

# This Time Had Better Be Different: House Prices and the Banks Part 1

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Before the US house price bubble burst, its banks and regulators claimed (a) that there wasn't a bubble and (b) that, if house prices did fall, it wouldn't affect the solvency of the banks.

The same claims are now being made about Australian house prices and Australian banks. On the former point, Glenn Stevens recently remarked that:

"There is quite often quoted very high ratios of price to income for Australia, but I think if you get the broadest measures country-wide prices and country-wide measure of income, the ratio is about four and half and it has not moved much either way for ten years.

"That is higher than it used to be but it is actually not exceptional by global standards. ([SMH March 16<sup>th</sup> 2011](#))

On the latter, APRA conducted a "stress test" study of Australian banks in 2010, with the stresses including a 30% fall in house prices over 3 years:

**Table 1: APRA Stress Test Table, APRA Insight 2010/2, p. 9**

	2009/10	2010/11	2011/12
GDP growth (%)	(-3.0)	2.1	3.5
Unemployment (%)	9.8	10.8	10.7
House Price Growth (%)	(-11.8)	(-12.1)	(-1.7)
Commercial office property growth (%)	(-21.5)	(-9.4)	1.5

[APRA's conclusion](#) was:

The main results of the stress-test for the 20 ADIs, taken as a group, are as follows:

- none of the ADIs would have failed under the downturn macroeconomic scenario;
- none of the ADIs would have breached the four per cent minimum Tier 1 capital requirement of the Basel II Framework; and
- the weighted average reduction in Tier 1 capital ratios from the beginning to the end of the three-year stress period was 3.1 percentage points. ([APRA Insight 2010/2](#), p. 10)

So there's nothing to worry about then? No bubble to pop, and no problems for the banks if house prices fall anyway? In this post I'll consider the argument that there is no bubble because changed economic fundamentals justify Australia's relatively high house prices. In the next I'll consider what the popping of the bubble could mean for Australian banks.

## Prices

Glenn Stevens' claim that the house price to income ratio was "about four and a half" was almost certainly relying on research by Rismark. Rismark MD [Chris Joye recently asserted](#) that the house price ratio in Australia was 4.6, and though he conceded this was somewhat high, he argued that it was justified by changes to economic fundamentals. He ridiculed the claim, made by The Economist on the basis of a comparison of house prices to rents, that Australia's house prices are 56% overvalued:

The Economist does not question whether the old housing ratios might be nonsensical to today's home owners as a result of:

- Fundamental changes in the structure of the economy wrought by the fact that interest rates over the past 15 years have, on average, been 43 per cent lower than interest rates in the 15 years that preceded that period;
- The fact that average inflation since the middle of the 1990s has been 55 per cent lower than inflation in the 15 years prior; or
- The fact that the rise of two-income households and the female participation rate in concert with a near halving in the nominal cost of debt might have triggered a once-off upward increase in household purchasing power, and hence housing valuations... (Chris Joye, [A property bubble long shot](#), Business Spectator March 25 2011)

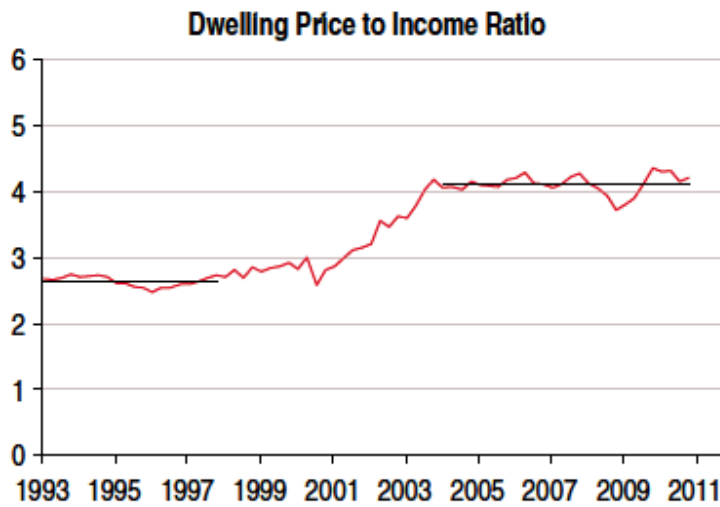
Former RBA staffer and now HSBC economist Paul Bloxham was equally adamant: Australian house prices are a tad high, but they are justified by changed economic fundamentals over the last 15 years:

... a large structural adjustment that occurred in the Australian housing market between 1997 and 2003... involved lower interest rates, better-anchored inflation expectations, and increased availability of housing credit. Without some reversal of these structural changes – which is a virtual impossibility – we do not expect Australian housing prices to fall...

Since late 2003 the dwelling price to income ratio has been broadly stable at between 3.5 and 4.5 and has averaged 4 (see chart)...

We view the risk of a sharp fall in housing prices as very low. (Paul Bloxham, [The Australian housing bubble furphy](#), Business Spectator March 18 2011)

Figure 1: Rismark's Dwelling Price to Income Ratio Chart



Source: Rismark

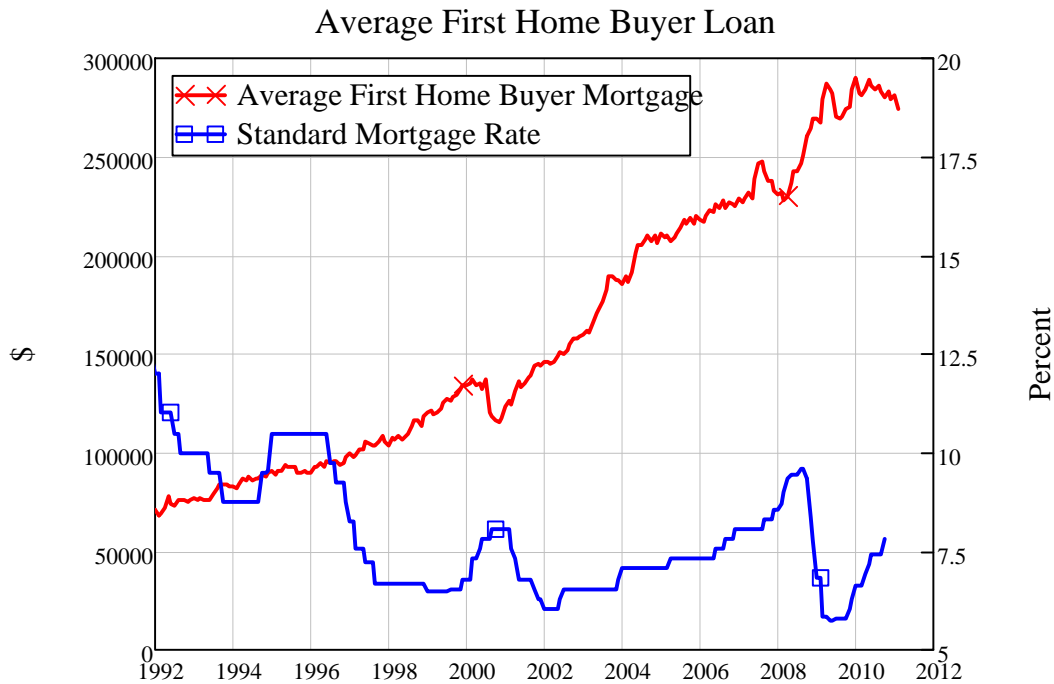
In other words, this time is different.

### They would say that, wouldn't they?

The "this time is different" argument asserts that lower interest rates, lower inflation and higher income per household (and more income earners per household) means that though the house prices to income ratio might be higher than before, it's nothing to worry about.

Tell that to a would-be first home buyer who's contemplating taking out a mortgage. In 1992, the average mortgage for a First Home Buyer was \$ 71,500. It is now \$274,000.

Figure 2: Average First Home Mortgage and Mortgage Interest Rate



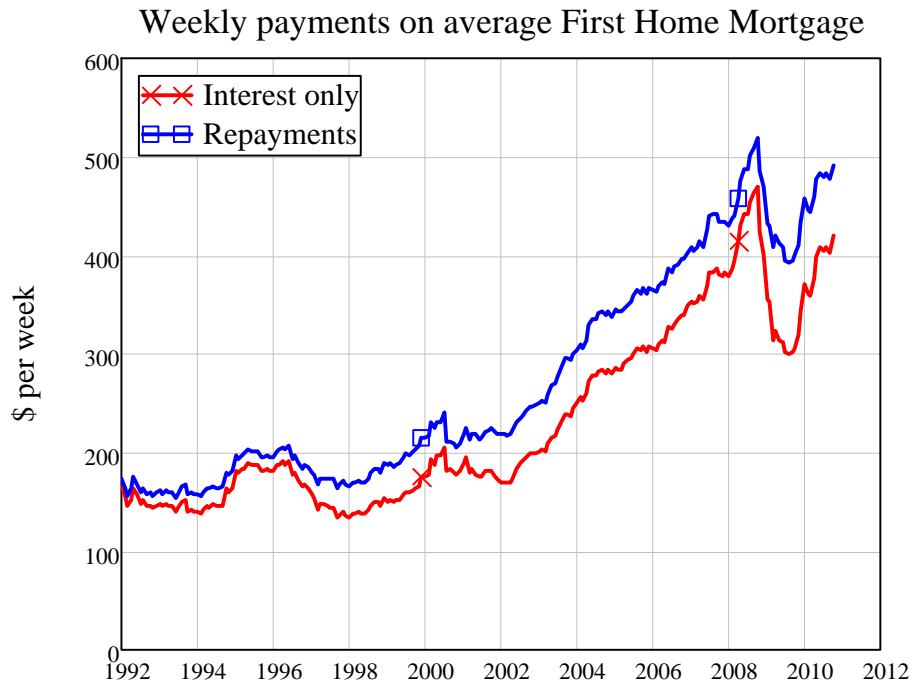
Source: ABS 560909a, Column D; RBA Table F05 Column K

The “no bubble” argument asserts that this has been counterbalanced by the fall in interest rates—which were 12% then and are 7.8% now. So the average first home buyer’s mortgage is 3.8 times higher than it was two decades ago, while interest rates are  $2/3^{\text{rds}}$  what they were then. Does one—along with changes in income and demographics—counterbalance the other?

Not on your life: the increase in debt and debt servicing has far outstripped all the factors that Joye and Bloxham rely upon to argue that Australia’s house prices are not in a bubble.

I want to make this case slowly, so that you can see each step in the argument, so let’s first look at the weekly interest and loan repayments on a typical 25-year First Home housing loan. Back in 1992, the weekly interest bill was \$165; now it is \$420—2.5 times as high. Repayments were \$174; now they are \$490—2.8 times as high.

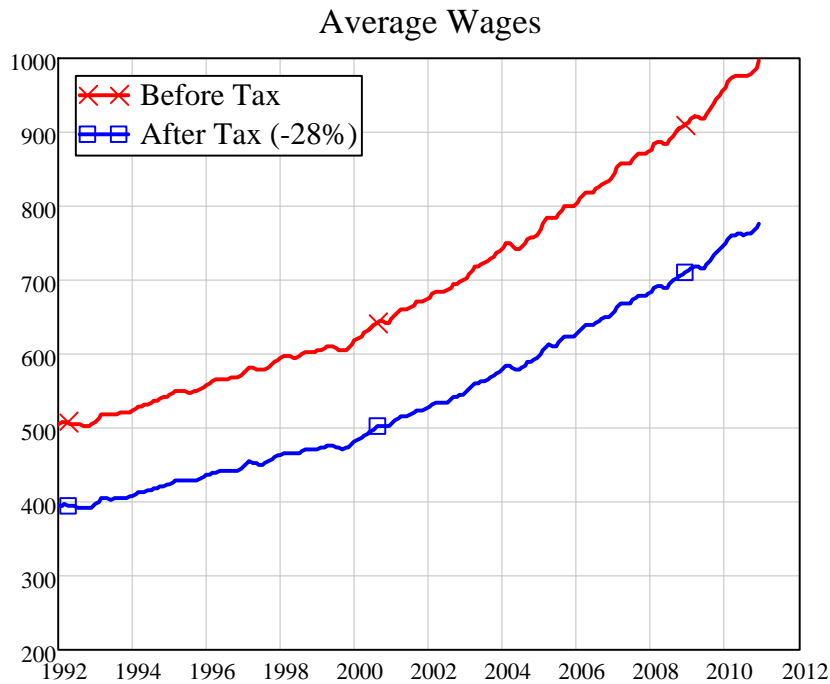
Figure 3: Interest up 2.5 times, repayments up 2.8 times



So have incomes risen sufficiently to mean that this almost threefold increase in debt servicing costs over 20 years is no big deal?

Not if you're a wage earner! Average *before tax* wages have risen from \$505 a week in 1992 to \$996 a week at the end of 2011—so they have almost doubled. Using an average tax rate of 28%, that gives the average wage earner \$777 after tax a week today, versus \$394 back in 1992.

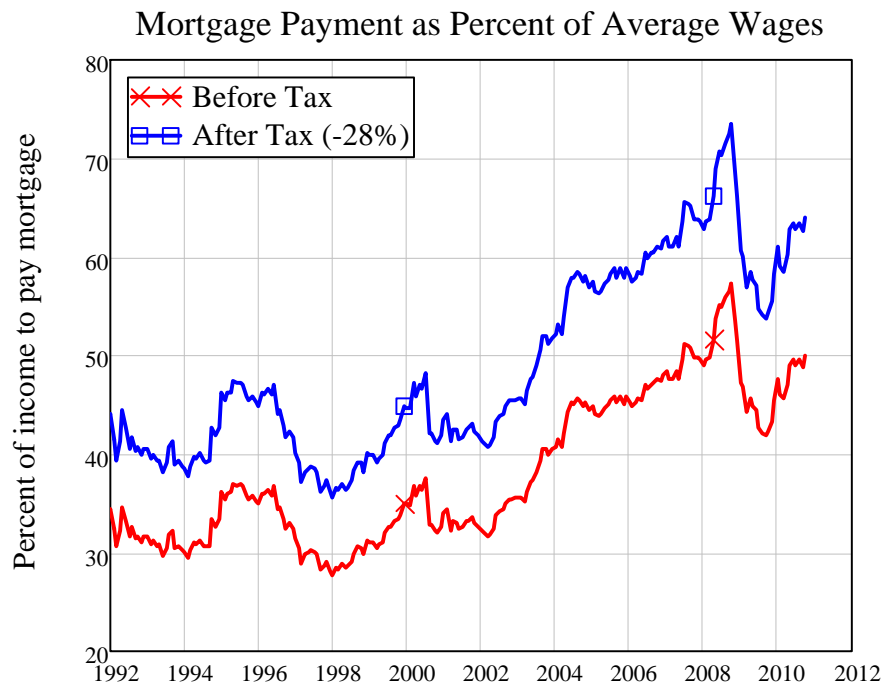
Figure 4: Average wages have risen by 97% since 1992



ABS 6302003 Column J

While wages have risen, the 2.8 times increase in loan repayments means that mortgage payments on an average first home loan have gone from taking 40 percent of after-tax income of the average worker in the 1990s to 64 percent now—after reaching a peak of 74 percent in late 2008 before the RBA slashed interest rates (the ratio fell to 53 percent, and it would have fallen further had the First Home Vendors Boost not caused house prices to skyrocket again).

In the early 1990s, a young wage earner could aspire to financing a house purchase using his or her income alone. Now, that's out of the question.

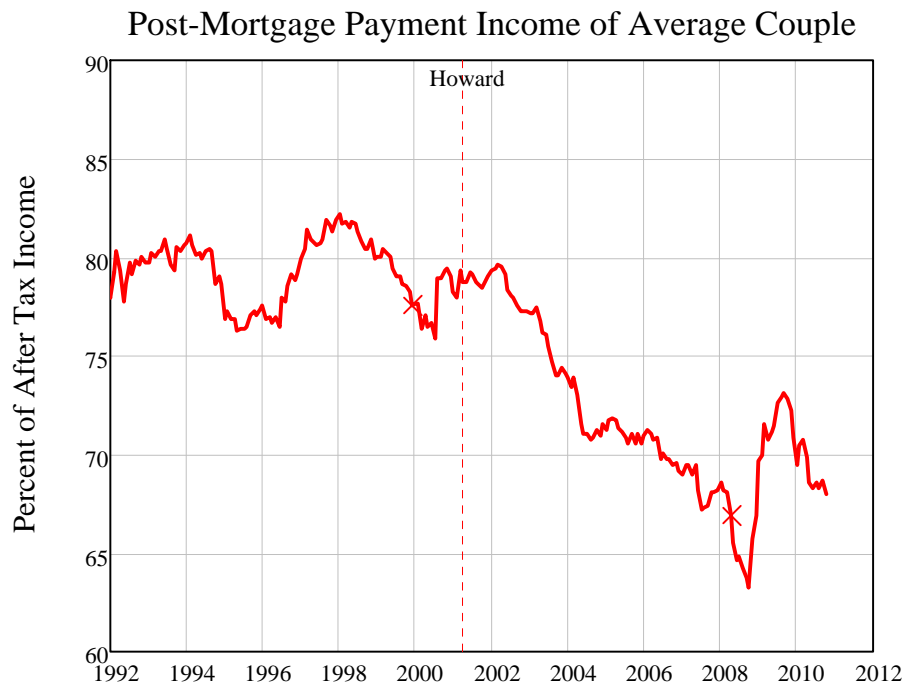


### He's a (young) Working Class Man-Renter...

This is what the “no bubble” proponents don't get: **high house prices have become a class and age issue**. If you're a young “working class man” on the average wage, you can no longer afford to enter the housing market in Australia—since the average first home loan would consume over 60 percent of your after-tax wage.

Even if you're a “young working class couple”, the cost of servicing a mortgage from wage income alone is prohibitive. In the 1990s, a couple (where both earned the average wage) had about 80% of their income free for other costs after paying the average First Home mortgage. The rapid escalation in house prices after Howard doubled the First Home Owners Grant in 2001 drove this down to under 65 percent—and most wage-earning couples simply don't have that much headroom in their budgets. They can't pay the rates, the food bill, the petrol, and the education fees, with less than three quarters of their after-tax income.

Figure 5: Max Headroom--disposable income after paying the mortgage plummets as prices rise



Faced with this level of potential debt-servicing costs, young would-be house-buyers are giving up on the dream of home ownership—and its attendant nightmare of debt peonage. They're also [signing up in droves](#) to call for a political campaign against house prices by GetUp: see the [Anti-FHOG](#), [Anti-Negative Gearing](#), and [Buyers Strike](#) campaign suggestions (and read David Llewellyn-Smith's [excellent piece](#) on it in the Fairfax press too).

A "Buyers' Strike", whether organized or not, is what will end the Ponzi Scheme of debt-inflated house prices, because like all Ponzi Schemes it only continues to work so long as new entrants outweigh those trying to cash out.

Those who are trying to cash out—existing house owners who are selling as speculators, or selling to realize a paper capital gain and upgrade to a more expensive house, or selling an investment property to fund their retirement—are now selling into a dwindling market.

The first effect of this imbalance between demand and supply is an increase in the time to sell, and in the number of unsold properties on the market. The second effect is a moderate fall in prices, once sellers who have to sell realize that they have to take a haircut. The third effect in Australia may well be an increase in sales by property speculators, if they see their capital gains diminishing the longer they hold on to their "investments".

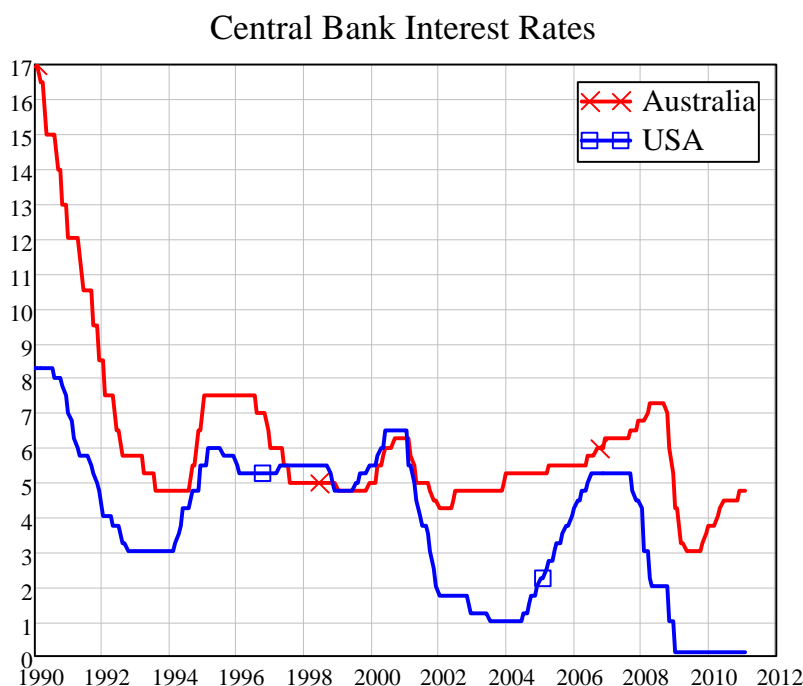
The Scheme could be kept alive by a reduction in interest rates to entice new buyers into the market—Australia's floating rate mortgages make it much easier for the Central Bank to manipulate mortgage



rates here than in the USA—but even there, there's a limit. To get mortgage payments back to 20% or less of the after-tax income of a couple earning the average wage— without mortgage levels falling, and hence house prices falling—the mortgage interest rate would need to fall to 3%. This would require the RBA to drop its cash rate to zero from its current level of 4.75 percent.

Even if it does do that, it will take a very long time to do so—remember that Australia's Central Bank was still raising interest rates well into the GFC (it increased the cash rate to 7.25% in March 2008, and only starting cutting it in September when the crisis was already a year old). Mortgages and house prices will have plenty of time to fall before that happens.

Figure 6: Australia's Central Bank rate is almost 5% higher than the USA's



This raises two questions: how much could house prices fall, and what could be the impact of a fall on the financiers of this Ponzi Scheme: the banks?

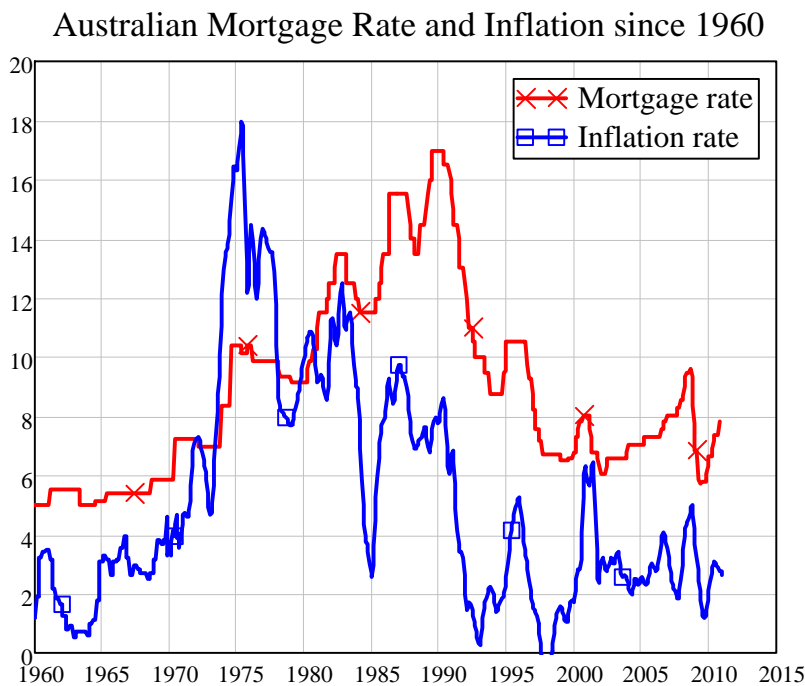
I'll consider the second question in a post next week; for now let's do something the "no bubble" crowd regularly refuse to do, and consider long-term data on house prices and incomes.

### Fighting Magoo-nomics with long-term data

I sometimes feel like I'm fighting Mr Magoo when I debate the non-bubble set: they choose a short-term data set and then tell me that what I'm predicting can't happen because it has never happened before. Yet there is long-term data to show that it has happened before. They either ignore it, or find reasons to dismiss it because it doesn't meet their quality standards.

This is self-serving. Older data will almost always not meet modern standards, simply because it is old and, in most cases, statistical practices have improved over time (one obvious exception to this is government reporting of unemployment and inflation, where standard have been dropped for political expediency—see [Roy Morgan's figures on the actual unemployment rate in Australia](#), and John Williams' "[Shadowstats](#)" information on actual unemployment and inflation in the USA). But the data exists, and unless it is out by a huge margin, the information it contains is worth considering.

Joye's points above about interest and inflation are a case in point here: "interest rates over the past 15 years have, on average, been 43 per cent lower than interest rates in the 15 years that preceded that period... average inflation since the middle of the 1990s has been 55 per cent lower than inflation in the 15 years prior". That's all true—but if you look back further in time, interest rates and inflation were *lower* in the 1960s than they are today. In the 1970s, though interest rates were higher than today, they were lower than the rate of inflation, so that the real interest rate was negative.

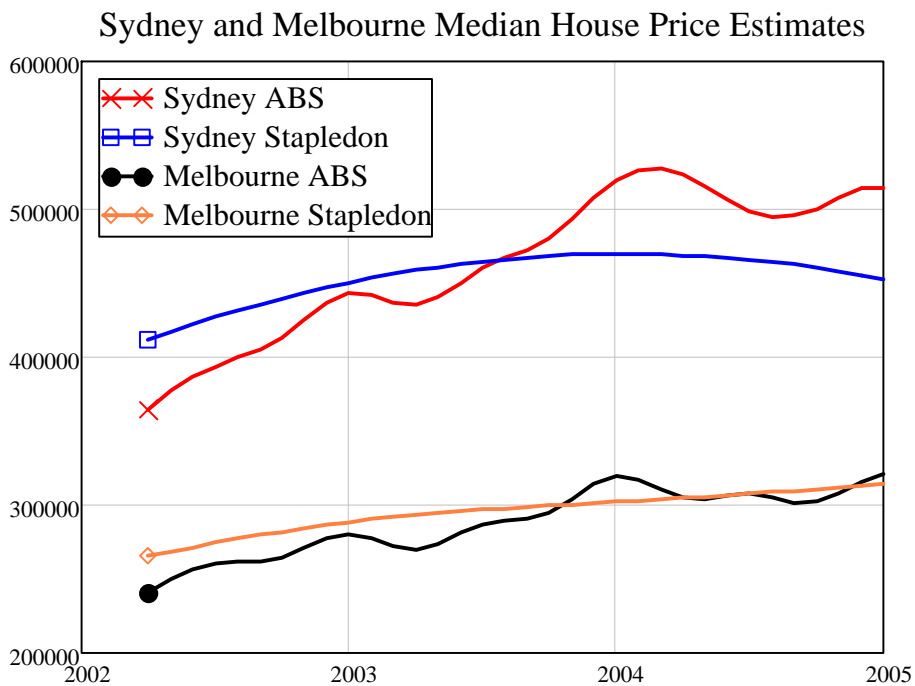


Time Period	Nominal Mortgage Rate	Inflation Rate	Real Mortgage Rate
1960-70	5.37	2.43	2.94
1970-80	8.62	9.76	-1.13
1980-95	12.71	6.69	6.02
1995-2011	7.55	2.78	4.77

If Joye and Bloxham's "structural changes mean this time is different" case was valid, then mortgages and house prices should have been higher relative to incomes in the 1960s than today (let along the 1970s!) because interest rates and inflation were much lower then than now.

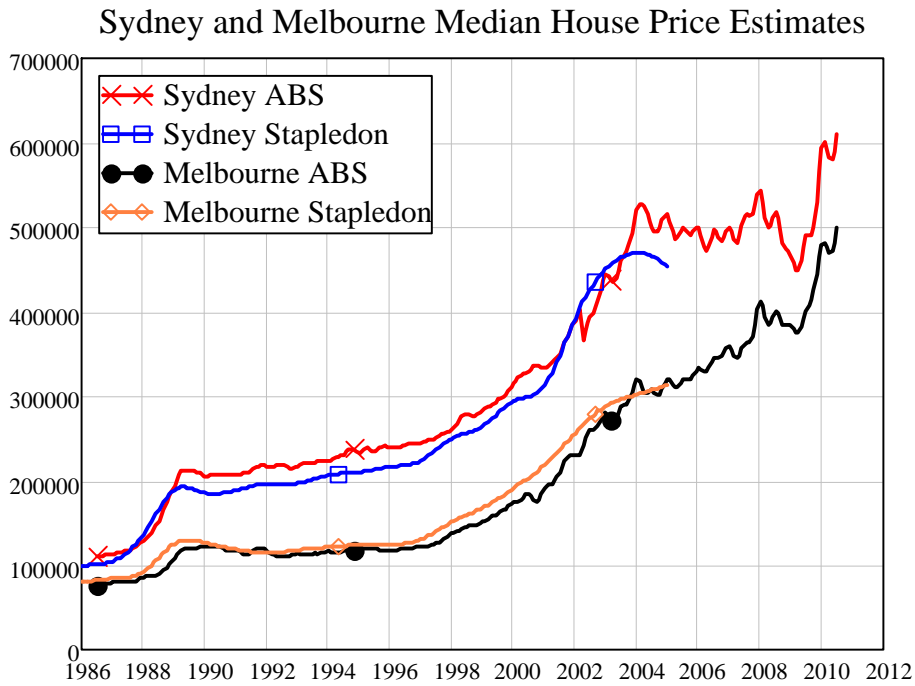
And were they? Here we have to do some detective work, to combine the very brief ABS time series on house prices (which starts in 2002) with longer term house price estimates for Sydney and Melbourne put together by Nigel Stapledon of UNSW (which starts in 1880 and ends in 2005). Though put together with very different methodologies, the overlap is good for the 3 years they share in common—especially for Melbourne.

Figure 7: Two methods for estimating house prices with comparable results



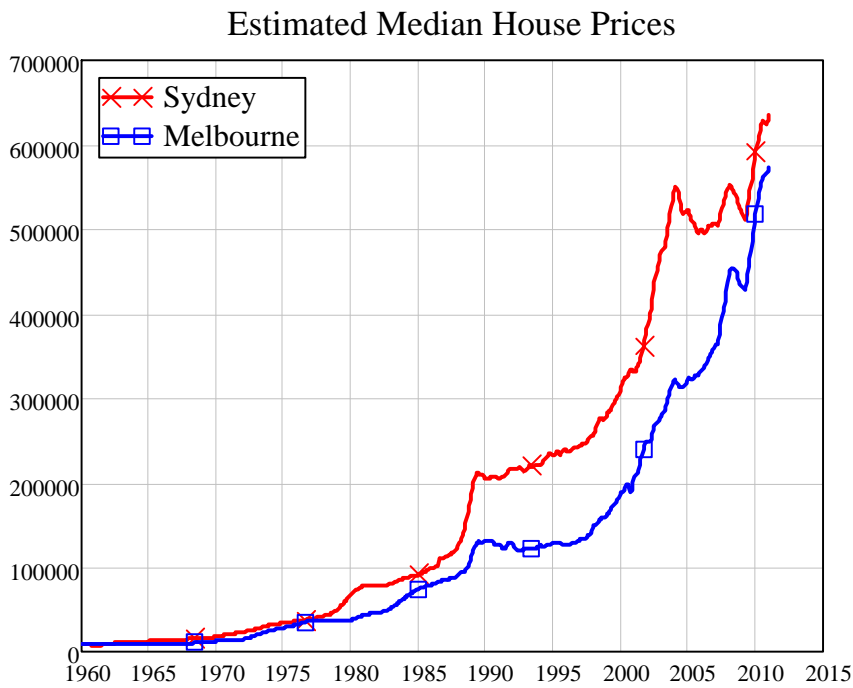
It's also possible to derive an implied ABS median house price for Sydney and Melbourne by combining the ABS's median house price index data—which goes back to 1986—with its price data from 2002 on. Stapledon's data also fits this series very well—again, especially for Melbourne.

Figure 8: They're also consistent over the last 25 years when combined with ABS Index data



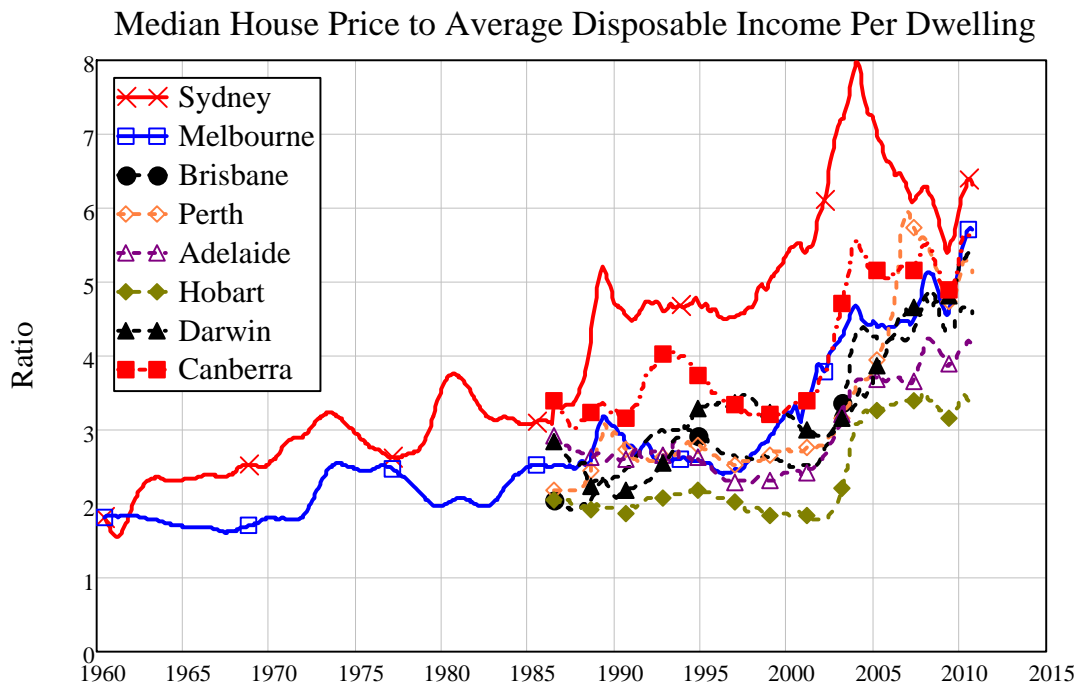
Given this close correspondence, I'm willing to use Stapledon's data as a reasonable guide to what median house prices were before the ABS began collecting house price index data.

Figure 9: Estimated median prices for Sydney and Melbourne using Stapledon's data till 1986 and ABS afterwards



Now we can combine this data with ABS and RBA data on disposable incomes, population and the number of dwellings to see how the ratio of house prices to disposable income has fared over time.

Figure 10: A tripling of house prices compared to incomes over the last 50 years



There are various problems with this comparison:

- It compares median house prices to average incomes, and therefore understates the median to median (or average to average) comparison by about 25 percent;
- The ABS Index only covers free-standing houses, thus overstating (probably also by about 25 percent) the median price level by omitting cheaper apartments;
- It doesn't account for differences in average disposable incomes by city, thus overstating the ratio for Sydney and Melbourne, but understating it for the other cities.

But overall it's a reasonable guide to something we desperately need more information on, and the over-time comparisons are valid. An average-income household could have purchased the median house in Sydney with less than 2 years of disposable income in 1960; it now takes over 6 years—and at the peak, it took 8 years.

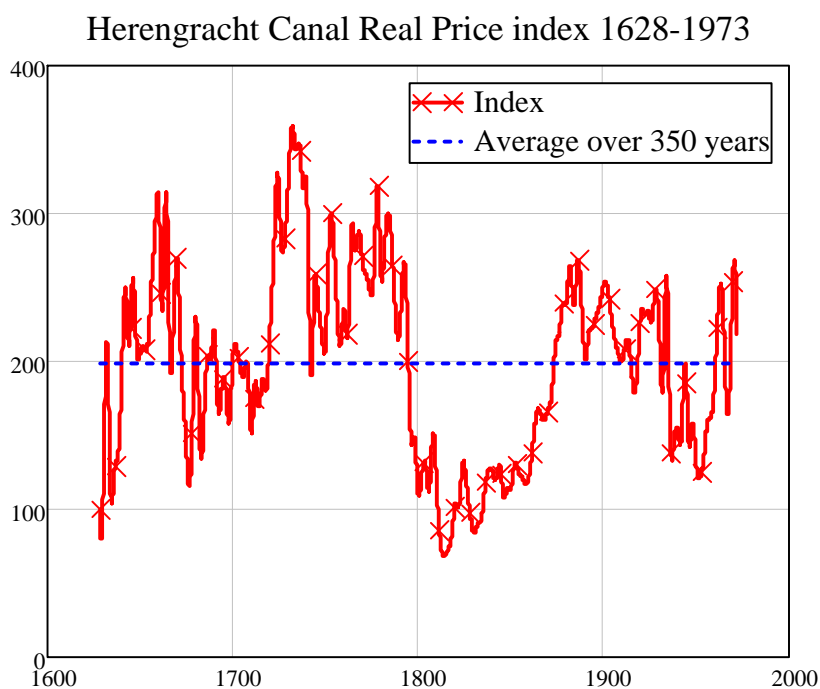
What's more, the servicing cost of this debt was *lower* in the 1960s than it has been for the last decade, because mortgage rates were 30% lower back then.

So much for Stevens' claim that "the price to income for Australia ... is about four and half and it has not moved much either way for ten years". The myopic focus of "no bubble" commentators on the last 10 years of data ignores a bubble that, since 1985, has doubled the relative cost of buying a house. Since the early 1960s, when the oldest Baby Boomers were buying their first properties, it has tripled the cost.

To restore the house price to income ratio that applied in 1985, before this bubble really took off, house prices would have to fall by 50 percent compared to incomes.

The final refuge of bubble deniers is a claim that I've heard much less of in recent years—after the US Bubble clearly burst in 2006—but which is still worth addressing: that house prices always rise faster than consumer prices over the long term. The best empirical retort to this is the [price index](#) compiled for Amsterdam's most expensive canal from 1628—just before the Tulip Craze began—till 1973. There were lengthy periods where prices generally went down in real terms, and equally lengthy periods where they went up. It was possible to be born when a long term slump began, and die at a mature age believing that house prices always fall; and ditto for believing, from your own experience, that they always rise. But over the very long term, there is no trend.

Figure 11: Amsterdam prices; booms and bust over 350 years, but no trend

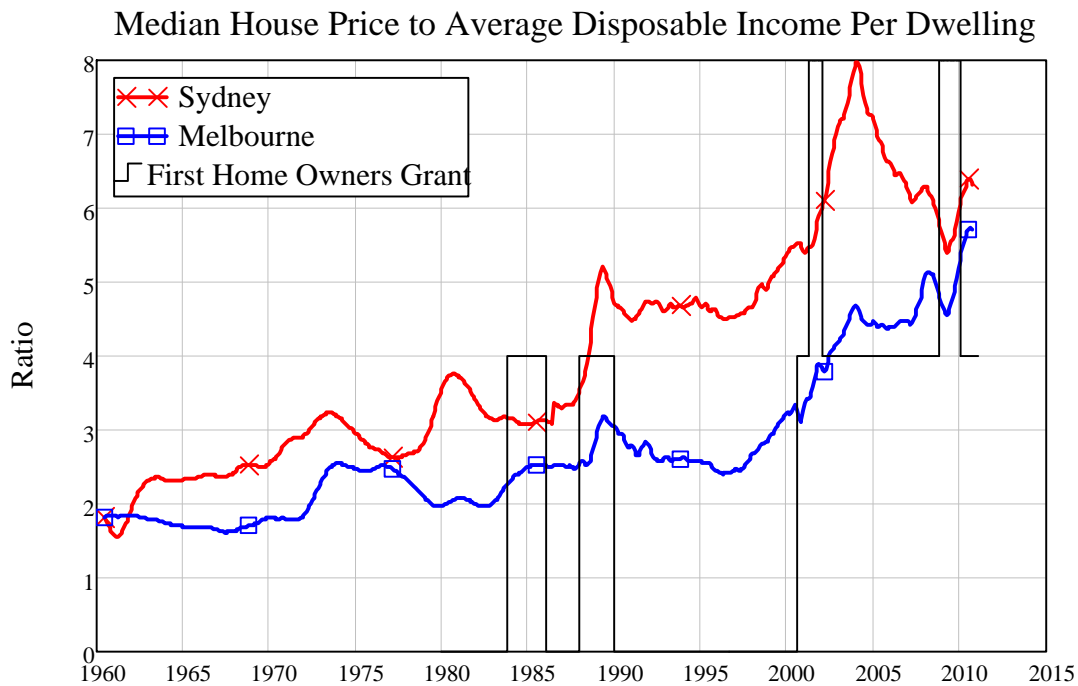


### Driving Miss Bubble

There were two main drivers of this bubble: a financial sector that makes money by creating debt, and a government sector that has (to some extent unwittingly) used asset price manipulation as a cheap means to stimulate the economy.

The impact of the government is obvious when you overlay the First Home Owners Grant over the house price to income data.

Figure 12: The FHOG lifts prices and stokes the debt-driven economy



Statistically, its impact sticks out like a sore thumb as well. Between 1951 and when the FHOG was first introduced (in 1983), the average quarterly change in real house prices was 0.07 percent—or effectively zero. After it, the average quarterly change was just shy of 1%. When the Scheme was in operation (it was not in operation during the 1990s), the rise was 2% per quarter; on the two occasions when the Grant was doubled, real house prices rose by 3 percent per quarter.

Normal Stats	Before FHOS	After FHOS	All Data	During FHOS	Between FHOS periods	When FHOS doubled
Mean	0.07%	0.95%	0.47%	2.17%	0.26%	3.10%
Min	-5.53%	-3.73%	-5.53%	-2.26%	-2.26%	-0.92%
Max	3.91%	7.86%	7.86%	7.86%	2.95%	4.93%
Std. Dev.	1.73%	2.17%	1.99%	2.71%	1.27%	1.83%
Count	131	108	240	25	50	7

On all but one occasion, the Grant was used as a macroeconomic tool—a cheap way of boosting the economy during a downturn, whether actual or feared (the one other time—when Howard revived it in 2000—it was as a “temporary” support to the building industry when the GST was introduced; that temporary support has now lasted almost 12 years).

The Grant works because the relatively small government grant is levered not once, but at least twice. Firstly the First Home Buyer’s borrowing capacity is boosted by the lender’s Loan to Valuation Ratio—so \$7,000 to the borrowers becomes something north of \$50,000 for the vendors with today’s sky-high

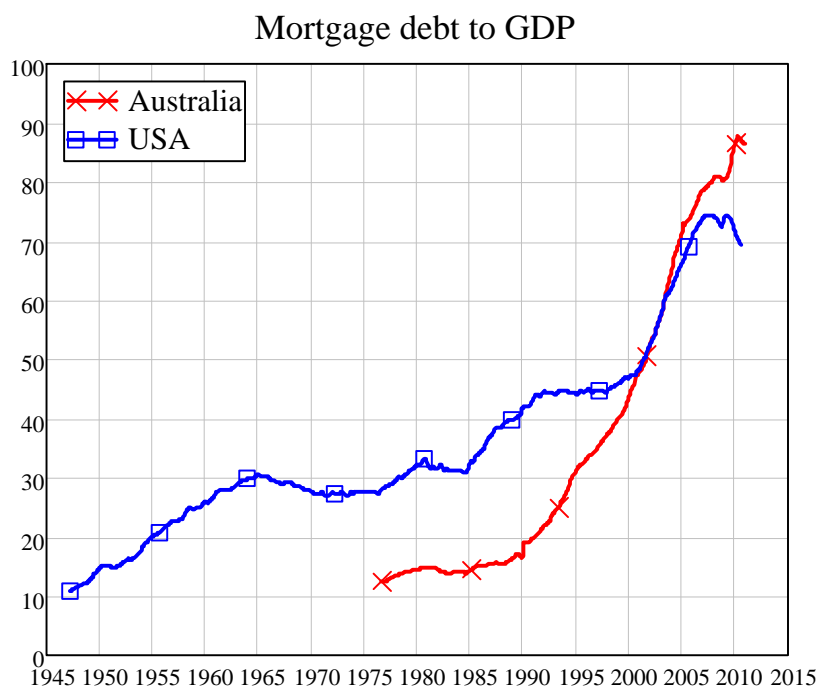


LVRs. Then the vendors use the additional cash they received as increased deposits for their next purchase.

The banks are happy to fund this process, because [they make money by creating debt](#), and are therefore always looking for avenues by which it can be created. When borrowing is based upon expected future income, or even aimed at funding consumption today, creating additional debt is hard. But if borrowers can be persuaded that there's money to be made by borrowing money and speculating on asset prices, there is—for a while—an easy means to create more debt.

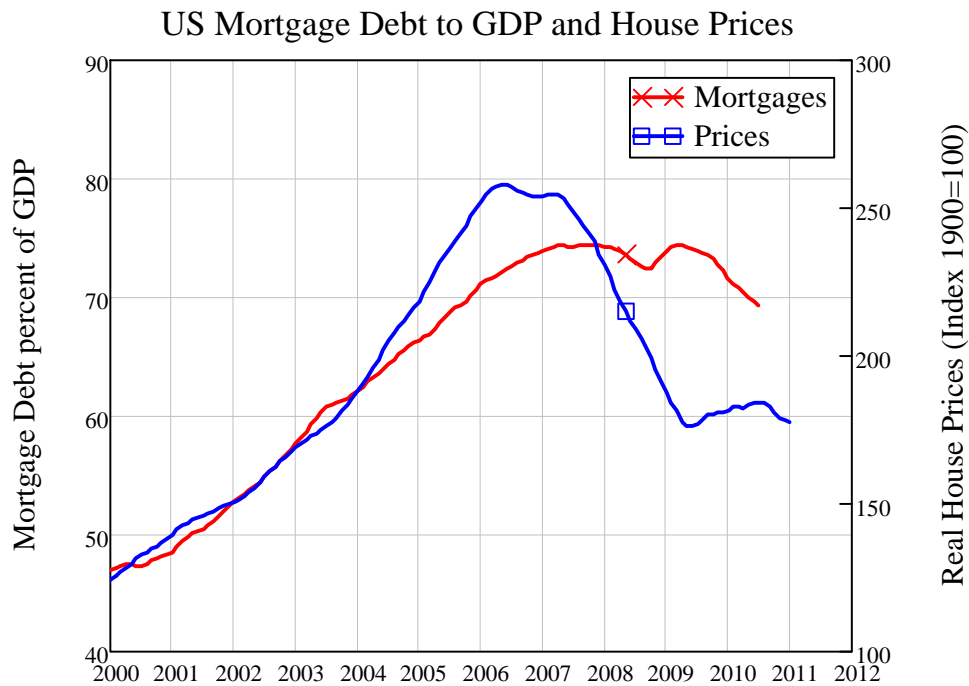
Ever since 1990, that's been the secret to both the house bubble and the profitability of Australian banks. They've made their money by financing Australia's property bubble; they started to do so the moment the previous speculative bubble—the one that gave us Alan Bond and Christopher Skase—died out; and, though the spin is that the USA had irresponsible lending while Australia's lenders were prudent, mortgage debt grew three times more rapidly in Australia than in the USA, and reached a peak 18 percent higher than the USA's.

Figure 13: Australian banks have been responsible lenders? Compared to whom?



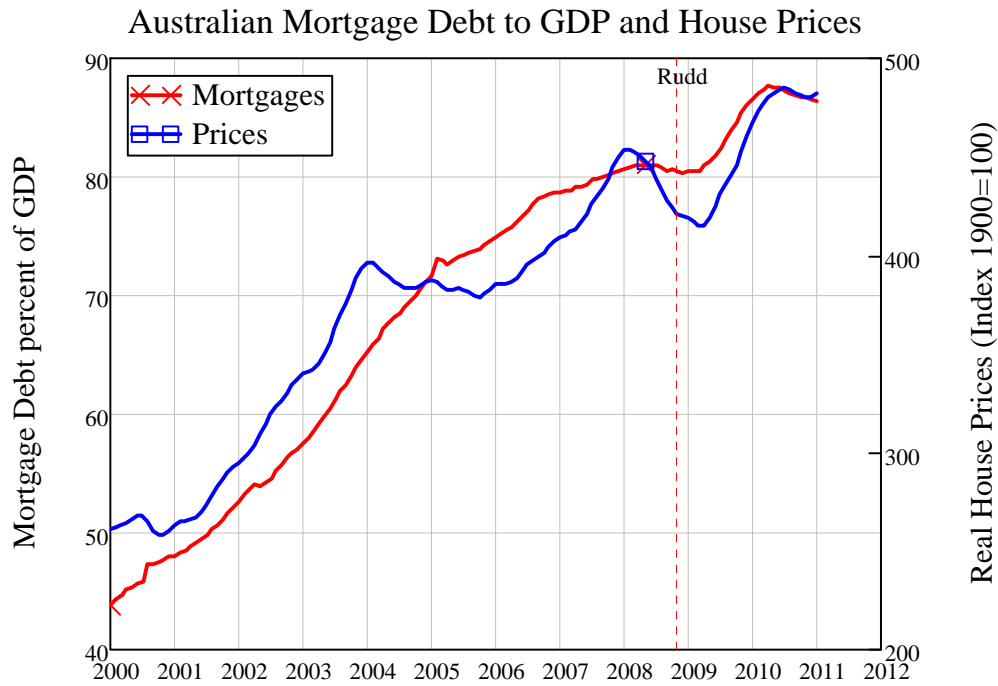
The growth of this debt is what really drove house prices higher, and now that our mortgage debt to GDP ratio is starting to turn, so too are our house prices—just as in the USA.

Figure 14: Rising debt drove the US bubble up, and slowing debt caused it to burst



The only thing that delayed this process in Australia was the last gasp of the First Home Vendors Scheme under Rudd, which turned a nascent decline in Australia’s mortgage debt to GDP ratio into a final fling of the debt bubble. Had the trend continued, the mortgage debt to GDP ratio would have fallen about 2 percent. Instead it rose over 6 percent, injecting about \$100 billion of additional debt-financed spending into the Australian economy. It was a major factor in Australia’s apparently good performance during the financial crisis, but as one my bloggers remarked, it worked by “kicking the can down the road”.

Figure 15: The same dynamic is playing out in Australia, though delayed by the FHVB



We all know what happened to the US finance sector after the US house price bubble burst. In the next post I'll consider what could happen to Australian banks as our bubble ends.