

# Discussion

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## 1. Malcolm Edey

This paper by Case, Quigley and Shiller provides a wealth of information about housing price dynamics and about how those dynamics might affect the broader economy. Rather than take issue with the conclusions of the paper, which I broadly endorse, I want to use my comments to focus on four questions that arise out of this material.

My first question is: are housing markets bubble-prone?

We have learned from other contributions to this conference that it can be difficult to pin down whether a particular rise in asset prices constitutes a bubble, especially at the time it is happening. It may be easier *ex post* – the definition that says that you know you've had an asset bubble when the price has just fallen by 40 per cent. Despite these uncertainties, I think it makes sense to step back and ask the broader question as to whether certain markets can be classified as bubble-prone. A reasonably clear definition of a bubble-prone market would be one with two characteristics – where the price dynamics are driven to a significant degree by extrapolative expectations, and where this on occasions generates sustained departures of prices from their long-run determinants.

The paper's results are strongly suggestive that housing markets in the US would satisfy that definition; and it seems reasonable to conjecture that the same would be true elsewhere. The paper brings out a number of stylised facts that would support that view. They show, for example:

- A strong investment motive among most home-buyers.
- The perceived attractiveness of housing as an investment is dependant on price expectations and also to some extent on perceptions of returns in alternative markets; thus there is some moderate support for the proposition that housing investment is more attractive in a period of stock market under-performance.
- Expectations of housing prices tend to be extrapolative, so that the degree of short-term optimism depends on perceptions of what is happening now.
- There are considerable inertial forces in the price-setting process, for example, widespread seller resistance to price falls.
- Housing prices in at least some parts of the US market display a pattern of long upswings interspersed with periods of flat or mildly declining prices.
- This latter characteristic is suggestive of periodic overshooting followed by periods of gradual correction.

Currently, Australia (like the US and UK) is in the midst of a housing price boom, and this brings me to my second question: if we accept that housing markets are subject to periodic overshooting and correction (so they might be classified as bubble prone), are they becoming more so over time?

The answer to this question is much less obvious than the first one. Things always look bigger when you're close to them, and there is a natural tendency to think that the latest economic event is more significant than the ones that came before it. To put the current period in some historical context, it is worth noting that housing price booms in Australia have been reasonably regular events. Periods of house price inflation going well into double digits have occurred roughly once a decade, going back at least as far as 1970; and, as John Simon's paper showed, real estate bubbles were not unknown well before that. A look at UK housing prices over this period would show periods of rapid increase occurring with similar frequency to that in Australia.

So the current housing price inflation in Australia is by no means unprecedented. What does mark out the current period is the way it has been associated with rising leverage and more readily available finance, a point that I will return to shortly.

My third question is: what causes housing bubbles?

I will not purport to offer a definitive answer to that question, but I hope I can make some observations that might provoke further discussion. As a starting point, I suggest that it is helpful to distinguish between the *pre-conditions* for bubble-like behaviour in an asset market, and the *triggers* that initiate an actual episode of rising asset prices.

The Case, Quigley and Shiller paper, I think, offers some important insights into the pre-conditions for bubble-like behaviour in housing markets. One obvious pre-condition is the widespread presence of extrapolative expectations, and the paper provides survey-based evidence that this is indeed present in housing markets in the US. A second pre-condition seems to be suggested by the striking differences in price dynamics across the different parts of the US market described in the paper. There appear to be some cities that are readily characterised as bubble-prone (those exhibiting large periodic swings in the housing prices to income ratio) and others that are not (those where that ratio is quite stable).

Why are some housing markets more prone to large swings than others? Why, for example, are Wisconsin housing prices so much more stable than those in California or New York? A plausible explanation is that the more volatile or bubble-prone markets are those where supply constraints on desirable land and desirable locations are the most important, a condition that would exist especially in the large coastal cities. This makes economic sense: it would be hard to have a bubble in an asset where the supply can respond elastically to the higher price. This would also explain why the most volatile markets are also those where the average prices are relatively high.

What about the triggers for a housing price boom?

There are many possible factors that could initiate an upward adjustment in housing prices but, for the sake of the discussion, I will go beyond the content

of the paper to mention two that seem to have been important in Australia in the current episode:

- One is the shift to a low-interest-rate environment, which is itself a natural consequence of the transition to low inflation in the 1990s. This interest rate adjustment is estimated to have contributed to an approximate doubling of households borrowing capacity, at least some of which could be expected to be capitalised in housing prices.
- A second has been the increased availability of finance for the housing sector in the aftermath of financial deregulation. Since the early 1990s, housing finance has grown rapidly not only in absolute terms, but has constituted a strongly rising share of credit provided by the financial system as a whole. A rising component of finance for investor housing has been an important element of that. Thus in a little over 10 years, lending for housing has gone from not much more than 20 per cent of credit outstanding of financial institutions, to around 50 per cent. A significant part of that has been accounted for by lending to investors, which went from around 5 to almost 20 per cent of banks' loan portfolios over the same period.

These factors can be thought of as releasing latent demand and hence contributing to an upward adjustment in housing prices in Australia in the past decade. But whatever the initiating factors, there is a broader point that emerges from the paper: that is, that once such an upward adjustment of this type gets under way, the dynamics of extrapolative expectations have the potential to give the process additional momentum of its own.

Finally, I want to touch briefly on the question: what do these housing price dynamics mean for the broader economy?

I think the paper is right to focus attention on the possible effects on consumer spending. It is well documented that housing price increases have been associated with equity withdrawal by households in the US, UK and Australia, thereby contributing to growth of consumer spending in recent years. But this process also has the potential to work in reverse, as was seen in the UK in the early 1990s. Hence, it seems likely that large swings in housing prices, when they occur, can work to amplify the broader macroeconomic cycle.

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## 2. General Discussion

The discussion covered a wide range of topics including the behaviour of house prices, the micro-level evidence about household expectations about housing prices, and the macro-level evidence about the responsiveness of consumption and economic activity to changes in house prices.

One participant commented on the graphs presented by Case, Quigley and Shiller of the ratio of house prices to income in different US states and suggested that it is difficult to discern whether fluctuations in the ratio were evidence of misalignments

or rather movements to a new equilibrium. In particular, if house prices reflected expectations of future income, then a ratio using current income might be more volatile. Furthermore, divergent movement in the ratio between states could reflect to some extent differing expectations about future income, for example, driven by differences in recent productivity growth rates.

Another participant suggested that a decline in the average number of people per household could cause a shift in fundamental housing valuations. He recalled the view expressed during the discussion of the paper by John Simon that asset-price misalignments occur when there is a once-off shift in the fundamental value of the asset, which is misinterpreted as a permanent shift in the fundamental growth rate and subsequently becomes built into peoples' expectations. The finding of Case *et al* that people's expectations tend to be backward-looking was seen to support this idea.

The importance of the supply side was also raised. One participant noted that the responsiveness of construction activity to changes in prices may vary between segments in the housing market (e.g., between houses and apartments). If the responsiveness of the supply side is important in determining the propensity of asset-price misalignments developing (as was suggested by Malcolm Edey), this may mean that particular segments of the housing market are more bubble-prone than others.

Turning to the Australian housing market, one participant agreed with Edey that there have been periods in the past where large upswings in house prices have occurred. However, he thought that one distinguishing factor of the present upswing was how prolonged it has been. Another participant noted that the downward rigidities in house prices and rents emphasised by Case *et al* are also present in the Australian housing market. However, it was suggested that such rigidities were probably smaller in magnitude due to the higher proportion of floating-rate (rather than fixed-rate) mortgages in Australia, compared to the US.

The role of investors in the Australian housing market, and the implications for market dynamics, was another topic of considerable focus. One participant suggested that investors are more likely than owner-occupiers to sell in the face of falling house prices. However, another participant expressed the alternative view that housing investors are typically towards the higher end of the income distribution, have often paid off their principal mortgage and therefore are likely to be better able to absorb falls in house prices. On a related topic, Karl Case noted that in the US the relationship between the rental market and the owner-occupier market has altered over time. He cited the role of demographic influences, namely that the proportion of the population in the age groups that typically rent has declined, and contributed to the recent rise in the rate of home ownership.

The estimates of wealth effects in Case *et al's* paper prompted some discussion of whether housing is an intrinsically different asset compared to equities. One participant argued that this was the case as the household is both a supplier and consumer of housing services. Another participant noted that as a consequence it is the reaction of liquidity-constrained households to changes in house prices that is of macroeconomic importance. It was argued that households that own equities

are typically not credit-constrained, whereas increases in house prices would relax the credit constraints for a household at the margin, and that these factors explained why Case *et al* found that the elasticity of consumption with respect to equities is lower than the elasticity of consumption with respect to housing. Another participant thought that the relaxation of credit constraints might cause the effect of changes in house prices on consumption to be asymmetric.

Some of the discussion focused upon the experience of the states of Massachusetts and California in the US in the late 1980s. Case noted that in these episodes of rising house prices, people generally reduced their savings. When the aggregate economy weakened, housing-related sectors initially continued to grow, but then also weakened.

There was also some discussion of implications for financial stability of a fall in house prices. Several participants thought that financial institutions are likely to be able to withstand such a downturn better than previously. This reflected a variety of factors, including improvements in their banking practices, strengthened prudential regulation and supervision, and the move to securitisation of mortgage debt. However, there was some unease as to where the securitisation had redistributed the risk, and concern about the exposure in the US of mortgage insurance companies and the government-sponsored housing enterprises, Fannie Mae (the Federal National Mortgage Association) and Freddie Mac (the Federal Home Loan Mortgage Corporation).