of its own features. Negative gearing on investment properties will tend to encourage excessive risk-taking on the part of investors. For owner-occupiers, there is assistance to buyers in the form of grants to, and savings incentives for, first home-buyers. This encourages marginal buyers, without any necessary demonstrated capacity to save, to take on what is a high risk investment. However, it is doubtful that these inducements represent the same degree of incentive to buyers as applies in the US market (RBA 2003: 22).

The bottom line for the US is that the housing finance system which has evolved appears to be distorting incentive signals, creating an environment which is conducive to a lower quality of mortgages and accentuating procyclical swings in the housing market. Bernanke (2009) has acknowledged this relative weakness in the US housing finance system and the need for fundamental reform.

A measure of the performance of the housing finance system is the rate of defaults and foreclosures, which jumped sharply in the US in 2008. The rate of defaults will be an important influence on the potential downside to prices in the housing cycle. Prices, or at least nominal prices, in the housing market are generally argued to be sticky on the downside as sellers withdraw from the market if the price is perceived too low. However, if there are large scale defaults, then the ability of prices to be sticky is sharply diminished. Campbell et al. (2009) have estimated that foreclosure produces a large discount (their estimate 28 per cent) to house prices. Given the scale of defaults in the market in 2007–2009, coupled with the drying up of funds available to potential buyers of those forced sales, downward pressure on (discounting of) prices in this period would have been expected to be extreme. That would be a significant explanation for the magnitude and rapidity of the price falls experienced in the US.

By contrast, Australia has experienced historically lower default rates *vis-à-vis* those in the US. Default rates will be influenced by economic conditions, and high unemployment that accompanies recession would be expected to see defaults rise in the Australian market and have a negative effect on prices. However, the conditions that emerged in the US in 2007–2009 do appear to be extreme and largely explainable in terms of the weaknesses in the US housing finance system.

Australian banks have appeared to avoid the contagion which has afflicted banks outside the US — for example, in Europe, where housing finance systems are more akin to those in Australia. This is probably more good luck than good management. European banks have surplus deposits *vis-à-vis* lending opportunities in their home markets and hence a need to look for assets in other markets. By contrast, reflecting Australia's reliance on foreign savings, Australian banks have a deficiency of deposits and hence have had less need to contemplate offshore lending. Whether by luck or good management, avoiding the contagion has contributed to the capacity of the Australian housing finance system, and the housing market, to continue to function fairly normally in difficult economic conditions.

## Fundamental Value in Housing Markets

In the housing literature and debate, assessments of under- or, more frequently, over-valuation of housing are most often benchmarked against a measure of 'fundamental value' of housing based on some historical ratio of prices to income. In the US literature, again in the context of the distinction between inland and coastal cities discussed above, it has also been observed that for inland cities, price-to-income ratios have been relatively steady over time, leading to the mean price-to-income ratio being widely used as a proxy measure for equilibrium (see for e.g. Case and Shiller 2003; Hubbard and Mayer 2009). By contrast, the price-to-income ratio has tended to rise over time in coastal areas such as California, raising questions about the validity of using an historical mean of that ratio as a measure for equilibrium or fundamental value. If we look at the ratio of price to income for Australia, which is available for a longer period (Figure 2), it is observed that this ratio has been on a trend rise for the

last 50 years. This renders problematic the use of a ratio as a measure of fundamental value for Australia.

The literature recognises that, applying standard asset pricing theory, the 'fundamental' price of housing should be a function of the rental value of housing and a measure of interest rates. In the case of Australia, it can be observed (Figure 3) that rent per dwelling has also exhibited a trend rise over the past 50 years and that there has been a trend rise in the ratio of rent to income. For Australia, there is also a measure of rental yield (Figure 4) which, adding a risk premium, would be expected to move in line with real interest rates.

Over the period from 1960 to the mid-1980s, the rental value of housing rose faster than prices, and the rental yield rose from about 4 per cent in the 1960s to over 5 per cent in the 1980s. The rise in rents more than explained the observed trend rise in house prices and the rise in the price-to-income ratio in that period. The crucial factor in this period was the rise in real interest rates from the late 1970s and their persistence till the early 1990s, in lagged response to the inflation that emerged and became entrenched in the 1970s. The high interest rates in the 1980s constrained house prices. It is worth noting that equity yields in the late 1970s and 1980s were also historically high in response to the high real interest rates. The story from about 1990 until 2007–2008 is that growth in rents lagged prices and the rental yield declined to a post-1960 low in 2007 of about 3 per cent. The decline in real interest rates after 1990 would explain a good part of that. Otto (2007) has shown that interest rates were the critical determinant of house price changes in the period 1987–2006. One way then of characterising the 1996–2007 cycle is that it represented the lagged response to the decline in real interest rates. Now, regardless of whether the initial phase of any upswing in house prices is explainable in terms of fundamentals (decline in interest rates and/or rise in rents), cycles do tend to over-shoot, so there is almost certainly some degree of overshoot in prices in the cycle 1996–2007. However, the more exaggerated forecasts (of the order of 20–40 per cent) would have rental yields back at the levels of the mid-1980s, when real interest rates were significantly higher than is the case in the 2000s. This is not plausible or defensible in terms of economic fundamentals.

It is worth noting that from its low in 2007, the rental yield has already moved noticeably higher on the back of a combination of rises in rents and the modest fall in prices recorded in 2008.

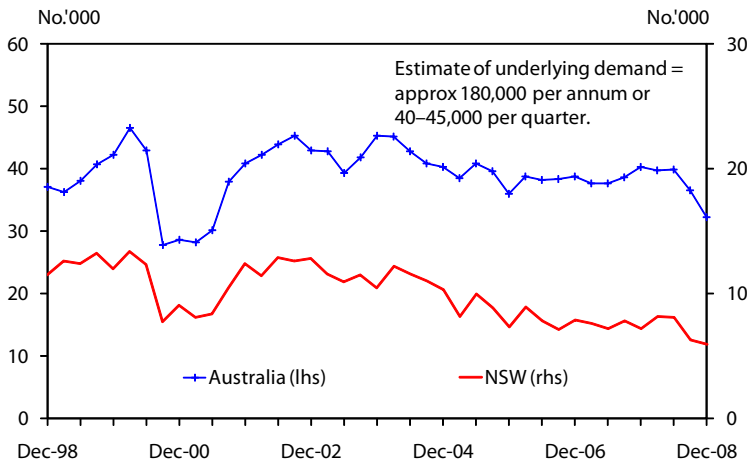
## The Macro-Economic and Housing Environment

The timing of macro-economic events is a major influence on house prices. The Sydney market, which tends to lead housing cycles in Australia (Bewley et al. 2004), peaked in 2004 and normally this might have been expected to be followed with a lag in the other capital cities. At the time, there were significant signs of over-supply in the housing market, in response to the build-up of supply stimulated by the 7 year run-up in house prices. Reflecting over-supply, there was downward pressure on rents.

In the period 2003–2008, however, Australia experienced a significant Terms of Trade (ToT) shock which substantially boosted household incomes

and pushed unemployment to its lowest levels in close to 40 years. From the perspective of housing, this was partially offset by an interest rate shock as the Reserve Bank responded to the inflation pressures generated by the terms of trade shock and lifted interest rates. These two shocks had different effects on different segments of the housing market. In the Perth market, where — courtesy of the mining boom in WA — the ToT shock was most significant, the housing market surged ahead. In the period 2002–2007, prices rose 90 per cent in the Perth market. By contrast, in the Sydney market, the impact of the positive ToT shock was less potent and the negative interest rate shock had more effect in an oversupplied market. Over the period 2002–2007, house prices in Sydney fell 15 per cent and housing activity declined quite sharply. Overall, the aggregate position was that prices rose 25 per cent in the period 2002–2007 but that activity declined (refer Figure 6).

**Figure 6: Australia and NSW Dwelling Starts**



*Dwelling commencements per quarter, seasonally adjusted: ABS (2009b)*

The position by 2008 was that the period of weak activity had worked out the oversupply and the housing market was showing symptoms of shortage. New housing starts in 2008 were running at an annual rate of under 150,000 which was below estimates of underlying demand of about 170,000 per annum.<sup>11</sup> Evidence of the tightness in the market was the upward pressure on rents in the period 2007–2008. This contrasts with the US where the market faced significant over-supply in the period 2007–2009.

Another point of difference between the US and Australia relates to monetary policy. The US has been criticised for a maintaining a policy of low interest rates in the period 2003–2006, which had a pro-cyclical impact on the housing boom (e.g. Leamer 2009; Stutchbury 2009) and has arguably left little capacity to use policy to cushion the downturn. By contrast, the RBA has been seen to have largely avoided these mistakes, but rather has been criticised for being too aggressive in attempting to moderate the ToT shock by increasing

rates in 2008 when, with the benefit of hindsight, the world economy was showing signs of weakness and the Australian economy was slowing (Stutchbury 2009). The counter-balance to interest rates being arguably too high for too long is that it would have contributed to the market being under-supplied going into the downturn, and given the RBA more scope to reduce interest rates when required.

Between individual housing markets within Australia, the position was not uniform in 2008. The Perth market, having ridden the boom, was vulnerable to any reversal in the ToT shock and to a fall in prices from over-shooting. In the Sydney market, the decline in activity had been quite significant in the period 2002–2007, so this market was probably less vulnerable to the reversal of the ToT shock and able to benefit more from the reversal of the interest shock as the RBA reversed course and quickly cut interest rates after September 2008.

The macro-economic environment which unfolds in 2009 and 2010 will have an impact on the housing market. A sharp rise in unemployment will have an adverse short-term effect on prices, and there will be a limit to the capacity of monetary policy to cushion that. However, the key point is that the position of the housing market going into the macro-economic environment of 2009–2010 was, in contrast with the US, not one suffering an overhang of supply.

## Conclusion

In recent years, there has been increasing recognition of the extent to which cycles in housing markets across different economies do tend to move in synchronisation. Nonetheless, there is still considerable variation in the exact timing and magnitude of those cycles, reflecting domestic macro-economic factors and also the framework within which lenders and borrowers operate. Despite its reputation for minimising government intervention, the US housing finance system is characterised by a high degree of regulation which has encouraged poor lending behaviour and contributed to the so-called sub-prime crisis.

By contrast, Australia's housing finance system, whilst not without its imperfections, has so far proved relatively resilient and has not generated the excesses experienced in the US market. The full story will, of course, only be told when the global financial crisis has run its course. Coupled with relatively favourable macro-economic conditions, the dire predictions for house prices in Australia do not appear realistic.

## Notes

1. The Australian story in this picture is discussed in more detail in Stapledon (2008).
2. Keen (2009a) says prices will fall 40 per cent: 'If they fall less than 20 per cent, Keen commits to walk 230 kilometres from Canberra to the top of Mount Kosciuszko'. Keen does argue in terms of 'fundamentals' and this is discussed later.
3. Ferris (2008) recounts that First Australian National Mortgage Acceptance Corporation (FANMAC), which collapsed in 1992, cost NSW taxpayers \$475 million. The author (Stapledon) recalls from his time in Canberra

- that in the 1980s, the NSW Treasury sought support from Commonwealth Treasury/Government for FANMAC and that it was rejected because of the potential cost.
4. Swan (2009) and Bernanke (2009) give a detailed account of the history of intervention in housing finance in the US.
  5. Keen (2009b) cites a version of this ratio in his estimate that prices are 40 per cent over-valued.
  6. Meen (2002) discusses the literature on the coastal-inland divide in the US in the context of explaining why UK and US house price series appear to behave differently.
  7. Moran (2006) has traced the rise of regulation in Australia which appears to parallel that of the coastal states in the US. Stapledon (2007, 2008) highlights the significant impact that regulation and other government policies had in lifting prices since the 1950s.
  8. It might be contended that California should be compared with, say, Sydney. California is a composite of a number of major metropolitan areas, so there is more reason to compare the aggregates for both. However, I would note that California still shows markedly more volatility than Sydney by itself. In the late 1980s cycle, Sydney showed a comparable trough to peak rise of 57 per cent, but the peak to trough decline was just 10 per cent (California -35 per cent; All capitals -8 per cent). In the period 1996–2006, the rise in the Sydney market was 70 per cent compared with 87 per cent for All capitals and 155 per cent for California.
  9. Swan (2009), p. 124.
  10. Reflecting this in modelling the US housing market, economists assume no capital gains tax: see, for example, Poterba (1984).
  11. FaHCSIA (2009) reports underlying demand greater than starts by 20,000 in 2008.

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