Housing Pulse

August 2018

Westpac Institutional Bank

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Contents

Executive summary 3

Overview: correction continues 4

Special topics:
Interest rate expectations 6
Prudential policy update 8
Residential property listings 10

State by state
New South Wales: more weakness ahead 12
Victoria: downturn deepens 14
Queensland: stable, sentiment hinting at a lift? 16
Western Australia: recovery fails to materialise 18
South Australia: steady on all fronts 20
Tasmania: boom running into constraints 22

Summary & forecast tables
Economic & financial forecasts 24
Housing market data 25

Appendix 29

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The next issue will be published on 23 November 2018.

Executive summary

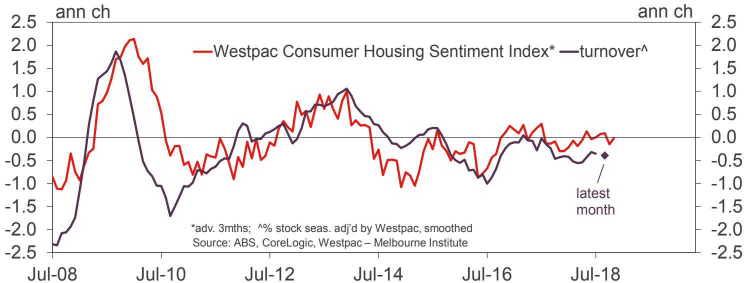
Our last **Housing Pulse** observed that while buyer sentiment continued to point to stabilising conditions and a slight firming in turnover, the positive signal was not strong and looked susceptible to a renewed weakening given price declines, slowing jobs growth and the prospect of a further tightening in mortgage lending criteria. Three months on and activity has still not stabilised with risks still clearly pitched to the downside.

The **Westpac Housing Consumer Sentiment Index*** has softened a touch but remains consistent with stabilising demand. The continued decline in turnover suggests other factors such as tightening loan criteria and falling investor activity are weighing on activity. The main driver of the sentiment lift continues to be less downbeat reads on 'time to buy', partly reflecting an improvement in affordability. Small positives around jobs and risk aversion have been offset by weakening price expectations.

Conditions continue to vary significantly across states. For NSW, the current price correction has now been running for over a year and is showing few signs of abating. Vic has swung into correction more recently but is showing signs of a deepening and widening downturn, albeit with resilience in some segments. Qld remains subdued, insulated from the current cycle and with some clear positives but still lacking a 'spark' to drive any real momentum. The WA market has had a disappointing 2018, the long hoped for stabilisation again failing to materialise. For SA, conditions are uniformly steady if unspectacular. Meanwhile, Tas's boom is showing no signs of running into supply constraints.

The **special topics** in this month's issue look at consumer expectations for interest rates; the impact of prudential measures on bank lending policies; and market indicators based on residential property listings.

1. Australia: national housing conditions

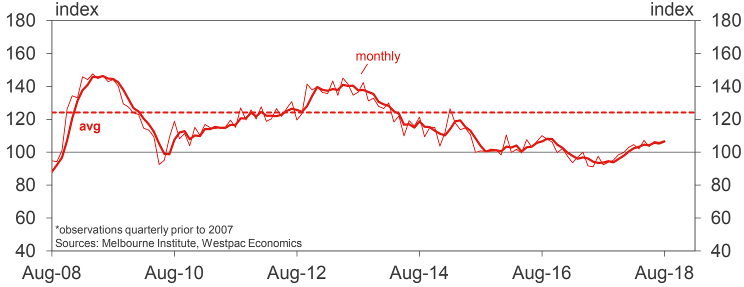


"The Westpac Consumer Housing Sentiment Index remains consistent with stabilising demand but other factors appear to be weighing on activity ... "*

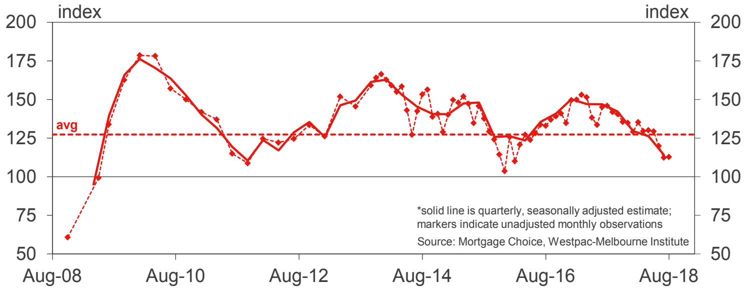
*The **Westpac Consumer Housing Sentiment Index** is a composite measure based on four housing-related components of the **Westpac Consumer Sentiment survey**. See **Appendix** on p31 for more details.

Overview: correction continues

2. Westpac–MI 'time to buy a dwelling' index

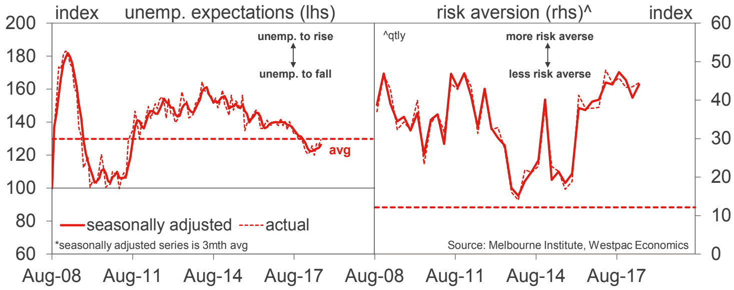


3. Westpac–MI House Price Expectations Index

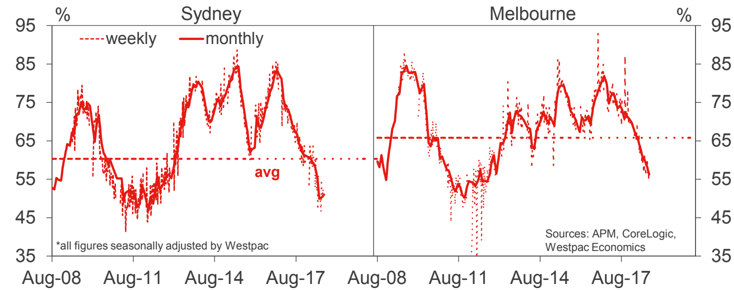


- Australia's housing market has continued to weaken. Conditions still vary widely across cities, but are soft overall with the Sydney, Melbourne and Perth markets moving through price corrections. Sentiment moves have been mixed: 'time to buy' assessments holding above 2017 lows but price expectations pared back sharply, a softer tone to unemployment expectations and risk aversion still elevated.
- Turnover remains very low. Whereas earlier estimates had suggested activity might have been stabilising in the first half of 2018, revised and updated data now show turnover nationally down 6.2% over the year to July. The annual pace of decline has moderated and the most recent monthly figures hint at stabilisation but, without a revival, annual growth is likely to stay negative through to year end. At just over 4%, the proportion of the dwelling stock turning over is at a 28yr low.
- Auction markets showed a further weakening in May-Aug with clearance rates in both Sydney and Melbourne moving well below average to be on a par with recent cyclical lows. Sydney clearance rates are showing tentative signs of stabilising at low levels in Aug.
- Prices nationally are now down 3.3% from the peak in Sep last year. The correction continues to be concentrated in the previously strong Sydney and Melbourne markets, with Perth's longer running price correction continuing at a similar pace. Prices are stable in Brisbane and Adelaide, with double-digit growth continuing in Hobart. Price weakness was widespread in the month of Jul with all major capital cities except Brisbane recording declines in the month.

4. Consumer sentiment: jobs & risk



5. Auction clearance rates



– Nationally, the **Westpac Melbourne Institute 'time to buy a dwelling' index** has risen 3.6% since May to be up 15.8%yr. Despite the solid rebound the index remains well below its long run average.

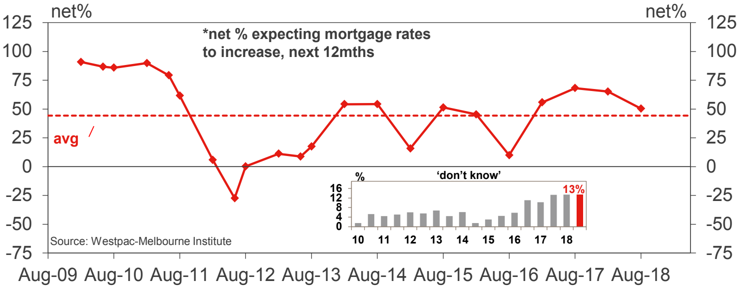
– The **Westpac–MI Consumer House Price Expectations Index** posted a sharp 13% drop over the 3mths to Aug, a material decline centred on NSW and Vic. At 112.8 the index is now well below its long run avg of 126.5. Over half of consumers now expect prices to be unchanged or lower over the next year. The NSW index has dipped into outright negative territory below 100, indicating more consumers now expect prices to fall than rise.

– The **Westpac Melbourne Institute Unemployment Expectations Index** rose 7.8% over the 3mths to Aug, retracing from a 7yr low in May (recall that higher reads mean more consumers expect unemployment to rise in the year ahead). The index, which can be viewed as a measure of consumers' sense of job insecurity, has drifted higher since Apr. While consumer unemployment fears are still materially better than in 2017, momentum appears to have shifted. The same is true to an extent of the labour market itself: after posting 100k+ gains in Q2, Q3 and Q4 last year, employment rose just 33k in Q1 of 2018 and 84k in Q2.

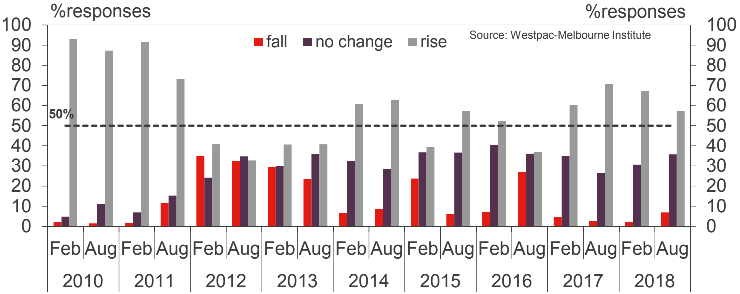
– Consumer attitudes towards risk have improved but remain a restraining factor. The **Westpac Consumer Risk Aversion Index** – based on responses to questions on the 'wisest place for savings' – lifted from 40.5 in Mar to 44.4 in Jun, unchanged on a year ago. We continue to see more consumers favouring 'pay down debt' (22%) than real estate and shares combined (21%).

Special topic: interest rate expectations

6. Westpac Consumer interest rate expectations

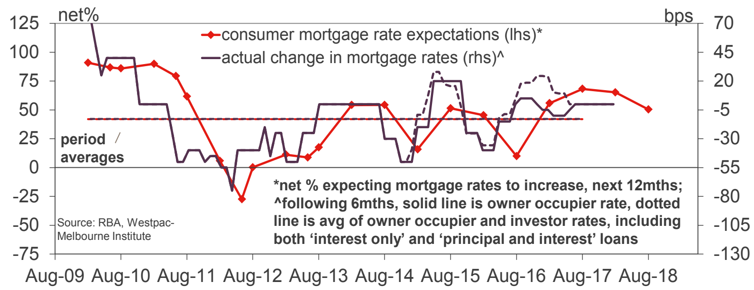


7. Consumer expectations for mortgage rates

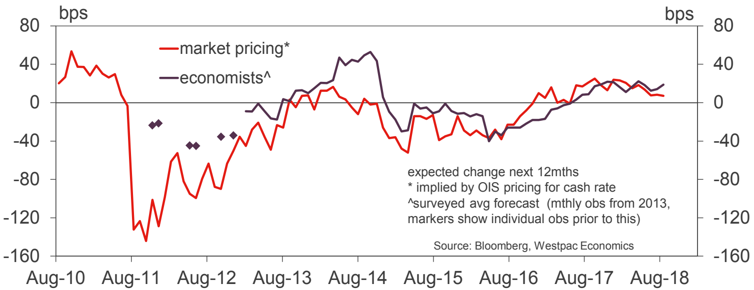


- Some of the apparent firming in consumer sentiment in 2018 looks to be due to easing rate rise fears. While housing-related sentiment has been mixed, headline consumer sentiment has shown a clear, albeit mild, improvement this year with reads consistently in the 'cautiously optimistic' range just above 100 compared to the 'mildly pessimistic' reads in the 95-100 range seen through most of 2017.
- Every six months we get a specific read on consumer views on rates from an additional question on expectations for mortgage interest rates over the next 12mths. Back in Feb, 58% of respondents expected rates to rise, down slightly from 61% in Aug 2017. The proportion fell to just below 50% in Aug 2018.
- It should be noted that last year's peak in rate rise fears coincided with mortgage rate increases on investor and 'interest only' loans as banks moved to comply with macro-prudential measures from APRA.
- It should also be noted that a relatively high proportion of consumers, 13% nominated "don't know". Excluding this group, the detailed breakdown for Aug 2018 shows 57% expect rates to be higher; 36% expect no change and 7% expect rates to be lower. That compares to a 67%:31%:2% mix in Feb and 71%:27%:3% mix in Aug last year.
- The simplest summary measure – the net % expecting rates to rise – declined to 50.4 from 65.1 in Feb and 68.2 in Aug. The latest read is still well above the 44.6 avg since we started running the question in 2010. Taken at face value, the responses point to a median expected increase of +20bps over the next 12mths.

8. Mortgage rate changes: actual vs expected



9. Cash rate expectations: market pricing, economists



- The history of this question shows a clear 'upward bias' to consumers' mortgage rate expectations. Since 2010 there has been only one survey in which consumers on balance expected mortgage rates to fall. That is despite several periods in which actual rates were in decline. Indeed, since 2010, mortgage rates have fallen over a 12mth period more often than they have risen.
- Chart 8 provides some basis for adjusting response to allow for this bias. It looks at interest rate expectations relative to the long run average and aligns responses to the actual changes in mortgage rates over the following 6mths (the link over long horizons appears to be much more tenuous). It suggests that the latest reading is broadly consistent with a 'rates on hold' view.
- The less hawkish consumer view on interest rates matches an easing in market pricing for the RBA cash rate but stands in contrast to economist forecasts which remain mildly hawkish.
- Back in Feb, markets were pricing in a 25bp increase in the cash rate by Feb 2019. They are now pricing in just 6bps by Aug 2019.
- The average year ahead forecast for the cash rate from surveys of economists is +19bps in Aug compared to +16bps in Feb. The most recent survey has 60% of economists expecting the cash rate to be higher by mid-2019, 35% expecting rates to be unchanged and 5% calling rates lower.
- Westpac Economics continues to expect no change in official rates over 2018 and 2019 with our on hold call recently extended through to the end of 2020.

Special topic: prudential policy update

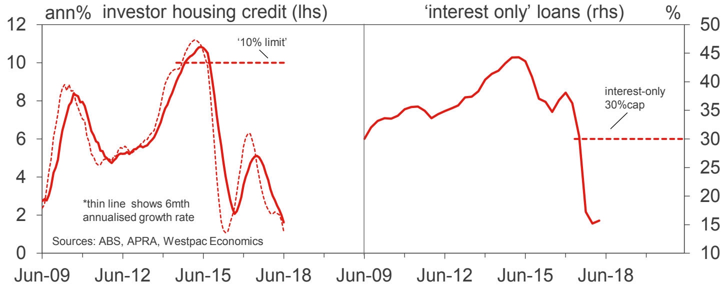
10. Summary of lending policy changes: major banks

Reported policy change*	2015	2016	2017	2018^
Serviceability tests: minimum floor and buffer rates raised	W, A	C		
Serviceability tests: IO assessed on residual P&I term	W			
Serviceability tests: increased floor and buffer tests for existing debt		N	C	C
Assessments: increased discount to 'non base' income		W, C, A	C	C
Assessments: credit card repayment raised from 2 to 3% limit	W		N	
Assessments: 'adjusted HEM' banding for incomes, regions etc	W	C, N, A		
Assessments: more detailed assessment of expenses		N		W
Interest only terms & availability: reduced max IO term	W	W	C, A	
Interest only terms & availability: tighter LVR limits			W, C, A	
Segments: LVR caps lowered for riskier areas & sub-markets	A	C, N	C, A	C, W
Other: tightened restrictions on borrowers with high loan-to-income ratios			N	C, N
Other: improved verification of existing debts				C

* as reported in half and full year investor presentations, W=Westpac, A=ANZ, N=NAB, C=CBA.
Note that dates are a mix of calendar, and bank years.
^ based on full year investor presentation for CBA, half year presentations for other banks

Source: WBC, ANZ, NAB, CBA, Westpac Economics

11. Macro–prudential targets



– Like the RBA cash rate, macro prudential policy looks to be firmly on hold. In a July speech, APRA Chairman Wayne Byres described the market response to its tightening in guidelines in recent years as "an orderly adjustment … [that] we expect … to continue" over time" but that "the heavy lifting on lending standards has largely been done". Any further tightening in lending conditions is expected to be marginal, initiated by banks rather than the regulator and in the nature of 'housekeeping' with the focus on improving assessments of expenses and prospective borrowers' other debt commitments.

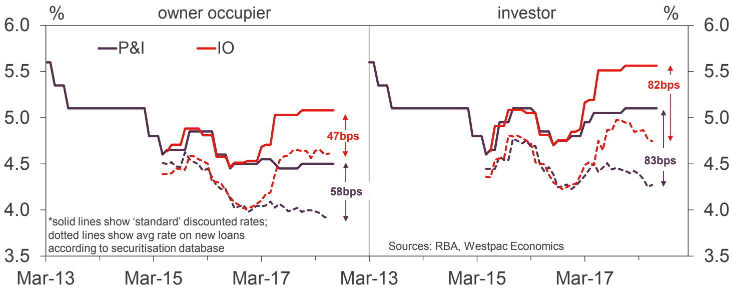
– More broadly, with housing credit growth subdued and price corrections underway in the previously strong Sydney and Melbourne markets, regulators will be feeling less pressure to guard against excessive risk taking.

– Conversely any easing in prudential policy is also unlikely, given the view across both the RBA and APRA that the correction remains orderly. Many 'micro-prudential' measures will also be seen as desirable improvements that should be kept permanently.

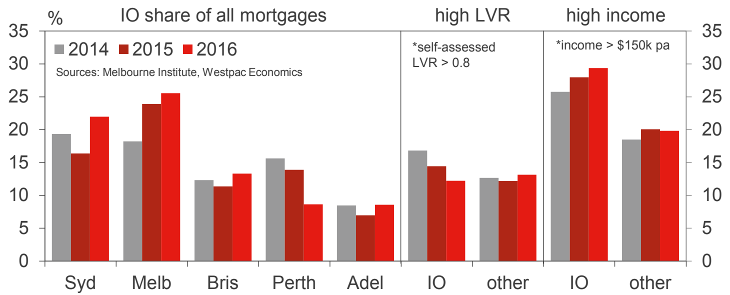
– The latest system-wide data continues to show macro-prudential targets being met comfortably. As discussed in our last report, APRA has removed the 10%yr speed limit on investor credit growth for lenders that adjust to this and other prudential guidelines.

– System-wide investor credit growth is currently tracking at just 1.6%yr. At 15.7%, the share of new interest only loans in Q1 was well below the 30% cap.

12. Mortgage rates: 'standard' discount vs new loans



13. 'Interest only' borrowers: selected characteristics



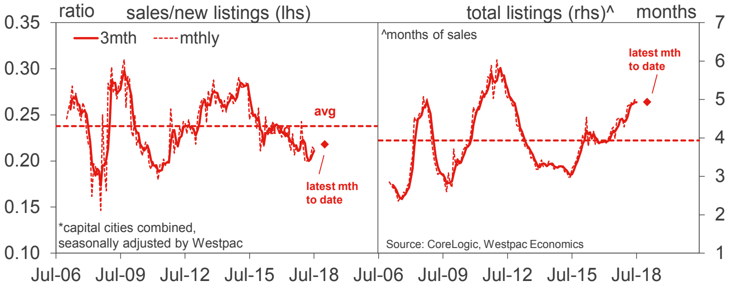
– Table 10 summarises lending policy changes reported by the four major banks in recent market updates. The table should be treated as indicative – reporting varies across lenders, the timing of measures is often unclear and there may be additional changes that have not been included. Also, only one bank has provided a full year update for 2018 (CBA). That said, the summary highlights the shift of focus in 2018 towards more stringent assessments of expenses and existing debt.

– Recent commentary from the RBA has highlighted that changes in lending standards appear to be driving stronger competition for customers with low credit risk, noting that average rates on new loans have been declining. Chart 12 shows 'standard' discounted mortgage rates compared to RBA estimates of the average rate on new loans based on securitisation data. The latter have shown notable declines for investors and, to a lesser extent, for owner occupier P&I loans. While competition for lower risk borrowers is a factor, some of the shift may also reflect the mix of new borrowers – previous RBA research has highlighted that larger loans to those with higher incomes tend to see bigger discounts. Note that the 'standard' discounted rate is for professional packages on a loan over $250k. This effect may be more pronounced for particular loan segments (for more detailed background on 'interest only' borrowers, see here and here).

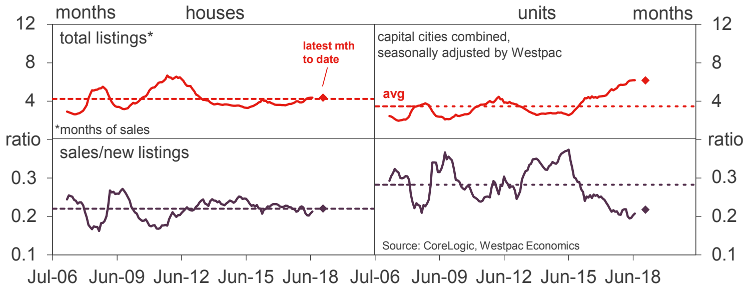
– Finally, while prudential policy may be on hold, there are major risks around wider 'non interest rate' policy, particularly with a Federal election looming and the opposition proposing to curtail negative gearing and capital gains tax advantages for property investors.

Special topic: residential property listings

14. Property listings: new and total

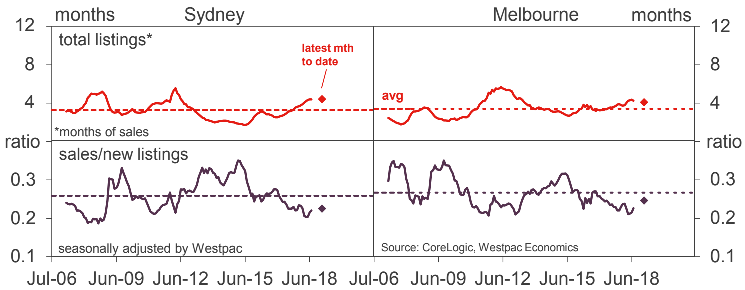


15. Property listings: houses, units

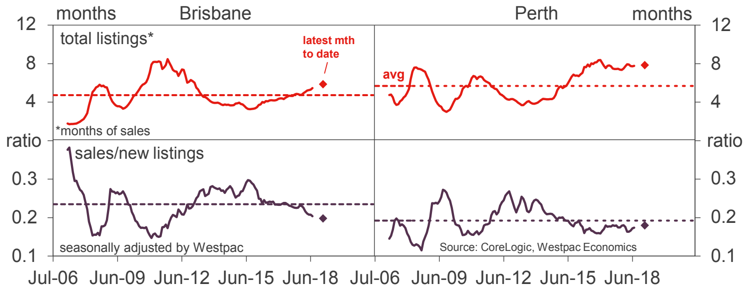


- Property listings provide a useful and timely way to gauge supply and demand conditions in residential markets. Simple metrics based on listings and sales can show both the rate at which unsold homes are accumulating and the extent to which a shortfall or overhang may be impacting. Note that in this instance ‘supply’ means ‘on market supply’ as distinct from the wider physical supply of housing. Likewise, ‘demand’ is more specifically ‘buyer demand’ rather than the wider physical demand for housing, i.e. including demand for rental accommodation and any notional ‘pent-up’ demand.
- The two common listings metrics we investigate in this topic are: 1) the ratio of sales to new listings, and 2) total listings expressed as months of sales. National measures of these are shown in Chart 14. Chart 15 breaks this down by ‘houses’ and ‘units’. Charts 16 and 17 provide the same measures for the Sydney, Melbourne, Brisbane and Perth markets. All figures are adjusted for seasonality.
- Nationally the picture is of a moderate overhang of stock accumulating at a moderate pace. In both cases, the main driver is weak sales, which have fallen to a 28yr low, rather than a high absolute number of listings.
- New listings are tracking at just under 100k/mth vs a historical average of 105k/mth. The sales to new listings ratio is sitting in the 0.20-0.21 range, well below the average of 0.24 but above cycle lows in 2011 (0.19) and 2008 (0.17). The implication is that sellers are pulling back, unwilling to test the thin market and not ‘forced’ by circumstance to do so.

16. Property listings: Sydney, Melbourne



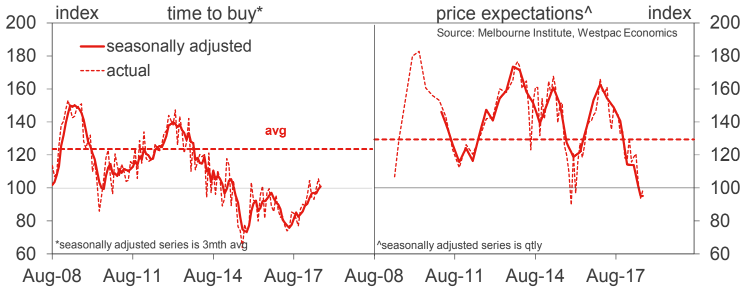
17. Property listings: Brisbane, Perth



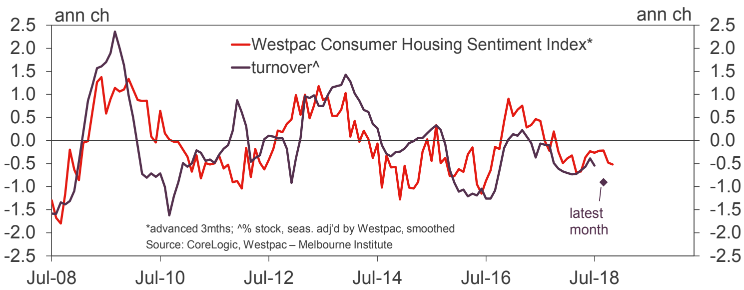
- Total listings nationally are just under 105k vs an average of 96k and a peak of 131k in 2011. Total listings are up 11k over the year to date. Again, the drop in turnover gives a more pronounced rise in inventory levels in 'months of sales' terms. At the current pace of sales, unsold stock would take nearly 5mths to clear, above the historical average of 4mths but below the 2012 peak of 6mths.
- The breakdown by houses and units shows a very interesting contrast. For houses both new and total listings are running close to long run averages relative to sales. For units however, new listings are well below average and total listings above average relative to sales. While that reflects the sharper drop-off in turnover across the units segment it highlights a clear risk of a more substantial overhang of stock emerging if new listings were to rise from here, e.g. if we see a rise in newly built dwellings coming on to the market.
- The city level detail shows a fairly similar pattern across the main eastern capitals. Despite differing conditions and variations in physical supply and demand profiles, Sydney, Melbourne and Brisbane are all showing a moderate overhang of stock accumulating at a moderate pace, the mix looking a little softer in Sydney and Melbourne. In absolute terms, new listings are running at 27k/mth in Sydney (below average) with a rise in total listings to around 26k (above average) reflecting the sharp drop off in sales. Melbourne is seeing new listings running at over 30k/mth and total listings sitting at just under 30k. Brisbane and Perth both have higher total listings in terms of months of sales, the latter sitting at 7.8 months, near historic highs.

New South Wales: more weakness ahead

18. NSW consumers: housing–related sentiment



19. NSW housing composite vs turnover



– The price correction in NSW – more specifically, the Sydney market – has moved into its 13th month with few signs of abating. Sydney prices have now declined 5.6% from their peak with monthly updates still tracking a 5-6% annualised pace of decline. Sydney's auction market has hinted at stabilising, albeit at weak levels.

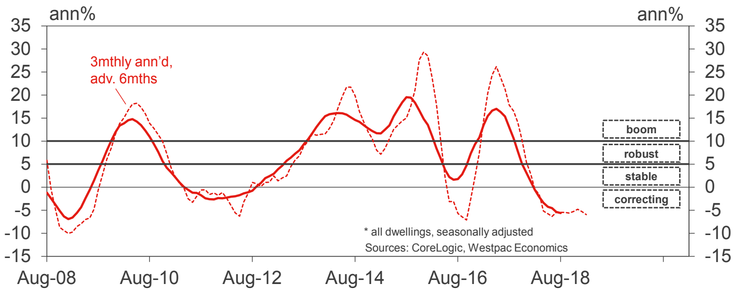
– The sub-regional price detail shows the biggest price pull-backs have been in 'middle ring' suburbs with generally milder correction in 'outer ring' and 'inner ring' areas, although performances have varied within these groupings. Prices have held up much better across the rest of NSW, up 2.1%yr on a combined basis.

– The **NSW Consumer Housing Sentiment index** has weakened again over the 3mths to Aug, pointing to a continued decline in turnover through the remainder of 2018 (note that in chart 22 and similar charts for other states both the index and turnover are shown in annual change terms rather than levels). After showing some signs leveling earlier in the year, turnover has slipped lower again over the last 6mths, down 3% over the previous 6mths, with Jul turnover down 7.7%yr.

– NSW consumers are becoming less negative on 'time to buy' as affordability improves. However this has been more than offset by a sharp fall in price expectations, into negative territory, and a significant weakening in, previously positive, unemployment expectations.

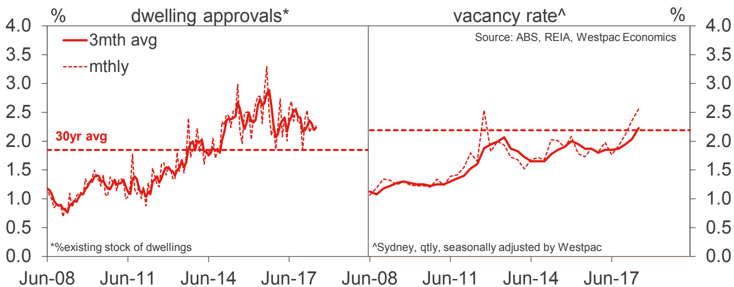
– On supply, rental vacancy rates have continued to rise, lifting to 2.4%, a 12yr high in Q2 but in line with the longer run averages (reflecting persistent rental market tightness and undersupply over the last decade).

20. Sydney dwelling prices



Population: 7.9mn
Net migration: 74k pa
GSP: $558bn (33% Aus)
Dwellings: 3.1mn, $2.8trn
Capital: Sydney

21. NSW: dwelling approvals, vacancy rates

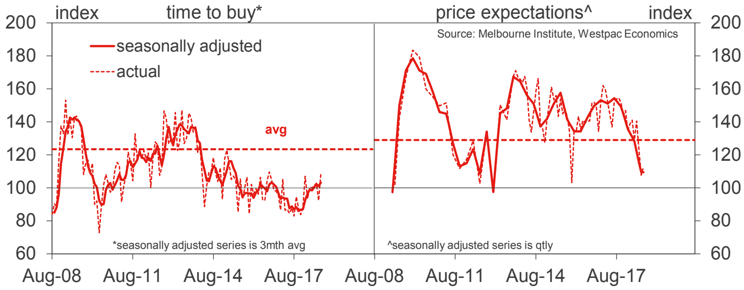


June years	avg*	2015	2016	2017	2018^
GSP, ann%	2.7	2.8	3.9	2.9	3.0
State final demand, ann%	3.2	3.4	3.9	3.9	3.1
Employment, ann%	1.6	2.1	3.4	1.0	3.7
Unemployment rate, %#	6.5	5.8	5.2	4.7	4.9
Population, ann%	1.1	1.4	1.5	1.7	1.5
Dwelling prices, ann%	6.1	17.0	2.2	16.3	–5.6
Rental yield, %#	4.6	3.7	3.8	3.7	4.1

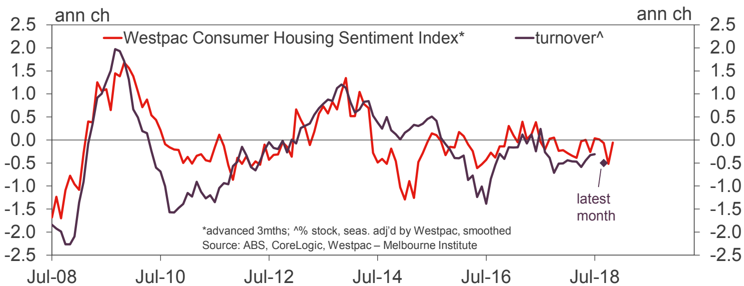
* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Victoria: downturn deepens

22. Vic consumers: housing–related sentiment

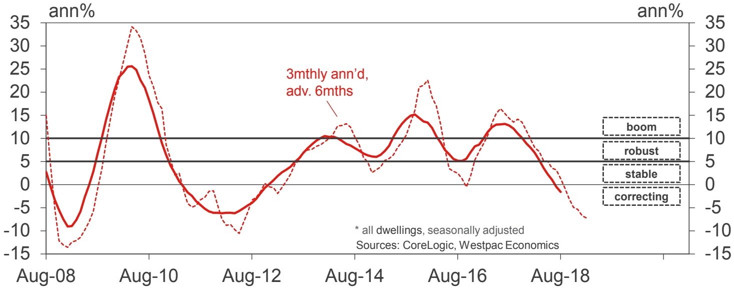


23. Vic housing composite vs turnover



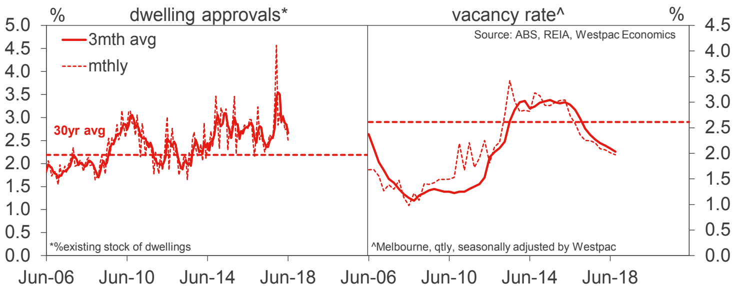
- While the Vic housing market has been slower to turn than NSW, the price correction that began late last year has accelerated notably through the middle of 2018.
- As with NSW, the correction is confined to the capital city market, Melbourne. It continues to show more variation across sub-segments as well with outer suburbs and lower priced properties holding up considerably better through the first half of 2018. That said, the breadth of declines looks to have widened through Jul-Aug, with the pace of falls also accelerating.
- The **Vic Consumer Housing Sentiment index** has been choppy in recent months, dipping sharply in Jul but rebounding in Aug to be only slightly softer than the May reading 3mths ago. Assessments of 'time to buy' continue to recover from the 2017 weakness. However, price expectations have, understandably, been pared back sharply. Vic consumers' unemployment expectations have also softened. Risk aversion is largely unchanged. Overall, the mix points to stabilising turnover by year end.
- Melbourne's auction market has continued to weaken with clearance rates dropping about 2ppts a month. At around 55% they are now well below avg although they are above 2012 lows.
- Melbourne's rental market remains unambiguously tight with vacancy rates holding around 2%. This is despite a surge in apartment completions which have lifted from around 15k a year mid-decade to 23k a year currently. Completions are expected to continue tracking around 20-21k a year through 2019–20.

24. Melbourne dwelling prices



Population: 6.4mn
Net migration: 101k pa
GSP: $399bn (24% Aus)
Dwellings: 2.6mn, $1.9trn
Capital: Melbourne

25. Vic: dwelling approvals, vacancy rates

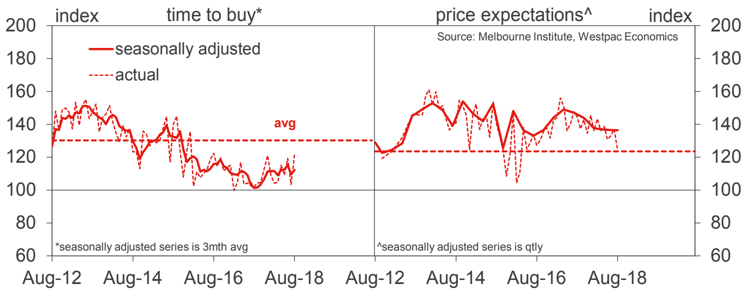


June years	avg*	2015	2016	2017	2018^
GSP, ann%	3.2	2.9	3.5	3.3	3.0
State final demand, ann%	3.8	3.5	4.5	4.2	4.8
Employment, ann%	2.0	3.5	3.0	3.9	1.9
Unemployment rate, %#	6.9	6.1	5.7	6.1	5.3
Population, ann%	1.4	2.2	2.5	2.4	2.3
Dwelling prices, ann%	6.8	11.9	6.6	13.0	–1.6
Rental yield, %#	4.6	3.8	3.9	3.9	4.2

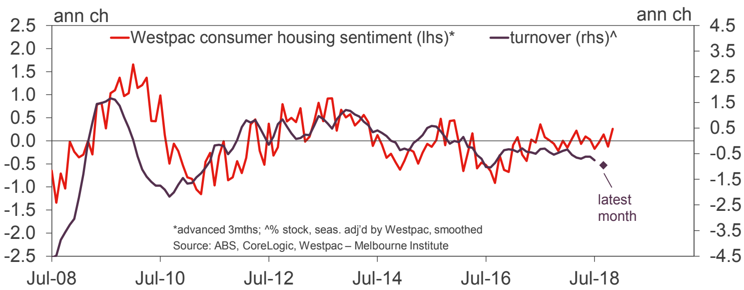
* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Queensland: stable, sentiment hinting at a lift?

26. Qld consumers: housing–related sentiment

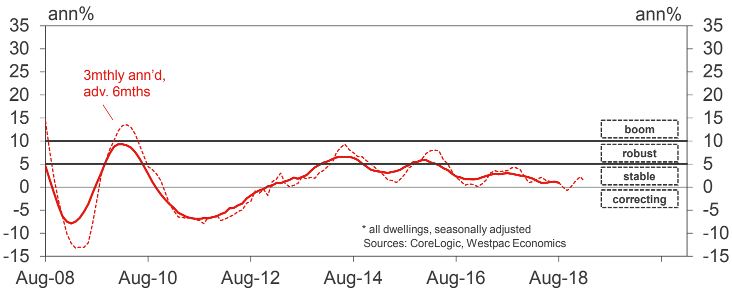


27. Qld housing composite vs turnover

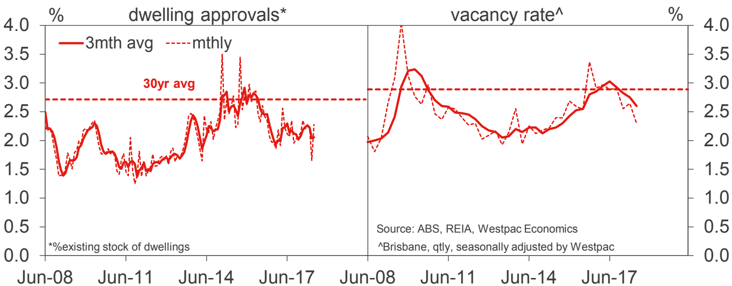


- Qld's housing market remains subdued, turnover declining but prices steady and sentiment hinting at a modest pick-up in demand. Notably the significant correction in Brisbane unit prices in 2016-17 has ended with both houses and units now seeing annual gains of around 1%yr. While Qld's underperformance through the latest price cycle has cushioned it from the corrections unfolding in NSW and Vic, and the affordability mix is more positive than in most other markets, it still looks to be lacking a spark with an upturn remaining elusive.
- The sub-regional detail shows price growth subdued across most parts of Brisbane and most regional areas, the Sunshine Coast standing out as a stronger performer with price growth around 8%yr.
- The **Qld Consumer Housing Sentiment index** has lifted over the last 3mths. Assessments of 'time to buy' have improved, although they remain below average levels. Price expectations have been steady, albeit with a soft Aug month. Unemployment expectations have softened however with job loss concerns and elevate risk aversion still the main factors holding sentiment back.
- Brisbane rental vacancy rates have continued to tighten, dropping towards 2.5% (closer to 2% in middle ring suburbs). Vacancy rates are also tight or tightening across the rest of Qld – well below 2% in the Gold and Sunshine Coasts and dropping rapidly in mining areas (3% across the combined Gladstone–Mackay–Rockhampton region after peaking near 9% in 2016). Some further tightening looks likely in Brisbane with apartment completions set to fall by over 30% in 2019.

28. Brisbane dwelling prices



29. Qld: dwelling approvals, vacancy rates



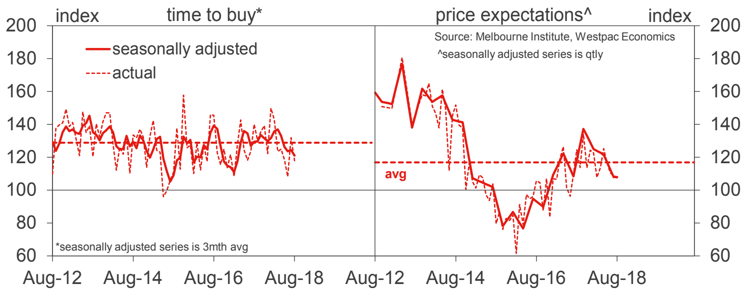
Population: 5.0mn
Net migration: 52k pa
GSP: $309bn (18% Aus)
Dwellings: 2.0mn, $1.0trn
Capital: Brisbane

June years	avg*	2015	2016	2017	2018^
GSP, ann%	4.0	1.2	2.6	1.8	2.6
State final demand, ann%	4.2	-3.6	-1.2	2.8	3.1
Employment, ann%	2.4	0.0	0.8	2.0	3.0
Unemployment rate, %#	7.0	6.2	6.3	6.2	6.2
Population, ann%	2.0	1.2	1.4	1.7	1.7
Dwelling prices, ann%	4.4	3.5	3.7	2.8	0.9
Rental yield, %#	4.8	4.5	4.8	4.9	5.4

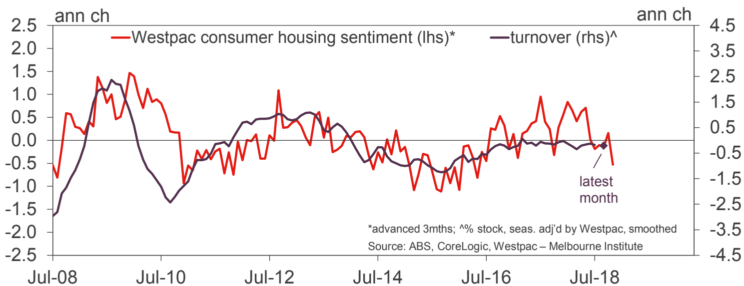
* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Western Australia: recovery fails to materialise

30. WA consumers: housing-related sentiment



31. WA housing composite vs turnover



– The long hoped for end to WA's prolonged housing market correction, which looked a reasonable prospect 3mths ago has again failed to materialise. Perth dwelling prices have seen renewed slippage, units in particular showing a re-acceleration in annual price declines from –1.1%yr in Dec to –4.5%yr in Jul.

– With buyer sentiment souring again and rental vacancy rates still pointing to a significant overhang of dwelling stock, a near term turnaround looks unlikely, the price correction set to carry well into its fifth year.

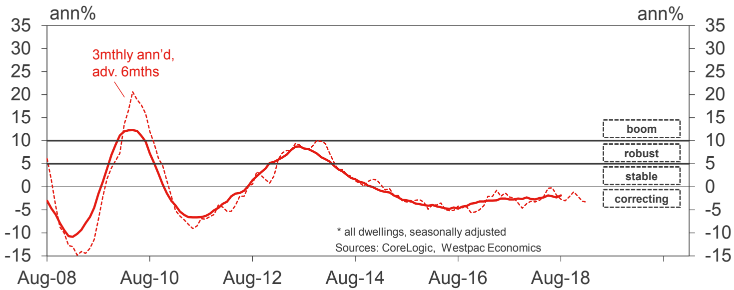
– The segment detail shows somewhat firmer conditions for the top 25% of properties by value although all tiers have seen renewed price weakness in recent months.

– The **WA Consumer Housing Sentiment index** has fallen back again since May with all components contributing. 'Time to buy' assessments dropped back below average. Price expectations have also been pared right back. The more positive view on unemployment expectations that emerged late last year has faded while risk aversion has nudged higher.

– Some of these sentiment responses may be an over-reaction. As noted in previous reports, some of the bullishness in WA housing sentiment looked to be a little premature, particularly given an apparent excess of housing supply and the likelihood that this would be slow to be absorbed given weak population growth.

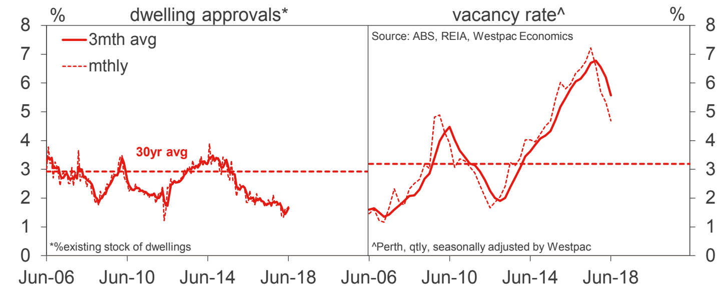
– Perth's rental vacancy rate has continued to track lower, and looks set to soon reach 4.5%, a marked improvement on the 7.3% peak in 2017 but still short of the 'balanced' market average of around 3%.

32. Perth dwelling prices



Population: 2.6mn
Net migration: 1k pa
GSP: $233bn (14% Aus)
Dwellings: 1.1mn, $0.6trn
Capital: Perth

33. WA: dwelling approvals, vacancy rates

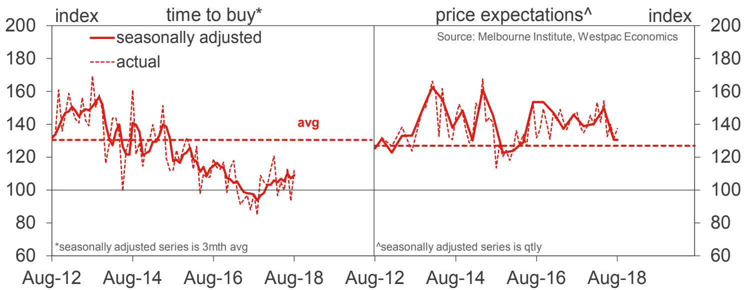


June years	avg*	2015	2016	2017	2018^
GSP, ann%	4.5	2.7	1.0	–2.7	2.4
State final demand, ann%	4.3	–2.2	–4.7	–7.2	0.2
Employment, ann%	2.4	1.0	–1.1	0.8	1.5
Unemployment rate, %#	6.2	5.7	5.8	5.6	6.3
Population, ann%	1.8	0.9	0.6	0.8	0.8
Dwelling prices, ann%	4.6	–2.3	–4.8	–2.5	–1.7
Rental yield, %#	4.7	4.5	4.2	3.9	3.6

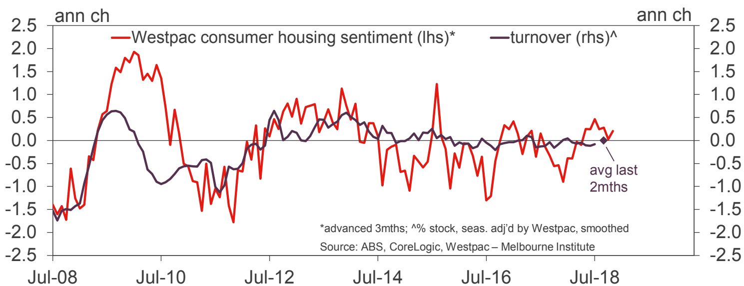
* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

South Australia: steady on all fronts

34. SA consumers: housing–related sentiment



35. SA housing composite vs turnover



– The SA housing market remains steady in nearly every respect. Price growth is holding around 1%yr, gains having slowed over the last year but never achieving any great heights during the previous upturn. Buyer sentiment continues to point to some pick up ahead although this may be thwarted by the tightening in lending conditions.

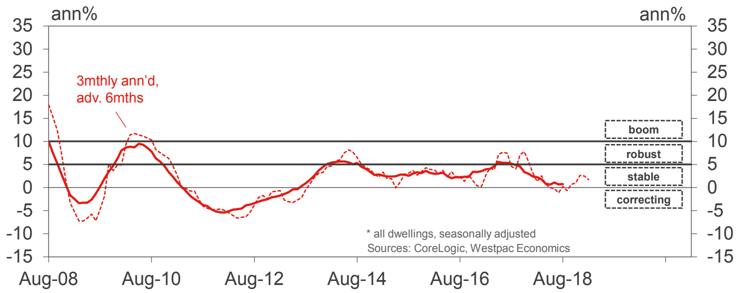
– Turnover has been softish over the last year, declining 1.8% over the year to Jun, but has shown signs of leveling out with turnover over the 6mths to Jul unchanged on the previous 6mths.

– The price detail for Adelaide underscores the steady picture with all price bands and sub-regions showing very similar price performances. Even houses and units are showing similar price gains although houses, which are the dominant form of housing in Adelaide, have outperformed significantly over the last 5yrs, averaging price growth of 3.4%yr vs 1.7%yr for units.

– Listings data shows new listings being absorbed relatively quickly and total listings sitting just below 4mths of sales – a relatively tight mix for Adelaide market but not greatly changed from the previous few years.

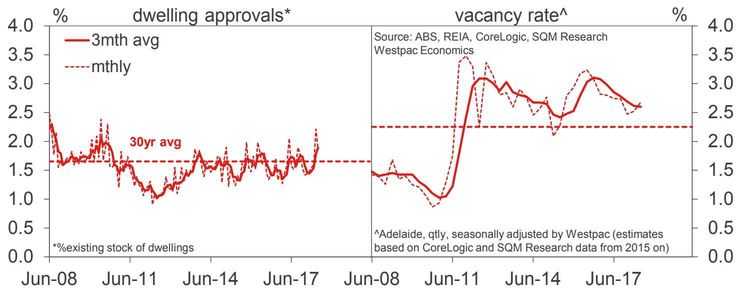
– The **SA Consumer Housing Sentiment index** dipped back in Jul but rebounded in Aug to be broadly unchanged since May. Consumer assessments of 'time to buy' have firmed a little and unemployment expectations have also improved but this has been negated by a less bullish consumer view on prices and a marginal lift in risk aversion.

36. Adelaide dwelling prices



Population: 1.7mn
Net migration: 6k pa
GSP: $102bn (6% Aus)
Dwellings: 0.8mn, $0.4trn
Capital: Adelaide

37. SA: dwelling approvals, vacancy rates

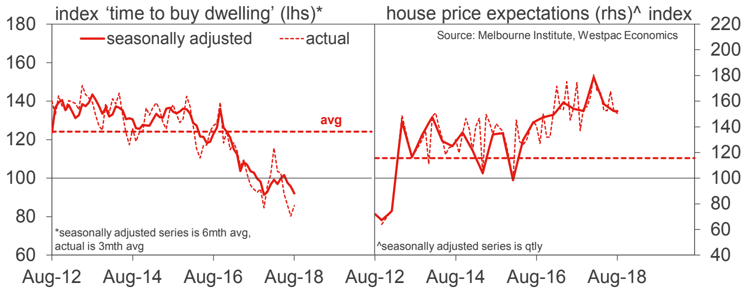


June years	avg*	2015	2016	2017	2018^
GSP, ann%	2.3	1.3	0.3	2.2	2.1
State final demand, ann%	2.9	1.8	1.2	3.3	3.8
Employment, ann%	1.1	0.3	0.7	1.1	2.7
Unemployment rate, %#	7.4	7.7	6.9	6.9	5.6
Population, ann%	0.7	0.8	0.7	0.6	0.6
Dwelling prices, ann%	4.5	2.8	2.0	5.4	0.7
Rental yield, %#	5.2	4.4	4.0	4.5	5.1

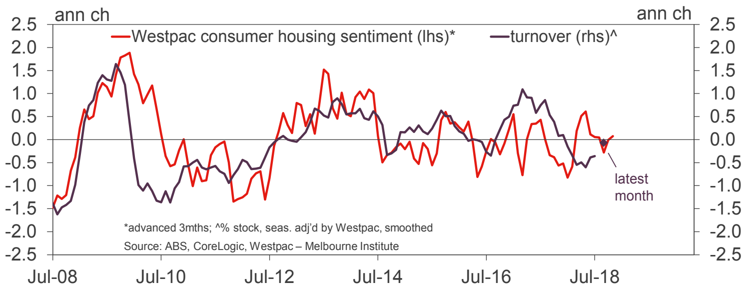
* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Tasmania: boom running into supply constraints

38. Tas consumers: housing-related sentiment

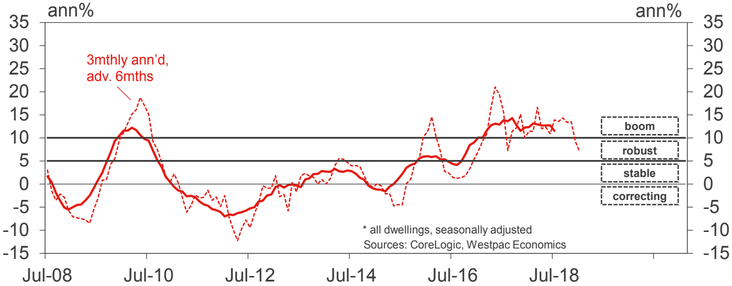


39. Tas housing composite vs turnover



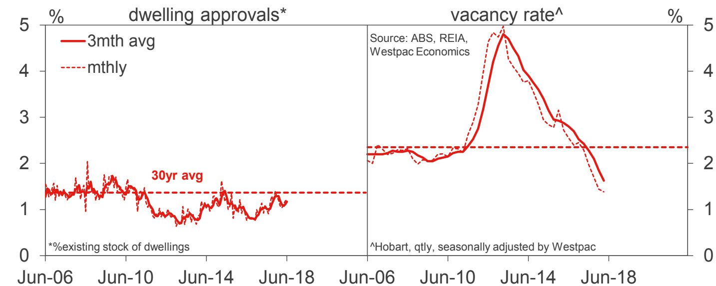
- Tas's housing market remains the exception nationally with its two year boom continuing largely undiminished into 2018. The Tas market is considerably smaller than the 'mainland' states – about a third of the size of the next smallest state, SA and about a tenth of the major states. It also tends to see slower, more volatile growth in economic activity and population, and historically it has usually underperformed on price growth. Right now though the volatility is on the upside. That is seeing the housing market outperform by a wide margin but it is also seeing the rapid emergence of acute shortages of supply that may generate problems down the track.
- Hobart dwelling prices continue to track a solid double digit growth rate, up 11.5% over the year to Jul. While the first half of the year has seen some moderation, a similar cooling in 2017 proved to be short-lived.
- The **Tas Consumer Housing Sentiment index** remains in slight positive territory although the detail points to growing tensions in the market. 'Time to buy' assessments have fallen sharply, swinging below the 100 line as the rapid price gains have stretched affordability. However price expectations remain near historic highs. Risk aversion has also moderated a touch with unemployment expectations generally supportive.
- Supply is where issues are starting to loom in the form of a widening shortage. Total listings are running at just two months of sales, miles below the long run avg of six with new listings still being picked up quickly. Rental vacancy rates suggest physical shortages are an issue with Hobart's vacancy rate nearing 1%. This may sustain the upturn cycle but make it more problematic as well.

40. Hobart dwelling prices



Population: 0.5mn
Net migration: 4k pa
GSP: $29bn (2% Aus)
Dwellings: 0.2mn, $0.1trn
Capital: Hobart

41. Tas: dwelling approvals, vacancy rates



June years	avg*	2015	2016	2017	2018^
GSP, ann%	2.1	1.1	1.3	1.1	3.3
State final demand, ann%	2.5	1.4	2.7	1.8	3.7
Employment, ann%	1.0	0.9	–1.0	3.9	0.9
Unemployment rate, %#	8.2	6.9	6.4	5.8	6.1
Population, ann%	0.4	0.3	0.5	0.9	0.9
Dwelling prices, ann%	5.0	1.1	4.8	12.9	10.6
Rental yield, %#	5.8	5.0	4.8	5.4	4.8

* avg last 25yrs; ^ latest available estimate, GSP is Westpac forecast; # June qtr readings
Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Economic and financial forecasts

Interest rate forecasts

	Latest (24 Aug)	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Jun-20	Dec-20
Cash	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
90 Day BBSW	1.95	2.00	1.97	1.97	1.92	1.92	1.83	1.80
3 Year Swap	2.09	2.10	2.20	2.25	2.25	2.30	2.35	2.50
10 Year Bond	2.54	3.00	3.10	3.00	3.00	2.80	2.60	2.60
10 Year Spread to US (bps)	-29	-35	-40	-50	-40	-40	-40	-20
International								
Fed Funds	1.875	2.375	2.625	2.875	2.875	2.875	2.875	2.875
US 10 Year Bond	2.83	3.35	3.50	3.50	3.40	3.20	3.00	2.80
US Fed balance sheet USDtrn	4.23	4.00	3.89	3.76	3.67	3.58	3.42	3.29
ECB Repo Rate	-0.40	-0.40	-0.40	-0.40	-0.30	-0.20	0.00	0.20

Exchange rate forecasts

	Latest (4 Aug)	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Jun-20	Dec-20
AUD/USD	0.7279	0.73	0.72	0.70	0.70	0.70	0.74	0.75
NZD/USD	0.6642	0.66	0.65	0.64	0.64	0.64	0.66	0.68
USD/JPY	111.46	112	113	113	112	112	109	106
EUR/USD	1.1555	1.15	1.14	1.13	1.14	1.16	1.22	1.28
AUD/NZD	1.0959	1.11	1.11	1.09	1.09	1.09	1.12	1.10

Sources: Bloomberg, Westpac Economics.

Economic and financial forecasts

Australian economic growth forecasts

	2017	2018				2019	
	Q4	**Q1**	**Q2f**	**Q3f**	**Q4f**	**Q1f**	**Q2f**
GDP % qtr	0.5	1.0	0.6	0.5	0.6	0.7	0.6
Annual change	2.4	3.1	2.7	2.7	2.7	2.5	2.4
Unemployment rate %	5.4	5.5	5.4	5.4	5.5	5.6	5.6
CPI % qtr	0.6	0.4	0.4	0.5	0.4	0.4	0.4
Annual change	1.9	1.9	2.1	1.9	1.7	1.6	1.6
CPI underlying % qtr	0.5	0.5	0.5	0.4	0.5	0.6	0.6
ann change	2.0	2.0	1.9	1.8	1.9	1.9	2.0

	Calendar years			
	2017	**2018f**	**2019f**	**2020f**
GDP % qtr/yr avg	2.2	2.8	2.5	2.6
Unemployment rate %	5.4	5.5	5.4	5.4
CPI % yr	1.9	1.7	1.7	1.7
CPI underlying % yr	2.0	1.9	2.1	2.0

Calendar year changes are (1) period average for GDP, employment and unemployment, terms of trade (2) through the year for inflation and wages.
* GDP & component forecasts are reviewed following the release of quarterly national accounts.
** Business investment and government spending adjusted to exclude the effect of private sector purchases of public sector assets.

Housing market data

Consumer sentiment – housing-related measures

		2016	2017				2018					
index*	**avg**	**Dec**	**Mar**	**Jun**	**Sep**	**Dec**	**Mar**	**Jun**	**Jul**	**Aug**	**%mth**	**%yr**
'Time to buy a dwelling'												
Australia	122.4	102.9	99.6	90.9	95.2	100.6	104.5	105.7	103.1	108.8	5.5	15.1
– New South Wales	120.2	95.6	82.8	75.5	81.3	90.1	104.6	99.7	105.5	99.1	–6.1	17.2
– Victoria	118.6	98.0	105.2	84.6	94.7	88.3	100.3	102.8	92.3	108.5	17.5	30.7
– Queensland	130.3	113.8	104.6	104.1	104.4	121.0	104.7	119.3	103.4	122.1	18.1	19.6
– Western Australia	128.9	113.8	127.4	118.2	130.4	122.2	123.5	108.3	131.9	117.9	–10.6	–15.8
– South Australia	130.5	98.6	99.6	96.9	85.0	102.8	96.7	113.3	93.4	112.8	20.8	15.0
– Tasmania	124.2	136.2	124.2	101.9	97.0	131.3	94.5	77.7	88.1	91.4	3.7	–4.1
House price expectations												
Australia	126.5	134.8	153.1	133.6	141.9	135.0	129.6	119.9	112.5	112.8	0.3	–22.7
– New South Wales	129.4	154.7	157.5	135.5	144.5	118.2	115.8	103.9	93.9	98.4	4.8	–32.4
– Victoria	129.1	134.1	159.5	137.0	154.6	146.9	141.1	123.9	107.8	112.9	4.8	–26.6
– Queensland	123.6	131.6	156.0	140.5	137.2	145.5	136.2	133.0	137.1	124.1	–9.5	–14.1
– Western Australia	116.9	83.6	119.2	96.3	113.8	124.3	113.7	110.4	109.3	107.4	–1.7	–13.9
– South Australia	127.0	131.0	149.1	142.2	138.6	145.4	141.4	139.9	131.6	137.5	4.5	–6.8
– Tasmania	127.0	131.9	154.2	145.3	137.1	163.5	166.4	167.6	152.7	150.5	–1.4	–13.8

*indexes based on net balance of % assessing 'good time to buy'/'house prices to rise' and % assessing 'bad time to buy'/'house prices to decline'
Sources: Melbourne Institute, Westpac Economics

Housing market data

Consumer sentiment – other components

		2016	2017				2018					
index*	**avg**	**Dec**	**Mar**	**Jun**	**Sep**	**Dec**	**Mar**	**Jun**	**Jul**	**Aug**	**%mth**	**%yr**
Unemp. expectations												
Australia	129.8	139.1	137.9	140.3	133.6	127.6	121.8	126.9	125.8	129.3	2.8	-2.4
– New South Wales	129.5	127.5	128.1	137.2	127.2	124.9	124.5	123.3	117.7	130.1	10.6	-3.0
– Victoria	130.9	142.6	137.7	138.3	137.0	127.8	118.4	122.6	134.0	127.2	-5.0	-3.3
– Queensland	133.0	139.2	147.4	139.9	135.3	123.6	119.2	137.0	124.5	137.4	10.3	-1.3
– Western Australia	127.6	148.9	127.5	144.2	128.0	127.6	117.7	132.8	135.3	123.9	-8.5	17.3
– South Australia	134.0	155.7	165.3	154.0	155.2	145.1	135.4	122.5	123.5	122.2	-1.1	-20.6
– Tasmania	**138.7**	**146.5**	**152.6**	**130.8**	**117.9**	**136.2**	**116.8**	**127.5**	**124.0**	**111.6**	**-10.0**	**-10.2**

Risk aversion											**qtr ch**	**ann ch**
Australia	12.1	40.1	44.6	44.1	47.2	45.2	40.6	44.1	n.a.	n.a.	3.4	-2.1
– New South Wales	8.3	41.8	34.9	35.9	38.9	39.1	35.8	39.5	n.a.	n.a.	3.6	1.6
– Victoria	6.8	35.4	44.7	51.3	44.1	50.0	35.5	37.2	n.a.	n.a.	1.7	-9.3
– Queensland	8.1	49.4	50.9	48.7	52.2	42.3	44.2	46.6	n.a.	n.a.	2.4	-4.4
– Western Australia	0.9	26.4	63.3	50.3	63.1	55.2	60.7	63.3	n.a.	n.a.	2.6	4.4
– South Australia	9.9	50.6	50.4	42.9	59.9	53.3	47.3	58.3	n.a.	n.a.	10.9	4.0
– Tasmania	13.4	37.9	36.8	41.5	27.4	28.6	34.8	27.1	n.a.	n.a.	-7.7	-5.1

*indexes based on net balance of % assessing 'unemployment to rise' and % assessing 'unemployment to fall'; ^measure based on responses to 'wisest place for savings' question.
Sources: Melbourne Institute, Westpac Economics

Housing market data

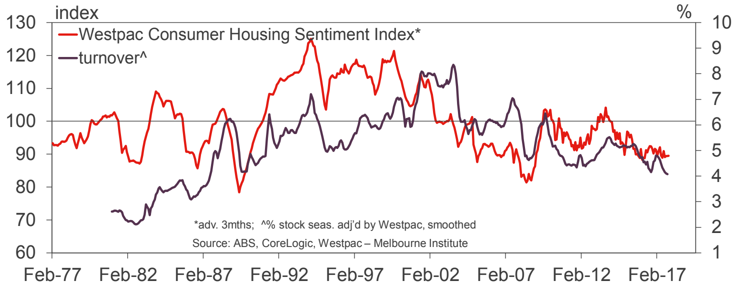
Dwelling prices and turnover

		2016			2017				2018			
%	avg	May	Aug	Nov	Feb	May	Aug	Nov	Feb	May	Jun	Jul
Dwelling prices, ann%*												
Australia	6.0	3.8	2.1	5.1	8.8	11.4	9.7	5.5	2.0	-1.1	-1.6	-2.4
– Sydney	6.1	3.7	1.8	7.3	13.5	17.1	13.0	5.0	-0.5	-4.2	-4.5	-5.4
– Melbourne	6.8	7.5	5.1	7.0	10.0	13.0	12.7	10.1	6.9	2.2	1.0	-0.5
– Brisbane	4.4	4.1	2.3	1.7	2.1	2.9	3.0	2.4	1.8	0.9	1.1	1.2
– Perth	4.6	-4.7	-4.9	-3.6	-3.1	-2.9	-2.8	-2.6	-2.7	-1.8	-2.1	-2.3
– Adelaide	4.5	2.4	2.2	3.5	3.9	5.5	5.2	3.4	2.2	0.6	1.1	0.7
– Hobart	5.0	5.4	4.1	8.5	10.0	13.1	13.6	11.5	13.1	12.7	12.7	n.a.
Turnover, %stock^												
Australia	5.7	4.5	4.5	4.7	4.6	4.5	4.4	4.2	4.1	4.0	4.1	n.a.
– New South Wales	5.6	4.7	4.6	4.9	4.9	4.6	4.6	4.3	4.1	4.0	4.0	n.a.
– Victoria	5.7	4.6	5.0	5.0	5.0	4.7	4.7	4.4	4.5	4.3	4.3	n.a.
– Queensland	6.7	5.4	5.2	5.3	5.2	4.9	4.9	4.8	4.6	4.3	4.3	n.a.
– Western Australia	6.4	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.3	n.a.
– South Australia	4.6	3.8	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.7	n.a.
– Tasmania	5.3	4.6	4.5	5.2	5.4	5.5	5.4	5.3	5.1	4.9	4.9	n.a.

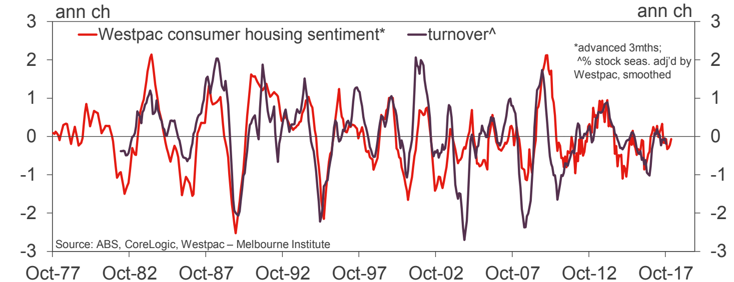
* 'all dwellings' measures, ann% ch, latest is month to date
^ % dwelling stock; most recent months are estimates modelled on preliminary data
Sources: CoreLogic, ABS, Westpac Economics

Appendix

Westpac Consumer Housing Sentiment Index: full series



Westpac Consumer Housing Sentiment Index: cycles



The **Westpac Consumer Housing Sentiment Indexes** presented in this report are composite measures based on a weighted combination of four indexes from the **Westpac-Melbourne Institute Consumer Sentiment survey**.

Two of these are 'primary' components with a higher weight that relate directly to consumer perceptions of housing market conditions: the **Westpac-Melbourne Institute 'time to buy a dwelling' index** and the **Westpac-Melbourne Institute House Price Expectations Index**. The remaining 'supplementary' components, with lower weights, relate to consumer assessments of job security – the **Westpac-Melbourne Institute Unemployment Expectations Index** – and risk appetite – the **Westpac Risk Aversion Index**.

Each of these components is seasonally adjusted, converted to a consistent base and combined using fixed weights determined by historical regression analysis. Note that the house price expectations component is only available from 2009 on – a re-weighted composite based on the remaining measures is used for earlier periods.

The resulting composite measures provide significant insight into housing market conditions both nationally and at the individual state level. The national index has over 40yrs of history and a clear lead indicator relationship with a variety of housing market metrics. The index is particularly good at picking turning points in housing market turnover – correctly anticipating every major upswing and downturn since 1980 with a lead of around three months (four once the timeliness of sentiment updates is included).

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