ECONOMICS & GLOBAL MARKETS RESEARCH

HOUSING OVERVALUATION

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CONTRIBUTOR

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SUMMARY

- *Structural* influences 'explain' observed house price outcomes to date, offering no reasonable grounds for expecting a significant correction in the foreseeable future.
- Cyclical/transitory forces upon the housing market, however, are delicately poised with a number of market supports removed over 2010 and the prospect of higher interest rates imposing upon affordability and investor sentiment in the year ahead.
- While the market is vulnerable to weaker momentum becoming entrenched in the medium-term, support from an economy growing at around trend and the prospect of a tightening in rental markets will help establish the pre-conditions for a renewed house price recovery in 2012.
- Falls in net migration levels, if persistent, will moderate the pace of rental market adjustment, likely delaying expected house price recovery.
- A *rapid* escalation in interest rates (low probability and not ANZ's main case) to combat unwelcome higher 'core' inflation represents a significant *transitory* risk to house prices over the next few years.
- Conversely, a risk scenario based around a *major* collapse in the terms of trade (also not ANZ's main case), contrary to expectations, is more likely to prompt policy settings that can only be favourable for house prices, particularly if momentum has been restrained in the lead-up. Interest rate-sensitive sectors such as housing will benefit considerably and swiftly.

ARE AUSTRALIAN HOUSE PRICES OVERVALUED?

We should just 'cut to the chase' and ask the more interesting and relevant question: '*will* Australian house prices fall?' It is easy to make a claim that house prices are overvalued by, let's say 20%, 40% or even 50%, particularly if the statement is then qualified with "we don't think prices will *actually* fall by this much". To suggest there is overvaluation begs some questions:

- Why has it persisted?
- What is inhibiting the correction?
- If there is going to be a correction, will prices fall by some, all or more than the extent of over-valuation?
- When can we expect the correction?
- What happens after the correction?
- What 'information' has the market overlooked that the analyst is so sure about?

The more you think about it, the more you realise that the concept of "over-valuation" is misunderstood or at least not fully appreciated and therefore generally misrepresented. It is more sensible to solve for what *will* happen and not what *should* happen. To do so, one needs to recognise both the *value and limitations* of the more useful commonly applied metrics and then overlay some of the less quantifiable and in some cases non quantifiable drivers.

Encouragingly, many analysts measuring 'overvaluation' do qualify their conclusions and by so doing implicitly or explicitly acknowledge that what *actually happens* to house prices is driven by forces *other* than those used to calculate their estimate of overvaluation.

The problem in the debate is that these 'other forces' are often conveniently ignored or discounted as either insignificant or irrelevant. This is central to why there are disparate views about the future of house prices. Put another way: we are not on the same page but we're all reading from the same book.

IT'S ALL TOO SIMPLE

Discussion about whether house prices are overvalued and calculating 'by how much' is generally founded on single-dimensional metrics using long-run averages and sometimes more cleverly-determined historical benchmarks often as a reversion target. Sometimes, the ratios used are ill-founded e.g. 'debt to GDP' or 'house price to income'.[1] Even the slightly more embedded affordability-based measures and rental-discount models are generally afforded too much status as if they capture all the information required to explain price outcomes. Such measures do get closer, offering a solid basis upon which to build analysis but none of these measures *alone* is powerful enough to fully explain the observable trend in prices.

More sophisticated econometric techniques that include a handful of measurable drivers, at least in principle, acknowledge that there is more at work in the market place and that single-dimensional measures alone won't do all the explaining[2]. That said, while econometrics offers some value, the technique has significant shortcomings: not all drivers are measurable (at all or not very well) so they remain outside the analytical framework. Also, the influence of particular drivers waxes and wanes over and across cycles. Econometrics "averages out" these influences, thereby seriously misrepresenting the dynamics of the market place at any point in time. Econometrics also struggles to capture the impact of structural shifts.

[1] These ratios compare a stock against a flow and take no account of changes in the cost of capital over time.
[2] For example, see 'What drives house prices in Australia? A cross country approach', IMF 2010.

FIGURE 1. NO MEASURE IS AN ISLAND

MEASURE / METHOD	DESCRIBED	COMMENT
$ LEVEL OF HOUSE PRICE	Commonly used in a conversational context. Rapid escalation in prices is often interpreted as evidence of 'bubble'.	Devoid of any analytical value other than being the raw material for analysis. Users suffering from effects of money-illusion.
'HOUSE PRICE TO INCOME' RATIO	Premised on the valid assumption that income (flow) is generally the primary source for servicing obligations (stock) that are typically associated with house purchase but that this relationship is stable over the long-term. Mean reversion assumed to occur at some stage.	A good starting point. Ignores shifts in cost of funding, other structural shifts (e.g. taxation), funding preferences, housing market conditions, credit availability etc. These influences undermine long-term average as a useful benchmark.
'HOUSE PRICE TO RENT' RATIO	Premised on the notion that housing rents and prices will equilibrate to some historical average relationship.	Like its cousin above, does not accommodate structural shifts in cost of capital, taxation. Also, treats housing as a pure investment play.
DEBT-SERVICING RATIO	Aggregate interest divided by aggregate disposable income.	Ok as a guide to measuring the leverage interest rate changes have on aggregate interest burden. Little direct insight offered to house price analysis.
PURCHASE AFFORDABILITY	Interaction of interest rates, incomes and house prices under stylised debt structure and servicing assumptions.	Useful gauge for typical first-time buyer entry burden. Takes no specific account of conditions facing investors/upgraders.
RESIDENTIAL PROPERTY RISK PREMIUM	Gap between rental yield and real risk-free bond rate. Comparing this gap with its long-term average.	Assumes housing is a pure investment play but has considered shift in (before tax) cost of capital. Ignores housing market fundamentals, etc, assumes mean reversion.
RENTAL DISCOUNT MODEL	Value is based around discounted sum of all future rental payments.	Assumes housing is a pure investment play. Need to choose a discount rate. Ignores housing market fundamentals, etc.
ECONOMETRIC MODELLING	Various combinations of variables to help more fully explain observed outcomes.	Useful as it considers a multiple of explanatory variables within one framework ***but*** surrenders market dynamics and can erroneously interpret 'unexplained' price movement as market disequilibrium rather than model mis-specification.

SO MANY DRIVERS

House prices reflect a complex set of influences on both the demand and supply sides of the market. What the statistician measures is a representation of how all the interactions manifest. The importance of particular drivers shifts over time and sometimes there are structural changes that may or may not reverse. Some of these are gradual (e.g. cost of funds) and may take time to be built into medium and longer-term expectations while some will impact more immediately (e.g. a change in prudential risk weights on the lending mix). Sometimes, incentives are offered that alter the dynamics of the market place. Lenders can change debt servicing thresholds for customers and regulatory change can alter the economics of investing, lending, owning or renting. There can be large swings in dwelling construction and in population growth that alter market balance. This imbalance can persist for many years or be transitory. Consumer attitudes and expectations also play a critical role. Once expectations shift and take hold, they can generate behavioural change that defies or counters fundamentals and other market signals. *As a consequence, the equilibrium that analysts target in single-dimensional metrics is eternally elusive as the myriad of other legitimate drivers continually 'push and pull' on outcomes.*

The aim of house price analysis therefore should not be to simplify relationships (e.g. assume reversion to long-run averages) and then imply that the discrepancy *must represent* 'over-valuation'. Rather, the strategy should seek to validate observed price outcomes by internalising a broader set of drivers and making an assessment of how each of these will play out. Let's not kid ourselves; many of the 'extra' drivers are not quantifiable. As a second-best solution, assigning the direction and power of influence to particular drivers (in retrospect and in prospect) will allow for a more robust interpretation of what has happened to house prices to date and what is more likely to happen in the future.

WILL HOUSE PRICES FALL?

To assist analysis, a distinction needs to be made between *structural* influences (e.g. a lasting regulatory change or a 'permanent' shift in the cost of funds) and *cyclical/transitory* influences (e.g. a within-cycle movement in interest rates)[3].

Let's deal with the structural story first.

Incomes represent the most stable of structural influences for benchmarking house prices. Put simply, that incomes have continued to rise over time, provides a solid basis for house prices to grow.

If house prices had risen by the same percentage as average household incomes over the past quarter of a century (i.e. a constant house price to income ratio), the median price in 2010 would be around $290,000 instead of $559,000. A reversion to some historical 'house price to income' ratio suggests house prices need to fall some 48%.

Of course, while some continue to offer this as a meaningful benchmark, it is irresponsible to 'close the book at page 1'.

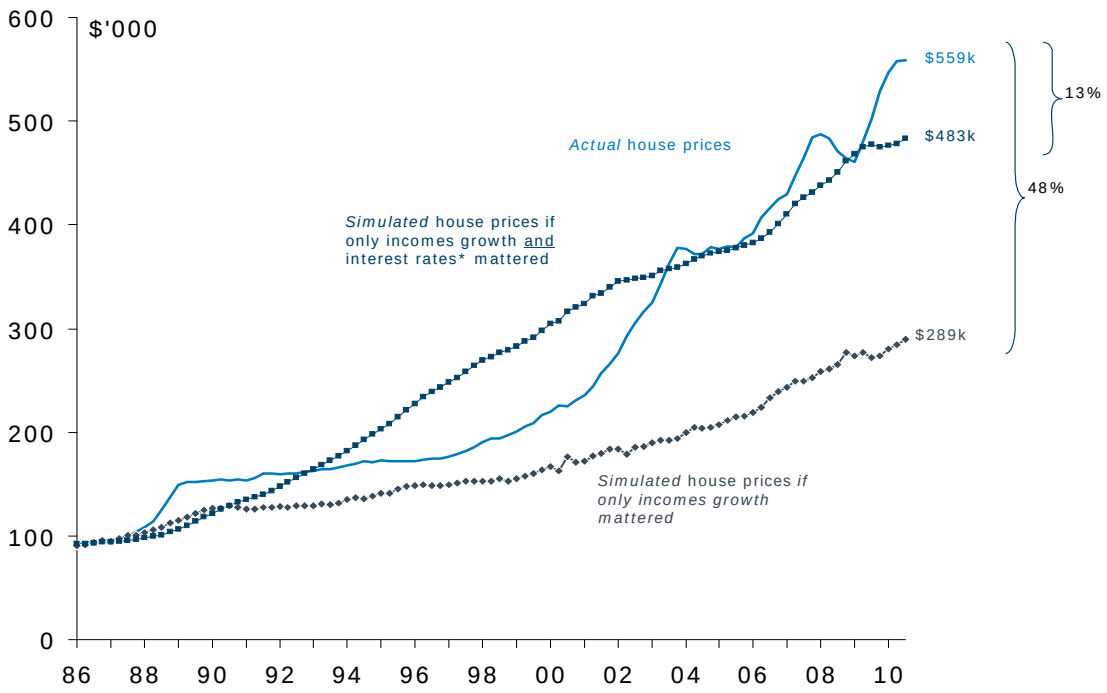
The fall in inflation and interest rates through the 1990s was another momentous *structural* shift. It had a marked impact on the level of debt (and house price) that could be supported for any given interest burden. It took a few years for this new reality to sink in as householders remained fearful that reductions in mortgage rates were only temporary and about to head back to 17.5% (late-1980s peak in bank mortgage rates). Having been through a nasty recession, the private sector remained very cautious. As a consequence, for the first half and into the second half of the 1990s, house prices were relatively stable and not engaging the signal which the two critical variables – income and interest rates – were suggesting house prices ought to be.[4] It was not until the second half of the 1990s that expectations had mobilised the market and some kind of 'catch-up' became apparent. This lasted until 2003. Since then, house prices have continued on a generally upwards trajectory, interrupted by periods of weakness (flat to moderate falls). We are in the early stages of a third period of weakness since 2003.

This is neat… but only part of the story.

[3] Cyclical influences can drive house price movements above a local trend and then below a local trend (say 2-5 years). Transitory can do the same but are more random in their incidence (e.g. temporary government assistance to first-home buyers). For practical purposes, both are, hereafter, referred to as 'transitory'.

[4] Note, for this purpose, a 'structural' interest rate is calculated so that cyclical movements in interest are neutralised and only sustained shifts are represented. Within-cycle movements are considered later under "transitory" influences.

FIGURE 2. PRICE LARGELY JUSTIFIED BY INCOMES AND INTEREST RATES



* Used a 5-year moving average mortgage rate to capture structural shifts in interest rates

Sources: ABS, RBA, ANZ

But wait…there's more…

If it were *just* interest rates and incomes that mattered to the determination of house prices (and 1985 is used as a benchmark for sustainability[5]), one could argue house prices need to fall by 13% (see chart above).

But this is the trap most analysts fall into. For prices to have moved as observed suggests influences *other* than interest rates and incomes growth have been playing out over the past two decades.[6]

[5] 1985 was about two years after recession and well before any hint of the ensuing boom in house prices. It is also an economic cycle mid-point before the impact of deregulation and before structural falls in interest rates and inflation.

[6] The distribution of income, in particular the income growth of relevant sub-sets of householders (potential home-buyers, renters etc.) is also more likely to offer greater insights than 'income averages' based on the whole household sector.

OTHER STRUCTURAL INFLUENCES

We must therefore consider the *directional* impact (at the very least) of other *structural* shifts over the past couple of decades to determine whether prices can be validated at current levels.[7]

Financial deregulation…. a revolutionary shift

In the 1970s and early part of the 1980s, *banking was heavily regulated* with interest rates and lending limits restricting the amount of credit made available to householders. Given the 'credit rationing' framework, many householders who were ready and able to service obligations did not receive it.

The removal of most quantitative and interest rate controls through the first half of the 1980s together with the introduction in 1988 of a risk-based approach to capital adequacy (Basel I) that favoured mortgage lending over most other forms of lending re-defined the parameters surrounding credit to the household sector. As part of this, lenders introduced more sophisticated credit risk assessment processes and product innovation accelerated, offering greater flexibility for managing exposures.

The rules of the game had changed fundamentally. It is difficult to precisely assess to what extent such a fundamental change in the operating environment (including second round effects on customer behaviour) had on re-calibrating house prices. But given most of these changes facilitate the demand side of the housing market compared to the pre-deregulatory environment, the net impact must be to accommodate over the longer-term a permanent shift in the average threshold of debt servicing (c.f. regulated environment), supporting higher house prices.

Critically, the persistence of very low housing loan delinquency rates over several decades (including through the most recent GFC) is the greatest testament to the sustainability of debt levels and house prices in Australia. Strong prudential regulation and an on-balance sheet approach to credit creation (as opposed to the United States' 'originate and sell' approach) have maintained a strong emphasis on loan serviceability. That lenders continue to adhere to tough eligibility criteria minimises the probability that any event shock will emanate from 'over-provision' of credit. [8]

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[7] Structural shifts, to the extent they are permanent or at least long-term, should represent as a shift in the simulated price shown in the chart above. Transitory influences while impacting on observed price outcomes within the cycle, have little ongoing impact on sustainability of price.

[8] The GFC did prompt some lenders to tighten eligibility criteria. The shift in market share towards banks over this period translated into an additional de-facto tightening in effective risk criteria given some customers will have been assessed by less discriminate non-bank lenders prior to the GFC. In any case, such shifts are negligible in comparison to the wholesale re-engineering born out of deregulation.

Shortage of homes supports prices

A more recent phenomenon (from circa 2005) has been the emergence of a chronic shortage of dwellings.[9] The combination of limited land release, excessive infrastructure charges and higher environmental standards has lifted the cost base for residential development. Over this period, solid population growth has maintained a level of underlying housing demand well in excess of profitable supply. The tension between both sides of the market is likely to persist for the foreseeable future and has been well documented. *A lasting imbalance, while not likely to create acute price pressures, does present as a fundamental support that can command a legitimate price premium compared to a market that is oversupplied or in equilibrium.*

Tax changes

In 1999, capital gains tax relief (to only 50% of nominal gain being assessable) was offered as an alternative to the pre-existing policy of taxing real gains only. The new choice provided investors the opportunity to re-assess fundamental asset value based on potentially higher after-tax returns. Not long after, introduction of the GST in 2000 lifted the cost base for dwelling construction. At the time, estimates of the price impact varied but the Government saw fit to compensate first-home buyers with $7000. The equivalent tax in today's terms is adding $17,000 to the price of a new and established home price.

Often discounted as marginal influences or ignored altogether, these tax changes represent lasting structural shifts faced by sections of the home-buyer market.

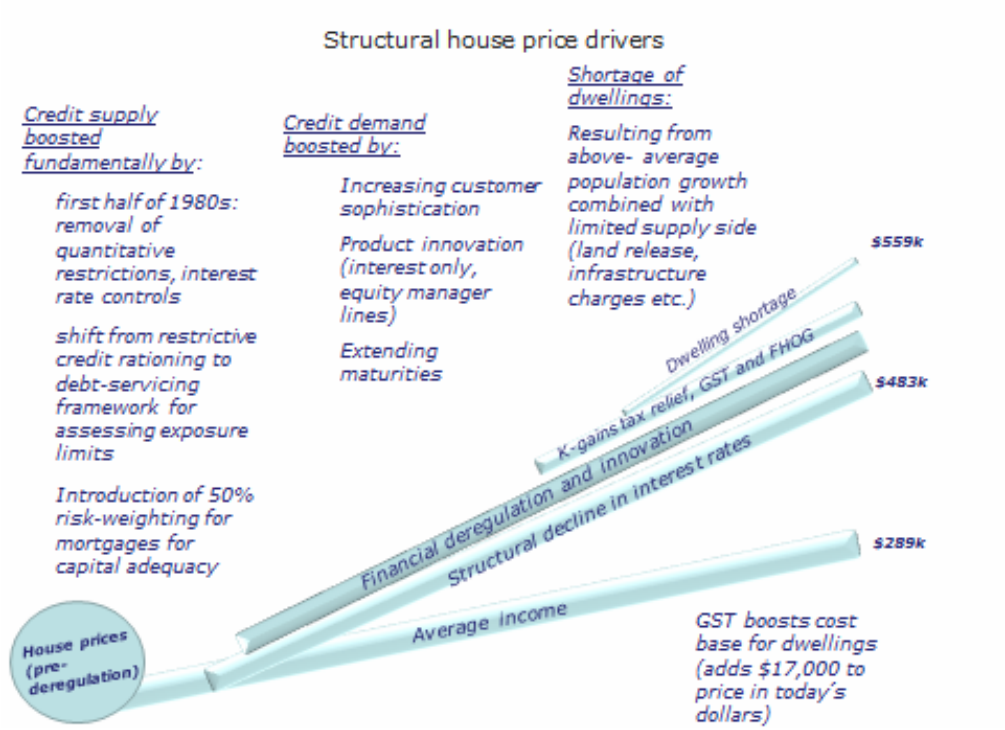
With structural elements validating observed price outcomes to date, there appear no grounds for significant correction in house prices in the foreseeable future. [10]

Nonetheless, a major correction driven by *transitory* influences must also be considered.

[9] The dwelling cycle generally oscillates either side of underlying demand, creating cyclical imbalances. However, the nature of the imbalance in recent years and for the foreseeable future suggests the presence of a structural component.

[10] A 'structural correction' implies a new equilibrium price which will act as a notional centre for cyclical movements around this new lower level over the medium and longer-terms. A transitory adjustment suggests a temporary dip that does not displace the structural house price level.

FIGURE 3. STRUCTURAL CHANGES AND SHORTAGE VALIDATE HOUSE PRICES AT CURRENT LEVELS



Sources: ABS, RBA, ANZ

TRANSITORY/CYCLICAL INFLUENCES - THE HERE AND NOW!

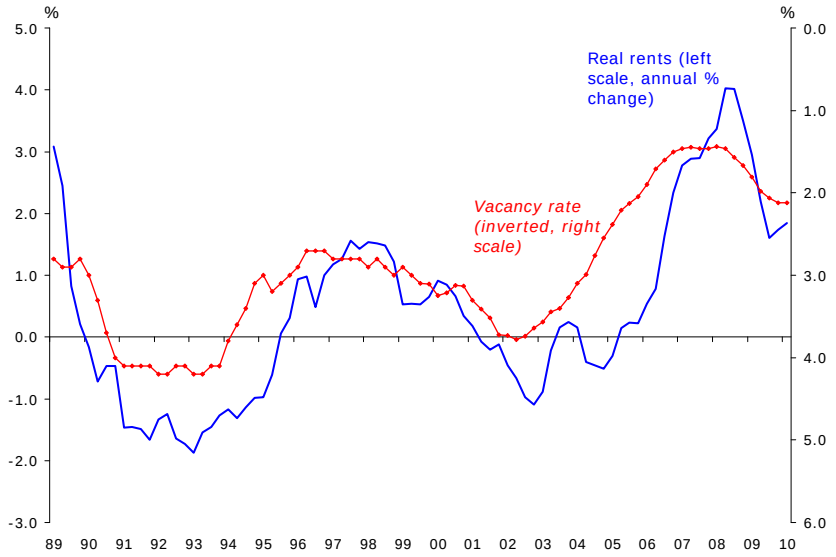
The sharp rise in house prices in 2009 was on the back of lower interest rates and a series of short-term policy measures combined with a solid rebound in economic activity following the GFC. Since then, the tightening in FIRB rules and a strong currency have undermined some foreign investor support. Additionally, the winding-up of the 'First-home Owners Boost' at end-2009 has seen this segment take a breather through 2010. Higher interest rates over recent quarters have also cast a shadow over housing market prospects, reflecting in a flattening trend over this period.

Further weakness in prices over 2011 is expected. Firstly, it appears a broadly-based expectation that significant prices rises will be difficult. This mentality is reminiscent of the experience over the first half of the 1990s. However, there are a number of reasons why this perception will be short-lived.

Firstly, the economy is on a healthy trajectory and is expected to grow around trend over 2011 and 2012. Investment expectations are favourable and the terms of trade will sustain incomes growth over the medium-term despite an expected peak in 2011/12.

Secondly, fundamental conditions in the housing market are tight and likely to tighten further in the years ahead, manifesting initially in lower rental vacancy rates and eventually higher rentals growth. This acceleration in rental growth will be symptomatic of the broader structural shortage and will serve to re-calibrate yields, offering a clear signal to investors that pre-conditions for improved housing market conditions are establishing. Higher interest rates in the year ahead will be a catalyst for this, diverting potential buyers to rental markets, a process that had already commenced through 2007 until the GFC and associated policy changes (lower interest rates, FIRB relaxation and renewed higher assistance to first-time buyers) circumvented the adjustment. The recent slowing in population growth, if it continues, however, does threaten to delay this process and hence the seeds of a renewed rental boom and house price recovery.

FIGURE 4. TIGHTER RENTAL MARKET WILL PROVIDE EARLY SIGNAL FOR PRICE RECOVERY

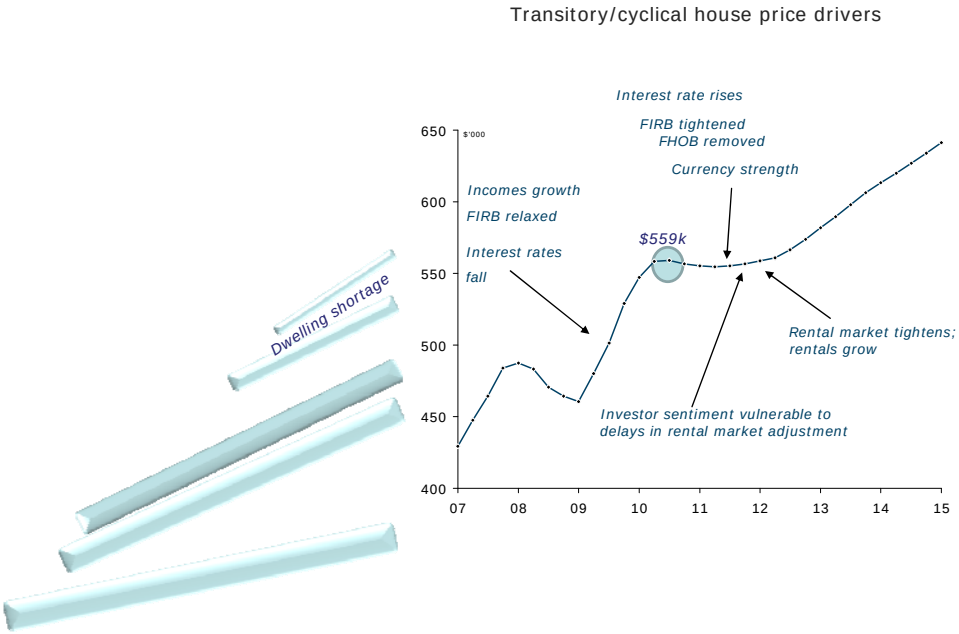


Sources: REIA, ABS, ANZ Economics and Global Markets Research

Sources: REIA, ABS, ANZ

Thirdly, the 'wounding of sentiment' from the GFC has been minimised thanks to well-timed fiscal and monetary policy adjustments. This contrasts to the early 1990s recession which saw more pervasive economic pain and a stubbornly slow healing process.

FIGURE 5. TRANSITORY INFLUENCES TO KEEP PRICES FLAT IN 2011



Sources: ABS, RBA, ANZ

In short, sentiment towards the housing market, while expected to remain subdued over 2011 will be supported to a considerable degree by a relatively benign economic backdrop, despite the cloud of further interest rate rises and the potential 'drag' on rental market adjustment from lower net migration.

The transitory forces are delicately poised, but in the absence of a rapid escalation in interest rates to combat unwelcome higher 'core' inflation (not ANZ's main case), a wholesale downward shift in house prices remains unlikely.

Conversely, a risk scenario based around a *major* collapse in the terms of trade in future years, contrary to expectations, is more likely to prompt policy settings that can only be favourable for house prices, particularly if house price momentum has been restrained in the lead-up. Policy-makers intent on preparing for a 'post-terms of trade collapse' environment are likely to shift settings to a more accommodating stance. While the economy is likely to slow, the interest rate-sensitive sectors such as housing will benefit considerably and swiftly.

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