

Housing Pulse

November 2019

Westpac Institutional Bank



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Executive summary

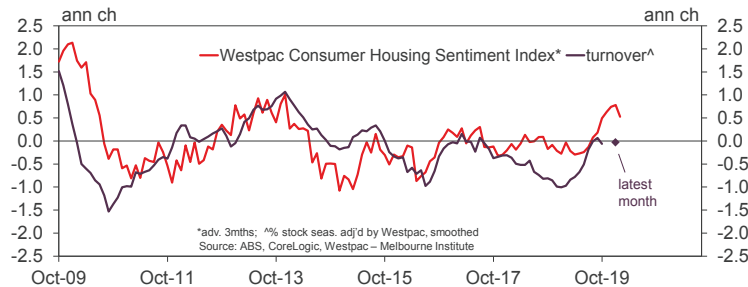
The pick-up foreshadowed in our last report is now coming through clearly with recent months showing more convincing evidence that Australia's housing market is into a self-sustaining recovery. Prices have lifted and are set to finish up slightly for the 2019 calendar year. Turnover has been slower to turn but is starting to show a clearer pick up as well.

Our November **Housing Pulse** shows buyer sentiment continuing to improve albeit with the annual pace of gains slowing marginally. The **Westpac Housing Consumer Sentiment Index*** remains near five year highs – readings consistent with a pick up in turnover carrying through year end and into the first half of 2020. The swing that became apparent mid year continues to be led by a strong resurgence in NSW and Vic but with other states also showing a clear pick up. Auction markets, finance activity, prices and listings now all confirm the turn.

Conditions continue to vary markedly by state. NSW is showing a strong, broad based price rebound that is already starting to hint at renewed affordability issues. Vic's recovery has good momentum but is more uneven across segments. Qld missed out on most of the recent price cycle but is starting to show signs of perking up. SA is seeing a gentle firming but WA is still struggling to pull out of its multi-year price correction.

Our main **special topic** this month is a look at **the year in review and the year ahead** including point price forecasts for the five main capital city markets (see p6). Momentum is set to continue into 2020 but the upswing is forecast to move through a transition as affordability constraints re-emerge in Sydney and Melbourne and population flows start to favour other markets, Brisbane in particular. We also include our regular **prudential policy update** which suggests this will take a back seat to other policy issues in 2020.

I. Australia: national housing conditions

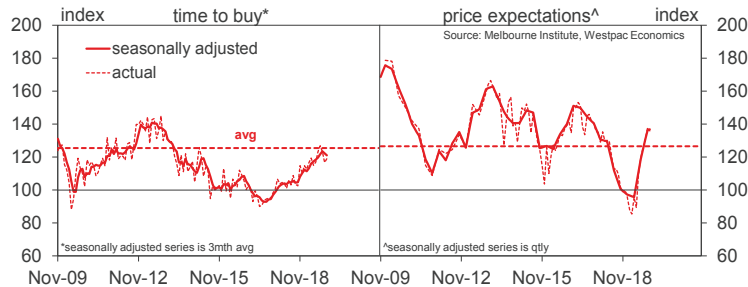


“... convincing evidence that Australia's housing market is into a self-sustaining recovery.”

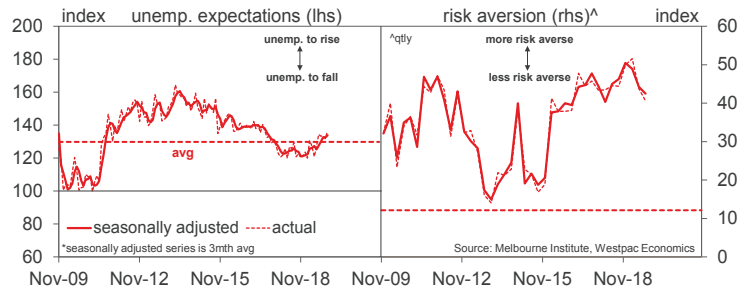
*The **Westpac Consumer Housing Sentiment Index** is a composite measure based on four housing-related components of the **Westpac Consumer Sentiment survey**. See **Appendix** on p40 for more details.

Overview: resurgence

2. Consumer sentiment: housing

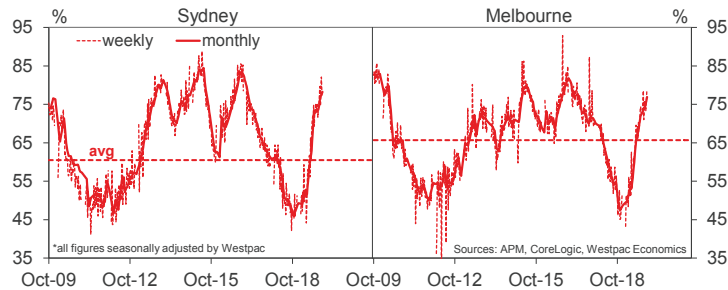


3. Consumer sentiment: jobs & risk

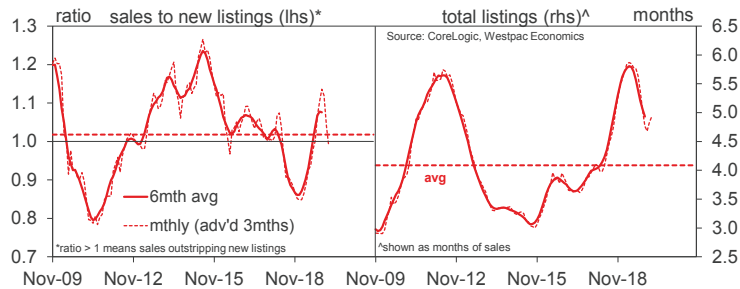


- The price pick-up evident three months ago has strengthened and broadened with a clear resurgence now underway in the Sydney and Melbourne markets. Conditions are more mixed across other markets with a notable lift in Brisbane but more muted improvements elsewhere.
- Housing-related sentiment continues to show a marked improvement albeit with some signs that the lift is starting to level out. Consumer house price expectations have continued to strengthen but assessments of 'time to buy' have softened a touch and unemployment expectations have deteriorated. Risk aversion remains unchanged and elevated but is slightly improved vs a year ago.
- Sales are also starting to pick up, turnover nationally rising nearly 9% between Feb's extreme low and Sep albeit with preliminary figures for Oct a touch softer (all figures are on a rolling 3mth basis). The total level of activity is still very low with around 3.6-3.8% of the dwelling stock changing hands, up only marginally on the 32 year low of 3.4% recorded at the start of the year.
- Auction clearance rates have lifted further into the high 75-80% range in both Sydney and Melbourne. Pre-auction withdrawals remain at low levels.
- Prices nationally have seen a strong 5% gain since July taking the annual pace to -0.2%/yr in November, a spectacular improvement from the -8.8% pace in May and tracking to be up 2% for the calendar year. Sydney and Melbourne have shown slightly stronger turnarounds with gains of 5.6% in May and annual growth tracking towards 4% gains for the calendar year.

4. Auction clearance rates



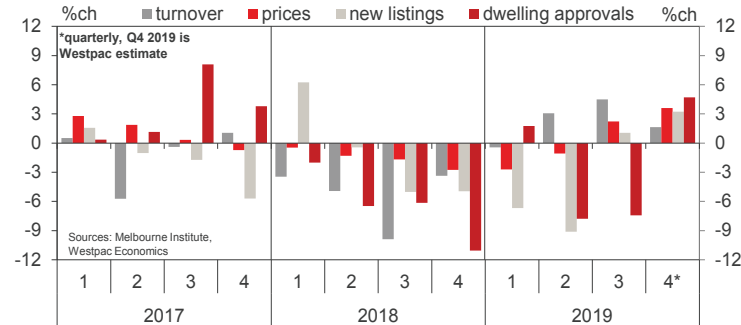
5. Residential property listings



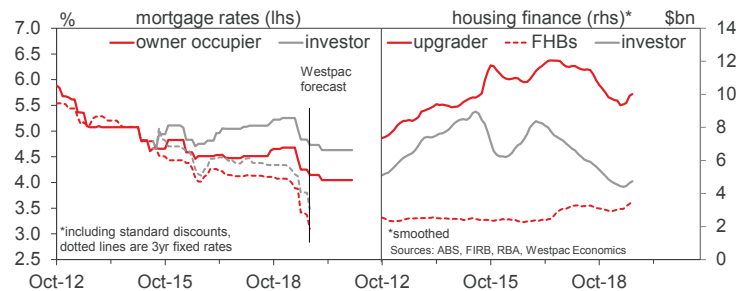
- Nationally, the **Westpac Melbourne Institute 'time to buy a dwelling' index** has retraced 6.2% since Aug but is still up 3.7%yr. At 119 the Index is around its long run avg of 120. Buyer sentiment has softened notably in NSW and Victoria where the resurgence in prices already looks to be squeezing affordability, but remains relatively well supported in Queensland, WA and SA.
- The **Westpac-MI Consumer House Price Expectations Index** has continued to rise strongly, surging a further 8.3% over the 3mths to Nov. At 135.8, the Index is up a spectacular 52% since May and on a par with levels seen in late 2017. All major states have recorded strong gains.
- The **Westpac Melbourne Institute Unemployment Expectations Index** has continued to deteriorate in recent months, rising a further 2.4% since Aug and up 13% since May (recall that higher reads mean more consumers expect unemployment to rise in the year ahead). The index points to a material increase in job insecurity compared to 2018.
- Risk aversion has eased slightly over the last 3mths but remains near historic highs. The **Westpac Consumer Risk Aversion Index** edged down to 43 in Sep from 44 in Jun and 49 in Mar but remains well above the long run avg of 14.8. The 'wisest place for savings' question that the index is based on shows 12% of consumers favour 'real estate', up from 8.8% in Mar, a 45yr low.
- Listings are showing a more balanced picture with the lift in sales bringing them into line with new listings and pointing to a much faster pace of absorption for unsold inventory, now sitting at 4.9 months of sales vs 5.8 at the start of the year.

Special topic: the year in review and the year ahead

6. Residential property: a year of two halves

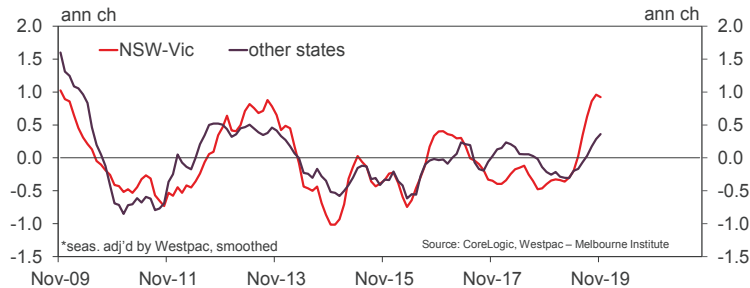


7. Mortgage rates and housing finance approvals

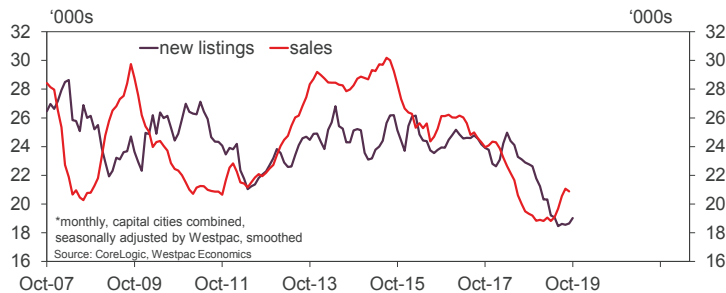


- Australian property markets are finishing the year with the proverbial 'wet sail', price gains accelerating, sales picking up and new listings starting to lift. In this special topic we recap 2019 and assess prospects for 2020.
- This time last year prospects looked bleak with property sales dropping sharply, price corrections worsening in Sydney and Melbourne and weakness starting to spill over to other markets. Turnover as a share of the total dwelling stock finished 2018 at a 31yr low with 70% of all properties recording annual price declines. Our November 2018 **Housing Pulse** noted buyer sentiment was stabilising but that other factors looked to be driving the weakness, including an apparent tightening in lending standards.
- The poor finish carried into the start of 2019 with the prospect of a more pronounced housing-related drag on the wider economy contributed to our decision to review our RBA view in February, Westpac becoming the first major bank to call rate cuts in 2019. The RBA moved to a clear easing bias in the following months, eventually making three 25bp rate cuts in June, July and October.
- The reduction in rates, reduced uncertainty around housing-related tax policy following the Coalition victory at the May Federal election, and some relaxation in regulatory guidelines for home loan serviceability assessments contributed to a dramatic turnaround since mid-year. The rebound has been particularly sharp for prices which look set to finish up 2.4% for the year, a remarkable turnaround given the 3.8% fall over the first half. Turnover, new listings and dwelling approvals are also lifting but remain at weak levels overall.

8. Consumer Housing Sentiment: NSW-Vic vs rest

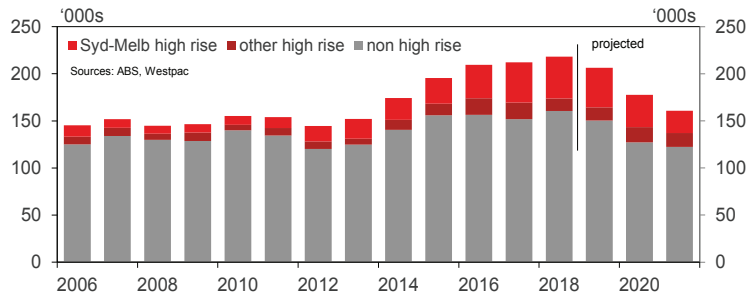


9. Residential property: sales and new listings

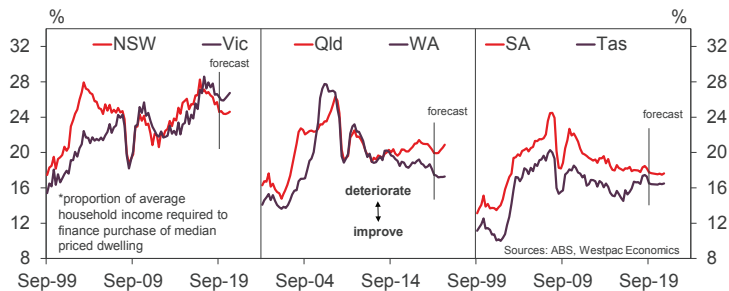


- As this publication makes abundantly clear, it is difficult to generalise about residential property in Australia with individual state and capital city markets often showing very different performances. Sydney and Melbourne continue to be the dominant drivers of the cycle nationally with more subdued conditions across the rest of the country, most of which missed out on the run-up in prices through 2012-17 and have seen much more muted swings since.
- Price-wise, the wash up for the 2019 calendar year shows remarkably similar gains across most capitals, ranging from around 4% in Sydney and Melbourne, to 3% in Hobart, 1% in Brisbane and a 0.5% decline in Adelaide. Perth remains a notable exception with prices likely to finish down nearly 7% for the year. Contrast this with calendar 2018 which saw a 9% fall for Sydney, a 7% decline in Melbourne and a 5% fall in Perth but a flat result for Brisbane, a 1% gain in Adelaide and a 9% rise in Hobart.
- Momentum heading into 2020 is clearly positive, albeit uneven across markets. Near term, the main guidance comes from current price momentum, auction markets, listings and our buyer sentiment measures. Nationally, these are all showing positive prospects for early 2020 with price growth accelerating, auction clearance rates riding high in Sydney and Melbourne, listings showing a clear tightening and a positive pulse from buyer sentiment pointing to a further lift in demand. The cyclical momentum is strongest in Sydney and Melbourne but is also showing a notable pick up in Brisbane. Adelaide and Hobart are seeing a more muted lift with Perth yet to pull out of its multi year price decline.

10. Dwelling completions

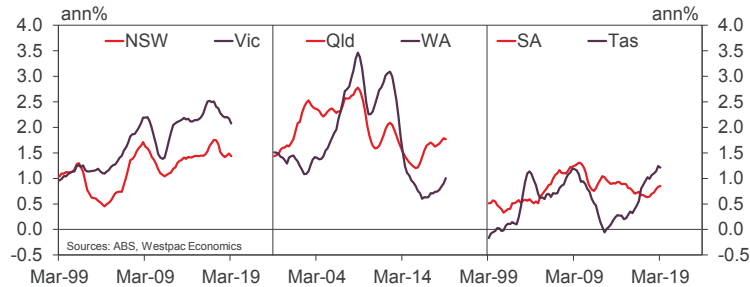


11. Housing affordability: by state



- Looking further ahead, several factors are set to shape residential property markets over the course of 2020.
- The first is **policy**: we expect the RBA to cut rates by another 25bps at its February meeting and to turn to so-called unconventional policy measures to provide additional stimulus. The exact flow through to lending rates is unclear but mortgage interest rates will continue to plumb historic lows. Meanwhile, prudential policy looks set to be sidelined, not restraining the upturn but not actively loosening lending conditions either (see p10). Fiscal policy will be slightly supportive with the roll-out of the Federal government's First Home Buyer deposit scheme from January aimed at providing easier access to finance for 10k buyers a year. Overall, the policy backdrop will continue to be broadly positive for property although some of the initial impetus from rate cuts will likely fade over the year.
- The second factor is **supply**, both in the form of sellers returning to the market and the physical supply of new dwellings. New listings fell to extreme lows in 2019. Our analysis suggests the listing cycle tends to follow the sales cycle by about six months. A likely lift in new listings will test the depth of demand in the first half of 2020. The supply of newly built dwellings will also remain elevated. Completions eased back from a record 218k in 2018 to an estimated 205k in 2019. Our projections have this easing to around 175k in 2020, still well above average pre-boom levels with about 50k of that high rise dwellings. New supply could prove difficult to absorb and will weigh on prices and rents in some segments - Sydney's rental vacancy rate and Melbourne's stock of unsold units being key areas to watch.

12. Population growth by state



13. Dwelling prices: actual and forecast

	avg*	2017	2018	2019e	2020f	comments
Sydney	5.1	3.2	-8.9	4.1	+6	Strong momentum fades as affordability issues re-emerge, population slows
Melbourne	4.3	10.2	-7.0	4.2	+6	Strong momentum fades as affordability issues re-emerge, population flows
Brisbane	0.9	1.8	0.2	1.0	+8	Gathering pace, well-placed in terms of affordability and likely population inflow
Perth	-1.5	-1.7	-4.7	-6.8	-0.5	Closer to stabilising but missing population & economic supports for recovery
Adelaide	1.5	2.5	1.3	-0.5	+2	Stable with some policy support but lacking economic drivers for stronger upturn
Hobart	3.3	11.9	8.7	3.1	+5	Market remains very tight meaning any lift in demand quick to stoke price growth
Australia	3.4	4.3	-6.4	2.4	+5	Resurgence becoming more evenly balanced across markets

All dwellings, Australia is five major capital cities combined measure; *10yr avg;

Source: CoreLogic, Westpac Economics

- As 2020 unfolds we expect another dynamic to come to the fore around **affordability** and **population flows**. Despite the price correction in 2017-18 and a further lowering in interest rates, affordability remains relatively stretched in Sydney and Melbourne. The resurgence in prices see these markets run into the same affordability constraints that emerged in 2016-17 as prices near previous peaks. Investor activity will lift as low deposit rates and equity volatility drive more interest in real estate but funding is likely to remain a constraint on investors.
- These pressures are in turn expected to see a gradual shift in **population flows** as would-be buyers priced out of the Sydney and Melbourne markets seek out more affordable markets. The precise timing, magnitude and direction of this shift is highly uncertain. There are already some hints of a shift with population growth slowing slightly in NSW and Vic over the last year or two but picking up elsewhere. Affordability and other factors suggest the shift will favour Qld. However, population growth in NSW and Vic should still hold up relatively well given the strong preference new migrants show for these states, foreign students in particular.
- Overall we expect the price upswing to continue in 2020 but with a key transition over the course of the year as deteriorating affordability caps gains in Sydney and Melbourne and displaced demand starts to lift prices in other cities, most notably Brisbane. The three major eastern capitals are forecast to see price gains in the 5-10% range, Brisbane outpacing slightly over the full year. Adelaide and Hobart are expected to see gains in the 0-5% range – improved but still lagging. Perth is likely to see prices stabilise but recovery remain elusive.

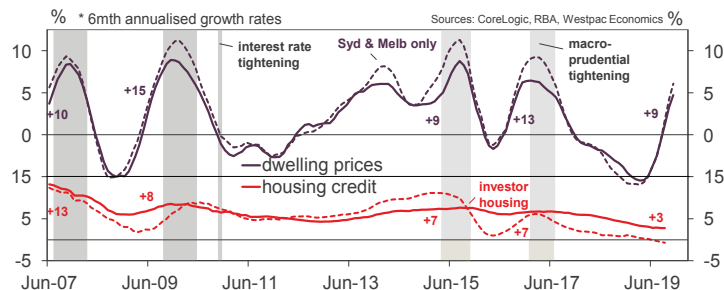
Special topic: prudential policy update

14. Summary of prudential policy measures

	'Macro' prudential	'Micro' prudential
2015	10% limit on investor loan growth	Tightened serviceability assessments and improved consistency across lenders, including minimum assessment 'floor' interest rates >7%; serviceability assessment buffers >2% and applied to both new and existing debt.
2016	–	Tightened serviceability assessments including estimates of credit card repayments; scaling of benchmark measures of minimum expenses; discounts to estimates of uncertain/variable income
2017	30% limit on share of 'interest only' loans	Restrictions on high LVR interest only and investor loans and continue to restrain lending to high risk segments
2018	10% limit on investor loan growth removed	Lenders to develop limits on share of new loans with debt to income ratios above 6, improve collection of information on expenses, and strengthen controls on verifying income and existing debt
2019	30% limit on share of 'interest only' loans removed	Further update of benchmark measures of minimum expenses; removal of 7% minimum 'floor rate' on serviceability assessments.

Source: APRA, Westpac Economics

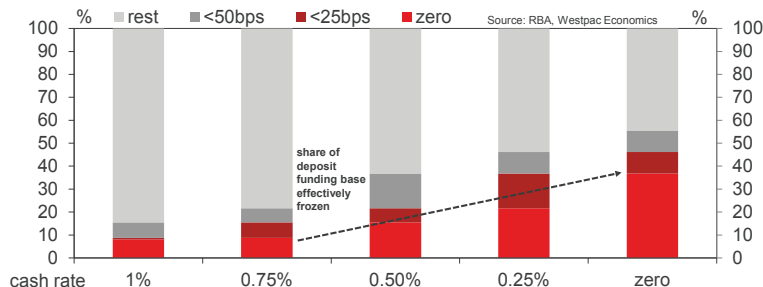
15. Dwelling prices and household credit



- Prudential policy has essentially been unchanged over the last three months and looks unlikely to see any material shifts in 2020. While dwelling prices are now showing a strong recovery, regulators are unconcerned, the minutes to the RBA October policy meeting noting “... higher asset prices were considered unlikely to present a risk to macroeconomic and financial stability”.
- Conversely, while the wider policy imperative is about generating stronger growth, the regulator also seems unlikely to roll back the ‘micro-prudential’ tightening measures introduced over the last few years (we use the term ‘macro-prudential’ to refer to aggregate guidelines such as those affecting the pace and mix of loan growth, and ‘micro-prudential’ to refer to the more detailed guidelines affecting individual loan assessments). Guidance has relaxed slightly since mid 2019 with the removal of the 7% minimum ‘floor rate’ for serviceability assessments (detailed in our last report here) but further steps along these lines seem unlikely.

- In this issue, we consider what factors could see regulators become more concerned about the upturn in dwelling prices. We also look at the wider policy outlook including the prospect for unconventional monetary policy measures in 2020.
- The resurgence in dwelling prices is clearly not currently a concern for regulators. Asked directly about the strength of the price pick up following a recent speech (October 29), the RBA Governor responded: “Is it a problem? I don’t think so. Could it become a problem? I think only if housing credit growth were to pick up a lot.”

16. Major banks: share of deposits on zero rates



17. Unconventional policy measures

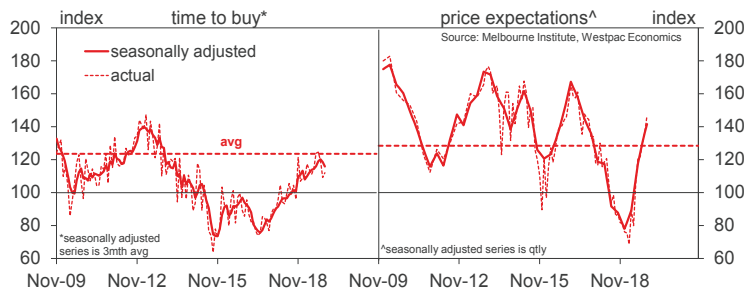
option	main channel	RBA Governor Lowe's comments
negative interest rates	AUD, longer term interest rates	"... it is extraordinarily unlikely that we will see negative interest rates in Australia"
forward guidance	AUD, longer term interest rates, inflation expectations	"... we're expecting interest rates to stay low for a very long period of time "
term lending to banks	bank funding with lending growth targets	"... clear success in dealing with dislocation and credit supply " [Europe example]
asset purchases (QE)	bond yields, swap rates, spreads, rates on ABSs	"I think the focus would be on trying to reduce the risk-free interest rate " [in Australia]
FX intervention	AUD	"seen in just a couple of cases"

Source: : RBA, Westpac Economics

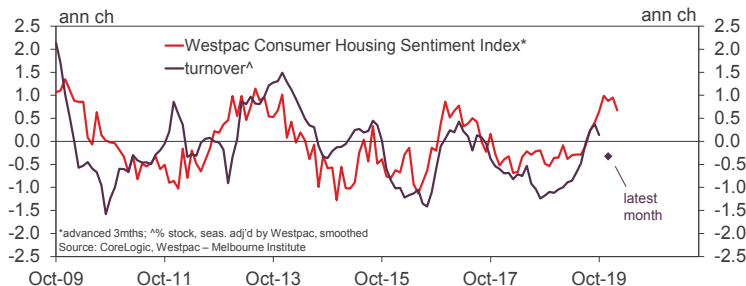
- Chart 15 puts some context on this comment, showing dwelling price and housing credit growth historically, highlighting periods of interest rate and macro-prudential tightening (figures show growth rates just prior to each episode). The main takeaway is that whereas price momentum is comparable to that prior to previous tightenings, housing credit growth – which is new lending net of repayments – remains markedly weaker, particularly in the investor segment that was of concern in 2015 and 2017. While some pick-up is likely, we expected credit growth to remain subdued in 2020.
- The wider and more urgent policy imperative at the moment is to generate stronger growth. The RBA's three 25bp rate cuts in June, July and October have provided some additional stimulus but with the cash rate now at 0.75% incremental cuts are becoming much less effective. Part of the reason relates to the structure of bank funding – Chart 16 shows around a quarter of bank deposits are now on very low or zero rates meaning they no longer 'reprice' with each rate cut, reducing the scope for banks to lower lending rates. These issues and wider concerns about the level of the cash rate also appear to be much more unsettling for confidence.
- The RBA's November Statement on Monetary Policy acknowledged that with rates already very low "each further cut brings closer the point at which other policy options might come into play." Westpac has commented extensively on the 'effective lower bound' to interest rate policy (see [here](#)) and the prospect of unconventional policy (see [here](#)). With the former assessed to be around 0.5% the latter is likely to be very much 'in play' in 2020.

New South Wales: rebound takes off

18. NSW consumers: housing-related sentiment

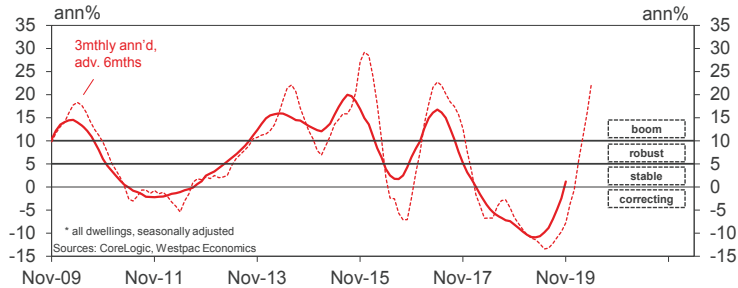


19. NSW housing composite vs turnover



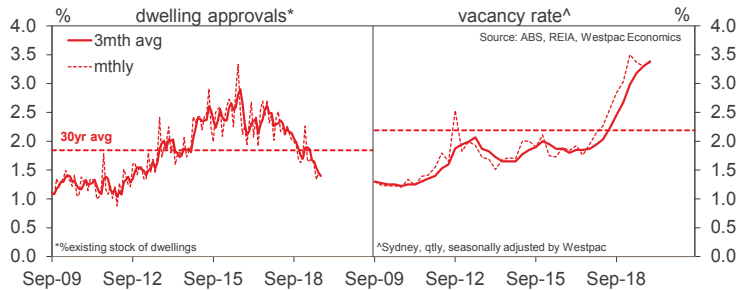
- The upturn evident in NSW three months ago is now well entrenched with prices rebounding strongly, the Sydney auction market humming, sales recovering and listings starting to tighten. Buyer sentiment points to more strength ahead although the pace of the rebound may slow. More generally, the market is still in recovery mode - despite strong gains, Sydney prices are still 8.5% below their peak and sales remain low by historical standards.
- The price detail continues to show broad-based gains with a similar lift for units and houses, the latter having seen more weakness through the 2017-18 correction. Properties in the bottom tier have underperformed slightly. The sub-regional detail shows similar gains across most areas of Sydney but with conditions a touch weaker in some outer suburbs (see p26 for more).
- The sales-listings balance has swung sharply with sales now tracking ahead of new listings and the total stock of unsold properties down to 3.8 months of sales compared to 5.4 months in late 2018. While listings still suggest conditions are more difficult for units, both units and houses have seen similar improvements since mid year.
- The **NSW Consumer Housing Sentiment index** has risen further since Aug although component moves have been more mixed and the 'pulse' from the annual change has softened a touch (note that in chart 23 and similar charts for other states both the index and turnover are shown in annual change terms rather than levels). Resurgent price expectations are now the main driver, partially offset by softer reads on 'time to buy' and unemployment expectations - suggesting affordability and job security are becoming constraints.

20. Sydney dwelling prices



Population: 8.1mn
Net migration: 70k pa
GSP: \$614bn (33% Aus)
Dwellings: 3.2mn, \$2.6trn
Capital: Sydney

21. NSW: dwelling approvals, vacancy rates

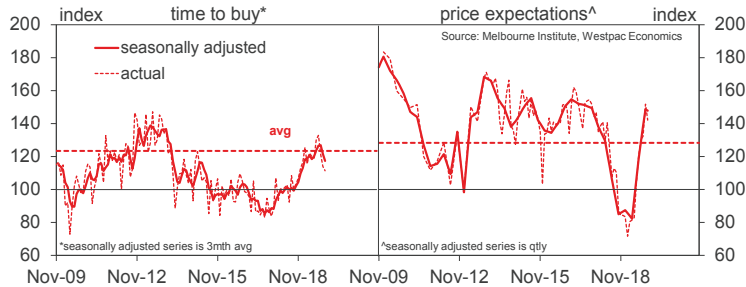


June years	avg*	2017	2018	2019	latest^
GSP, ann%	2.7	3.2	2.5	1.9	2.2
State final demand, ann%	3.3	3.4	3.5	2.2	2.2
Employment, ann%	1.8	1.1	3.7	3.3	2.4
Unemployment rate, % [#]	5.9	4.7	4.8	4.6	4.5
Population, ann%	1.2	1.7	1.4	1.4	n.a.
Dwelling prices, ann%	5.5	16.2	-5.4	-9.9	1.2
Rental yield, % [#]	4.6	3.7	3.9	4.1	4.1
Sales/new listings, ratio [#]	1.14	1.05	0.95	1.31	1.06
Total listings, mths sales [#]	3.3	2.9	4.2	4.2	3.8

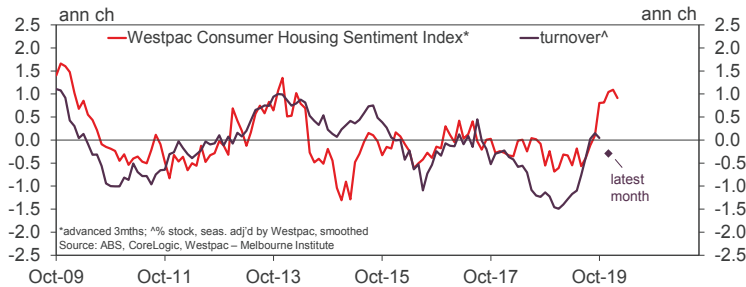
* avg last 25yrs; ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Victoria: strong momentum, uneven detail

22. Vic consumers: housing-related sentiment

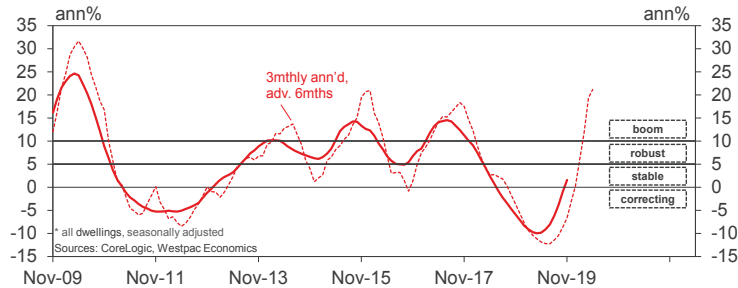


23. Vic housing composite vs turnover



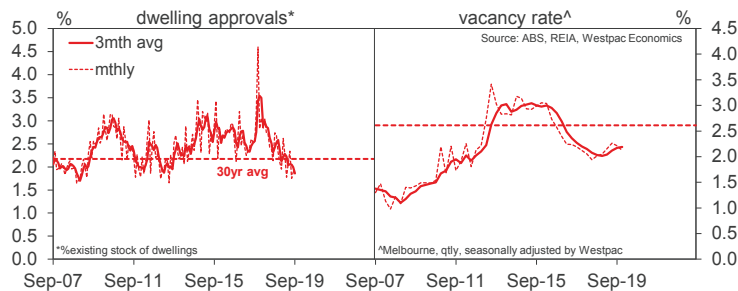
- Vic's price recovery has gained strong momentum with increases running at a double digit annual pace over the last 3mths and prices having now recovered over half of their correction. However the detail is still more mixed with price performances uneven, turnover at low levels and listings showing a significant overhang of unsold units. Housing-related sentiment points to more strength ahead although the pace of the rebound may moderate.
- The price detail shows a varied performance across segments and sub-regions, some of which reflects the more pronounced corrections for houses and top and middle tier properties. Melbourne unit prices are seeing better annual price gains but performances across price tier are now fairly even on an annual basis. The turnaround continues to be led by Melbourne's Inner East, which is coming out of a larger correction, with a more subdued upturn in the West and in regional areas.
- The **Vic Consumer Housing Sentiment index** has continued to lift over the last 3mths but is now being entirely driven by rising price expectations. As with NSW, assessments of 'time to buy' have weakened back to below average levels suggesting affordability pressures are starting to re-emerge (Melbourne prices are now just 4.5% below their previous peak).
- Listings metrics show some improvement with sales mostly outpacing new listings in recent months and the overhang of unsold stock down 18% from the peak at the start of the year. However, the overhang of units remains high and is declining more slowly. The stronger price performance of units overall may indicate a 'two tier' market with few properties transacting in the weaker tier.

24. Melbourne dwelling prices



Population: 6.6mn
Net migration: 99k pa
GSP: \$446bn (24% Aus)
Dwellings: 2.7mn, \$1.8trn
Capital: Melbourne

25. Vic: dwelling approvals, vacancy rates

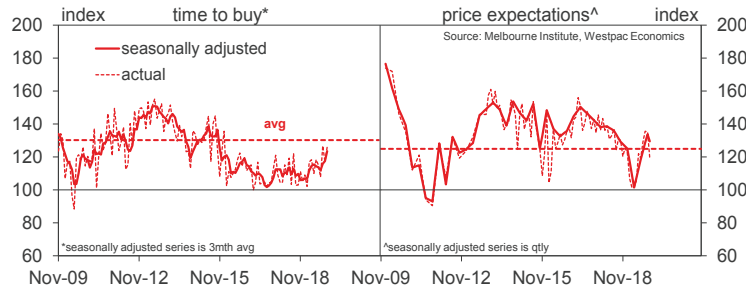


June years	avg*	2017	2018	2019	latest^
GSP, ann%	3.2	4.1	3.4	3.0	2.5
State final demand, ann%	4.0	4.2	4.9	3.4	3.4
Employment, ann%	2.2	3.9	2.0	3.7	3.3
Unemployment rate, % [#]	6.4	6.0	5.3	4.7	4.8
Population, ann%	1.6	2.4	2.2	2.1	n.a.
Dwelling prices, ann%	6.4	14.3	0.8	-9.1	1.6
Rental yield, % [#]	4.7	3.9	4.0	4.2	4.2
Sales/new listings, ratio [#]	1.00	1.05	0.86	1.07	0.97
Total listings, mths sales [#]	4.0	3.3	4.5	5.5	4.9

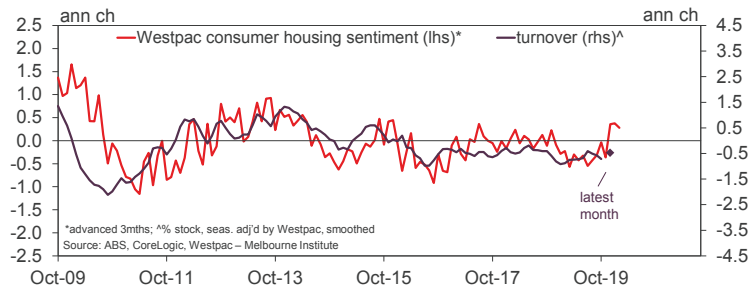
* avg last 25yrs; ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Queensland: perking up at last?

26. Qld consumers: housing-related sentiment

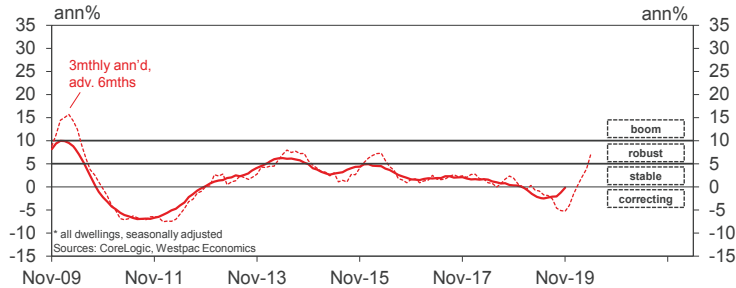


27. Qld housing composite vs turnover



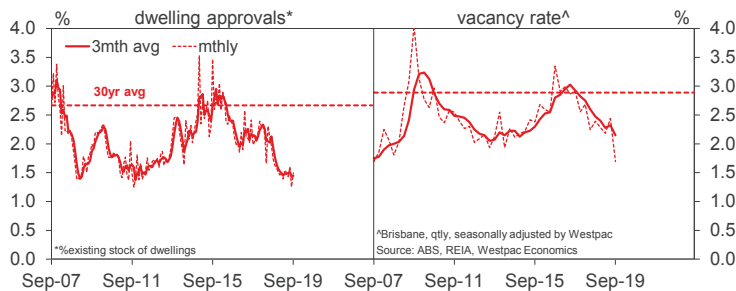
- After a lacklustre decade and a mild price correction in the first half of 2019, Qld is showing distinct signs of a cyclical lift although the evidence is still only tentative. Brisbane prices have seen the best 3mth gain in over 5yrs, the Nov month shaping as the strongest monthly gain in over a decade. Lifting buyer sentiment points to more firming ahead although it remains well short of the 'take-offs' seen in NSW and Vic. As discussed on p6, affordability remains more constructive in Qld, suggesting there is more 'head room' for sustained gains.
- While the Nov month detail is not yet available, the price detail to Oct shows a broad stabilisation in prices across type and tier. The sub-regional figures show Brisbane's inner city and West, and the Gold and Sunshine Coast leading the pick-up. Qld's regions continue to show a more varied performance with some previously weak mining areas seeing recoveries and tourism centres in the far north picking up but prices declining significantly in drought-affected areas.
- The **Qld Consumer Housing Sentiment index** has improved significantly over the 3mths to Nov and is now pointing to a likely pick up in demand in early 2020. However, for now turnover is still tracking lower. The gain in sentiment has been mainly around 'time to buy' assessments with price expectations flattening out at a moderately positive level. Cooling labour market expectations have been an offsetting drag.
- The picture around listings is more subdued with sales broadly in line with new listings and unsold stock stuck at above average levels. Rental vacancy rates remain very tight and dwelling approvals near historic lows.

28. Brisbane dwelling prices



Population: 5.1mn
Net migration: 59k pa
GSP: \$357bn (19% Aus)
Dwellings: 2.1mn, \$1.0trn
Capital: Brisbane

29. Qld: dwelling approvals, vacancy rates

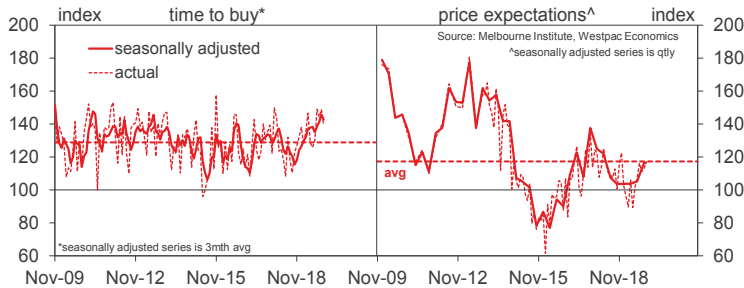


June years	avg*	2017	2018	2019	latest^
GSP, ann%	3.8	2.4	3.7	1.4	2.2
State final demand, ann%	4.0	2.9	3.6	1.1	1.1
Employment, ann%	2.3	2.0	3.1	1.7	2.3
Unemployment rate, % [#]	6.6	6.2	6.2	6.2	6.5
Population, ann%	1.9	1.7	1.7	1.8	n.a.
Dwelling prices, ann%	4.3	1.9	1.2	-2.5	-0.2
Rental yield, % [#]	4.9	4.9	4.8	5.0	5.0
Sales/new listings, ratio [#]	1.00	0.99	0.97	1.00	0.91
Total listings, mths sales [#]	4.8	4.6	4.7	5.9	5.9

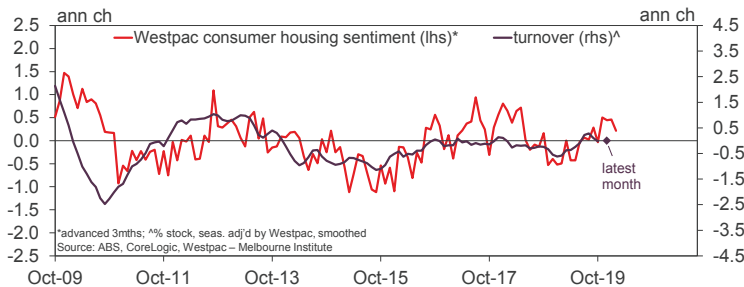
* avg last 25yrs; ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Western Australia: hope returns

30. WA consumers: housing-related sentiment

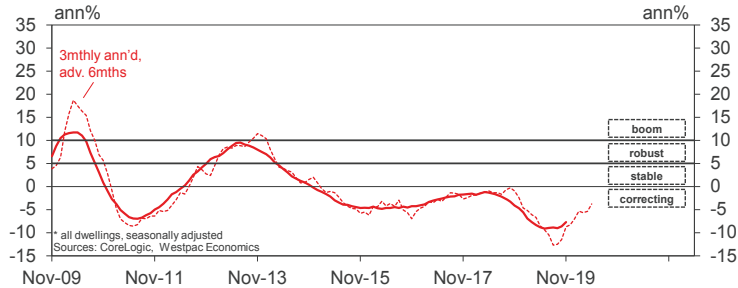


31. WA housing composite vs turnover



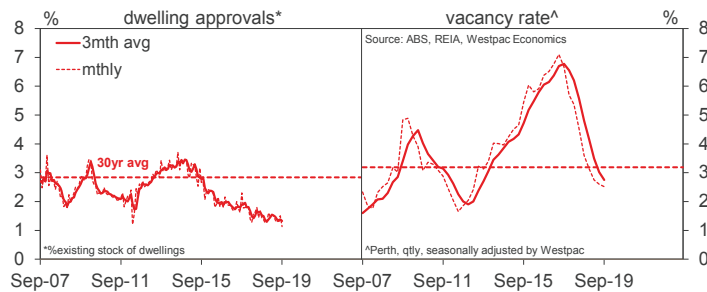
- WA's beleaguered housing market is once again showing signs of stabilising although prices have yet to shake off the multi-year decline that began in 2014. Perth prices lurched lower through most of 2019 and are set to record the biggest annual decline in the correction to date. That said, prices look a little more settled heading into year end. Buyer sentiment is once again looking more supportive and listings are showing a promising rebalancing although still not pointing to outright gains.
- The latest price data shows declines remain broad based across dwelling types and price tiers. Within Perth, declines have moderated notably in the inner Perth and the South East areas that saw the biggest falls in the first half of 2019. Regional areas have swung in the opposite direction, moving back into material price declines over the second half.
- The **WA Consumer Housing Sentiment index** continues to give a moderately positive signal but has softened a touch over the last 3mths. Assessments of 'time to buy' remain positive but have been pared back a touch. Consumer price expectations have firmed but risk aversion and unemployment expectations have deteriorated, the latter despite a decline in the state's unemployment rate over the year to date. Turnover continues to hold at extremely low levels – the sentiment mix pointing to some recovery in 2020.
- Supply-demand dynamics are becoming more supportive. Perth's rental vacancy rate has normalised and new building is at extreme low. Listings still point to a material overhang of unsold stock but this is declining gradually rather than rising.

32. Perth dwelling prices



Population: 2.6mn
Net migration: 5k pa
GSP: \$261bn (14% Aus)
Dwellings: 1.1mn, \$0.6trn
Capital: Perth

33. WA: dwelling approvals, vacancy rates

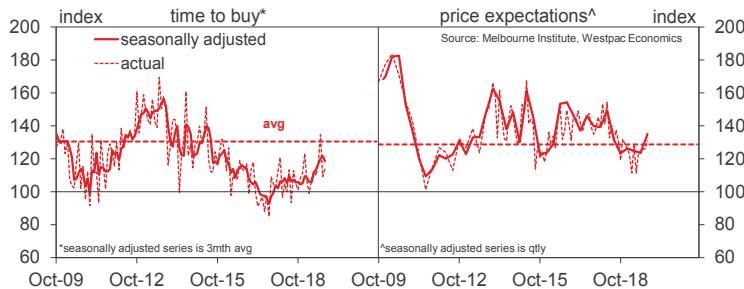


June years	avg*	2017	2018	2019	latest^
GSP, ann%	4.2	-1.7	2.5	1.0	2.0
State final demand, ann%	3.8	-7.1	0.7	-1.1	-1.1
Employment, ann%	2.2	0.8	1.6	0.9	0.9
Unemployment rate, % [#]	5.6	5.7	6.3	6.0	5.7
Population, ann%	1.7	0.7	0.8	1.0	n.a.
Dwelling prices, ann%	3.7	-2.6	-1.5	-9.1	-7.7
Rental yield, % [#]	4.8	4.0	4.0	4.5	4.5
Sales/new listings, ratio [#]	0.82	0.78	0.74	0.92	0.91
Total listings, mths sales [#]	5.9	7.5	7.7	7.3	6.9

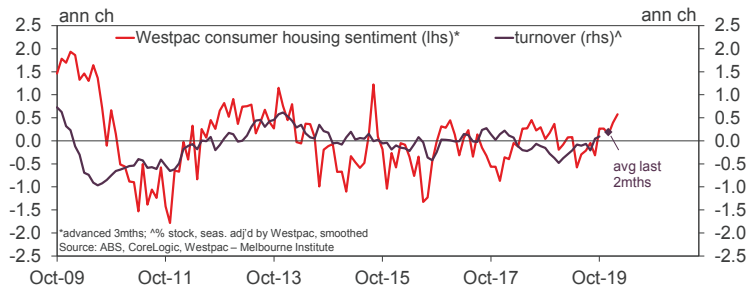
* avg last 25yrs; ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

South Australia: a gentle firming

34. SA consumers: housing-related sentiment

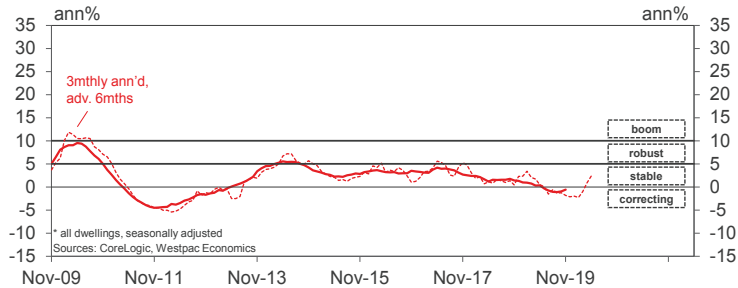


35. SA housing composite vs turnover



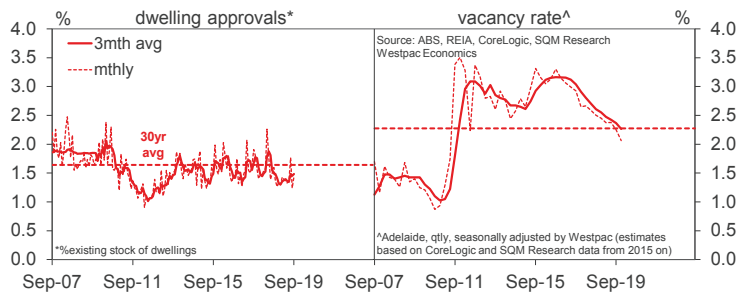
- The SA housing market has had a soft-ish year, recording a slight 0.5% price decline despite slipped into a modest price correction despite mostly benign or supportive 'fundamentals'. Conditions look to be improving somewhat into year-end, prices, turnover and buyer sentiment all lifting. That said, the pace of improvement is still gradual.
- The price detail for Adelaide shows price slippage has been concentrated in the top tier, with prices in middle and lower tiers broadly stable. By sub-region, weakness has been more pronounced in the city's west and 'central and hills' area. Across the state's regional areas, prices have been choppy in the Barossa, most recently declining, but firmer in the South East.
- Sales have shown steady gains since mid year, rising 5.5% over the last 6mths. Notably, they are now significantly outstripping new listings. The stock of unsold properties has been stuck around long run averages but could shift to being slightly 'tight' in coming months if the pick-up in sales continues. That said, SA's slow population growth means supply-demand pressures are typically very slow to build.
- The **SA Consumer Housing Sentiment index** has continued to lift over the last 3mths, giving the strongest annual pulse since 2015. The latest improvement is being driven by a lift in price expectations, and a slight easing in risk aversion and unemployment expectations outweighing a slightly softer read on 'time to buy'. The state's labour market remains a concern with SA's unemployment rate drifting steadily higher over 2019.

36. Adelaide dwelling prices



Population: 1.7mn
Net migration: 9k pa
GSP: \$108bn (6% Aus)
Dwellings: 0.8mn, \$0.4trn
Capital: Adelaide

37. SA: dwelling approvals, vacancy rates

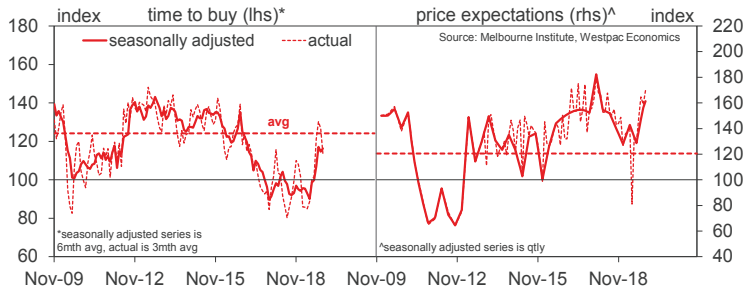


June years	avg*	2017	2018	2019	latest^
GSP, ann%	2.3	1.5	2.3	1.4	2.0
State final demand, ann%	3.1	3.6	3.4	1.6	1.6
Employment, ann%	1.2	1.1	2.9	1.6	1.3
Unemployment rate, % [#]	6.9	6.9	5.7	5.9	6.6
Population, ann%	0.7	0.6	0.7	0.9	n.a.
Dwelling prices, ann%	4.5	3.9	1.6	-0.3	-0.6
Rental yield, % [#]	5.2	4.7	5.4	6.0	6.0
Sales/new listings, ratio [#]	1.00	1.05	1.04	1.15	1.18
Total listings, mths sales [#]	4.0	4.0	3.9	4.0	3.7

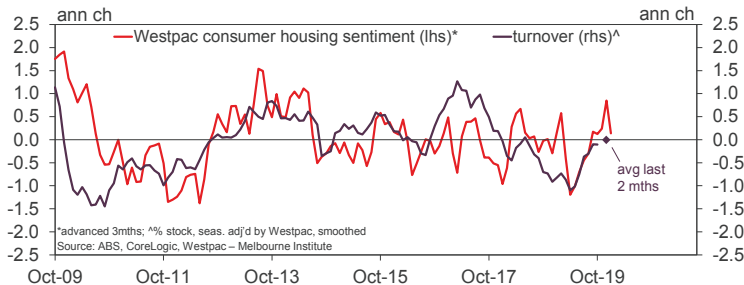
* avg last 25yrs; ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

Tasmania: reigniting quickly

38. Tas consumers: housing-related sentiment

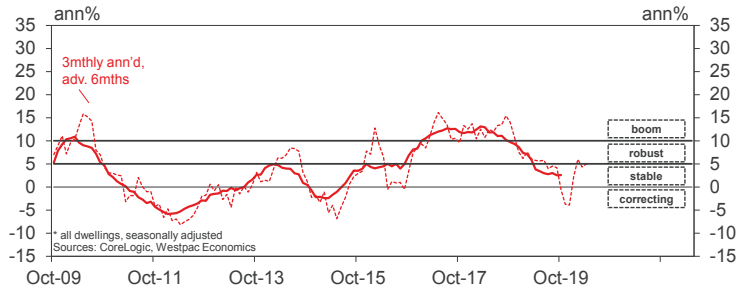


39. Tas housing composite vs turnover



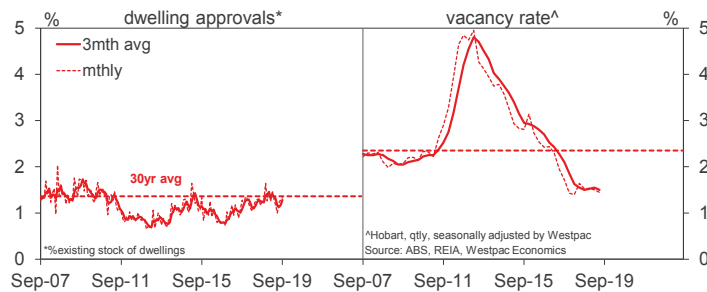
- Tas's housing market had the strongest lead-in to 2019, recorded the shallowest price correction of the major states and is now showing signs of a renewed pick up with a lift in demand hitting very tight supply. Prices have lifted 1.5% since May, following a flat first half and a strong 22.7% surge over the previous two years. Turnover dropped sharply over the year to May but has recovered 5% since then to be stable on an annual basis.
- Importantly, the market remains extremely tight. Hobart's rental vacancy rate remains below 1.5% and listings show unsold properties running at barely two months of sales. With sales running well ahead of new listings, that looks set to tighten further towards the lows seen in early 2018. That in turn suggests price pressures will be building again quickly.
- The price detail shows the earlier slowdown centred on top tier properties and in Hobart's inner and north eastern areas. Price gains have continued in Hobart's south & west and in Launceston. The mix suggests a fair degree of pent up pressure on prices.
- The **Tas Consumer Housing Sentiment index** has been choppy in recent months but continues to give a positive signal overall. Assessments of 'time to buy' have pulled back a touch but price expectations have continued to surge - the mix suggesting affordability concerns may be coming back. Rising risk aversion and unemployment expectations have also curbed sentiment. Note that Tas state measures are smoothed due to the smaller sample size that means underlying data is more volatile.

40. Hobart dwelling prices



Population: 0.5mn
Net migration: 5k pa
GSP: \$32bn (2% Aus)
Dwellings: 0.2mn, \$101bn
Capital: Hobart

41. Tas: dwelling approvals, vacancy rates

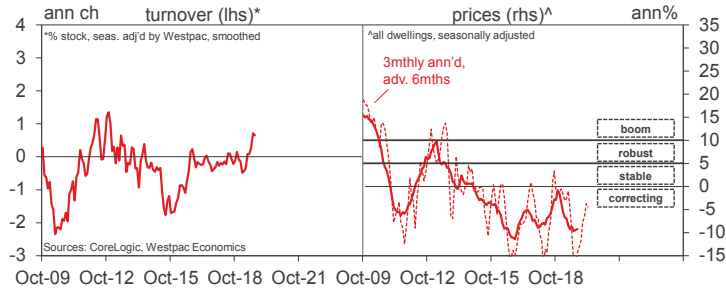


June years	avg*	2017	2018	2019	latest^
GSP, ann%	2.1	1.1	3.5	3.6	2.3
State final demand, ann%	2.6	1.7	4.6	4.1	4.1
Employment, ann%	1.0	4.0	1.2	-0.5	0.3
Unemployment rate, % [#]	7.5	5.8	6.1	6.6	6.2
Population, ann%	0.5	0.9	1.1	1.2	n.a.
Dwelling prices, ann%	4.8	12.2	11.8	3.0	2.6
Rental yield, % [#]	5.8	5.4	5.1	5.7	5.7
Sales/new listings, ratio [#]	1.06	1.28	1.25	1.16	1.47
Total listings, mths sales [#]	5.3	2.5	2.0	2.7	2.1

* avg last 25yrs (12yrs for listings); ^ GSP is Westpac forecast for 2020; # June qtr readings
 Sources: ABS, CoreLogic, APM, Residex, Westpac Economics

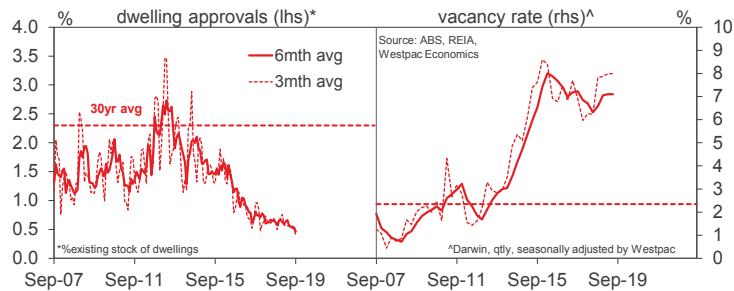
Territories: NT slump continues; ACT tightening again

42. NT: turnover, Darwin dwelling prices



Population: 0.2mn
Net migration: -4k pa
GSP: \$26bn (1% Aus)
Dwellings: 0.1mn, \$36bn
Capital: Darwin

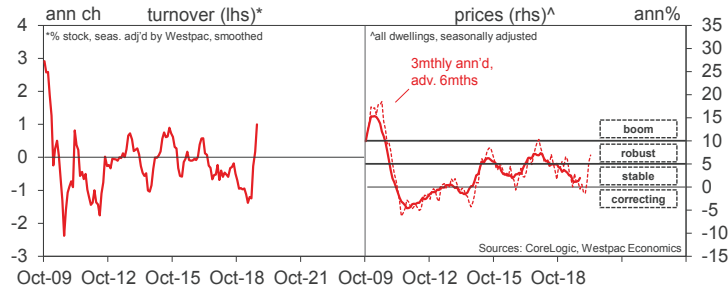
43. NT: dwelling approvals, vacancy rates



June years	avg*	2017	2018	2019	latest
GSP, ann%	3.9	1.5	2.0	-1.5	n.a.
State final demand, ann%	3.8	8.9	-2.8	-15.6	-15.6
Employment, ann%	1.2	2.4	1.8	-2.0	-2.2
Unemployment rate, % [#]	6.6	5.1	5.6	6.0	6.1
Population, ann%	1.4	0.7	-0.1	-0.4	n.a.
Dwelling prices, ann%	3.2	-5.0	-6.6	-9.3	-9.7
Sales/new listings, ratio [#]	1.11	0.85	1.03	1.20	1.18
Total listings, mths sales [#]	5.7	10.5	9.0	8.0	8.2

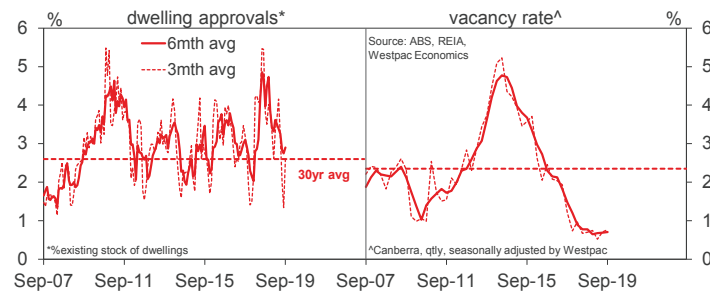
* avg last 25yrs (last 10yrs for listings); # June qtr readings
 Sources: ABS, CoreLogic, Westpac Economics

44. ACT: turnover, Canberra dwelling prices



Population: 0.4mn
Net migration: 4k pa
GSP: \$41bn (2% Aus)
Dwellings: 0.2mn, \$117bn
Capital: Canberra

45. ACT: dwelling approvals, vacancy rates

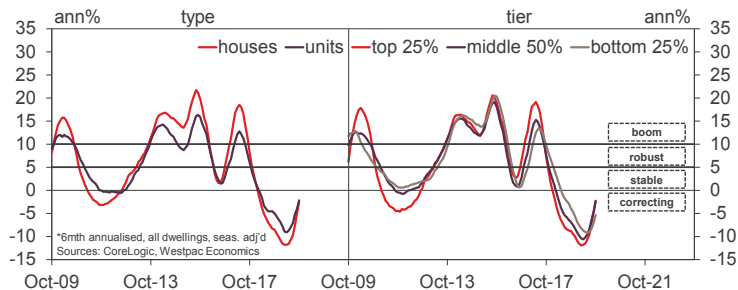


June years	avg*	2017	2018	2019	latest
GSP, ann%	3.2	3.3	3.7	3.0	n.a.
State final demand, ann%	3.8	3.2	3.7	3.0	3.0
Employment, ann%	1.2	2.7	2.3	0.6	3.6
Unemployment rate, % [#]	6.6	5.2	5.4	5.5	5.3
Population, ann%	1.4	2.2	2.0	1.7	n.a.
Dwelling prices, ann%	4.9	6.3	4.9	1.4	1.8
Sales/new listings, ratio [#]	1.30	1.23	1.12	1.03	1.24
Total listings, mths sales [#]	2.7	2.5	2.7	4.3	3.0

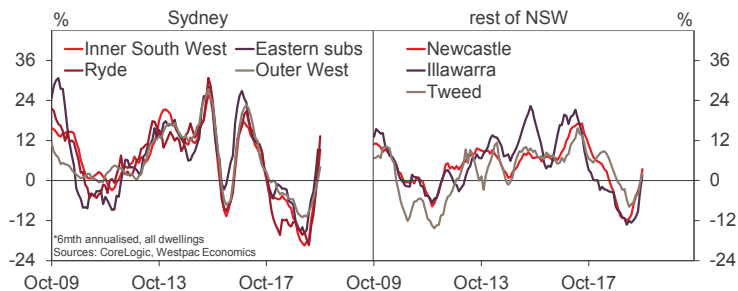
* avg last 25yrs (last 10yrs for listings); # June qtr readings
 Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables

46. NSW: Sydney dwelling prices: by type, tier



47. NSW dwelling prices: selected sub-regions

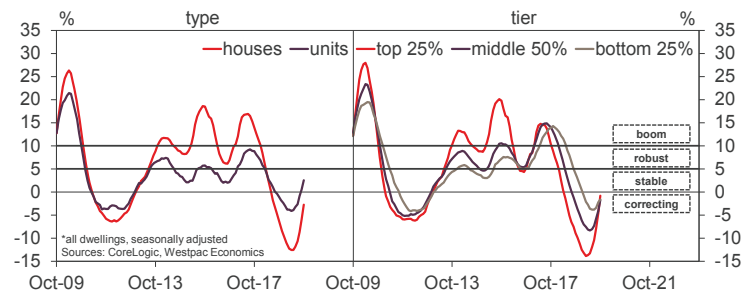


NSW	Sydney	rest of NSW
Population:	5.2mn	2.8mn
Net migration*:	50k pa	18k pa
Employ (%state):	68%	32%
Dwellings, no.:	1.9mn	1.2mn
Dwellings, value:	\$2.1trn	\$0.6trn

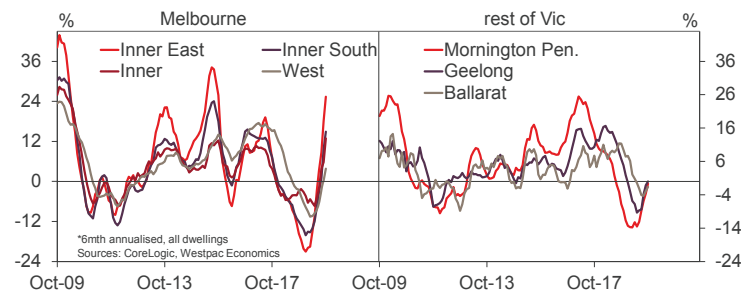
June years	avg [^]	2017	2018	2019	latest
Sydney					
Employment, ann%	1.9	2.2	4.1	3.2	3.0
Unemployment rate, %	5.3	4.5	4.3	4.4	4.2
Houses - prices, ann%	5.7	17.9	-6.1	-10.8	-2.6
- sales/new listings, ratio	1.00	0.98	0.94	1.16	1.17
- total listings, mths sales	3.7	2.7	3.8	4.0	3.3
Units - prices, ann%	5.0	12.1	-4.0	-8.0	-2.2
- sales/new listings, ratio	1.34	1.13	0.96	1.11	1.10
- total listings, mths sales	2.9	3.0	4.6	6.0	5.2
rest of NSW					
Employment, ann%	1.6	-1.2	3.0	3.7	3.4
Unemployment rate, %	7.1	5.1	5.8	4.8	4.8
Dwelling prices, ann%	4.4	11.1	3.4	-4.9	-2.8

* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

48. Vic: Melbourne dwelling prices: by type, tier



49. Vic dwelling prices: selected sub-regions



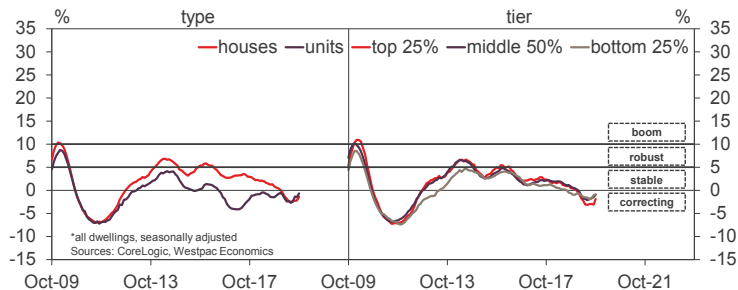
Vic	Melbourne	rest of Vic
Population:	5.0mn	1.5mn
Net migration*:	84k pa	16k pa
Employ (%state):	79%	21%
Dwellings, no.:	1.8mn	0.7mn
Dwellings, value:	\$1.6trn	\$0.3trn

June years	avg [^]	2017	2018	2019	latest
Melbourne					
Employment, ann%	2.4	4.1	3.1	4.2	4.2
Unemployment rate, %	6.2	6.3	5.3	5.0	5.1
Houses - prices, ann%	6.7	16.8	0.2	-11.8	-2.7
- sales/new listings, ratio	0.99	1.10	0.97	1.06	1.12
- total listings, mths sales	3.8	2.5	3.2	4.5	3.7
Units - prices, ann%	5.7	8.7	1.9	-3.2	2.6
- sales/new listings, ratio	1.02	0.96	0.67	0.76	0.79
- total listings, mths sales	4.7	5.1	7.9	10.1	9.3
rest of Vic					
Employment, ann%	1.3	3.6	-1.7	2.0	-0.7
Unemployment rate, %	6.7	5.2	5.1	3.9	3.9
Dwelling prices, ann%	4.2	6.3	8.8	-0.2	-0.9

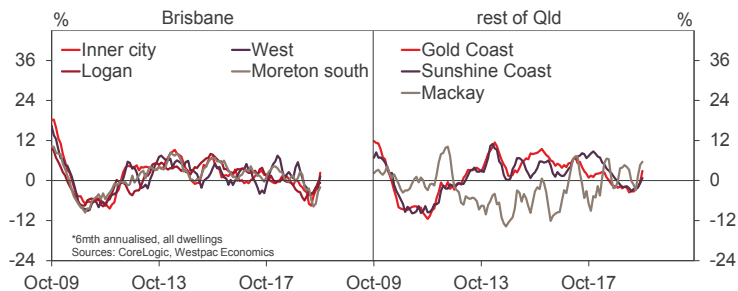
* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables, continued

50. Qld: Brisbane dwelling prices: by type, tier



51. Qld dwelling prices: selected sub-regions

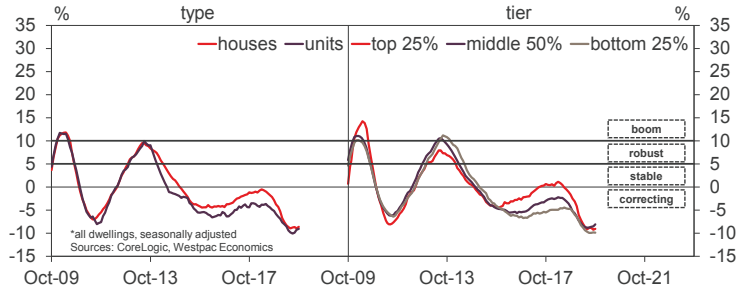


Qld	Brisbane	rest of Qld
Population:	2.5mn	2.5mn
Net migration*:	33k pa	21k pa
Employ (%state):	51%	49%
Dwellings, no.:	0.9mn	1.1mn
Dwellings, value:	\$0.5trn	\$0.5trn

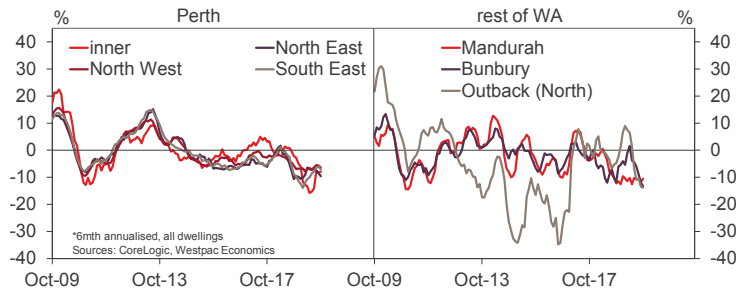
June years	avg [^]	2017	2018	2019	latest
Brisbane					
Employment, ann%	2.4	1.5	2.9	1.9	2.5
Unemployment rate, %	6.2	6.5	6.2	6.2	6.2
Houses - prices, ann%	4.6	3.3	1.6	-2.5	-1.4
- sales/new listings, ratio	0.89	1.01	0.98	0.91	0.88
- total listings, mths sales	5.4	4.1	4.4	6.1	5.9
Units - prices, ann%	2.8	-3.8	-0.8	-2.7	-0.7
- sales/new listings, ratio	1.48	0.95	0.96	0.94	0.88
- total listings, mths sales	3.7	6.3	6.3	7.6	7.5
rest of Qld					
Employment, ann%	2.2	2.6	3.3	1.5	2.0
Unemployment rate, %	6.9	5.9	6.2	6.3	6.7
Dwelling prices, ann%	3.3	2.2	1.3	-1.9	-0.4

* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

52. WA: Perth dwelling prices: by type, tier



53. WA dwelling prices: selected sub-regions



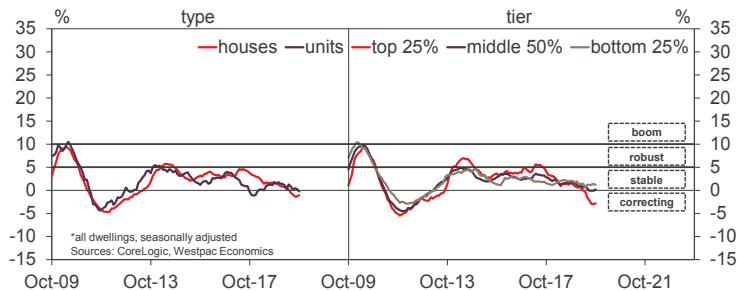
WA	Perth	rest of WA
Population:	2.1mn	0.5mn
Net migration*:	6k pa	-4k pa
Employ (%state):	80%	20%
Dwellings, no.:	0.8mn	0.3mn
Dwellings, value:	\$0.5trn	\$0.1trn

June years	avg [^]	2017	2018	2019	latest
Perth					
Employment, ann%	2.4	-0.4	1.8	1.8	1.9
Unemployment rate, %	5.8	6.1	6.4	6.2	6.1
Houses - prices, ann%	3.8	-2.1	-0.9	-9.0	-8.6
- sales/new listings, ratio	0.83	0.79	0.74	0.90	0.93
- total listings, mths sales	5.7	6.8	7.1	6.8	6.2
Units - prices, ann%	2.8	-4.5	-3.7	-9.8	-9.1
- sales/new listings, ratio	0.77	0.74	0.69	0.78	0.87
- total listings, mths sales	7.0	9.6	10.6	11.6	10.4
rest of WA					
Employment, ann%	1.4	5.4	0.8	-2.5	-2.0
Unemployment rate, %	5.2	4.3	5.8	5.3	4.6
Dwelling prices, ann%	2.6	-2.0	-4.0	-10.3	-11.0

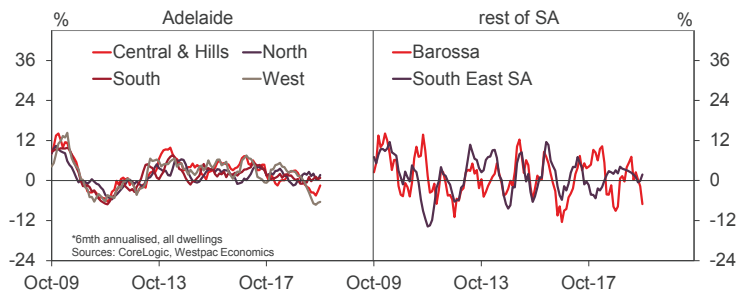
* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables , continued

54. SA: Adelaide dwelling prices: by type, tier



55. SA dwelling prices: selected sub-regions

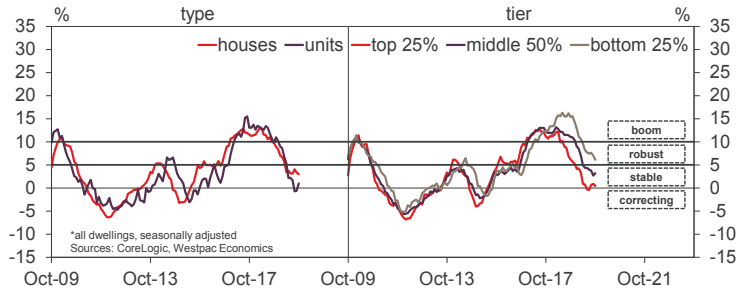


SA	Adelaide	rest of SA
Population:	1.3mn	0.4mn
Net migration*:	7k pa	1k pa
Employ (%state):	79%	21%
Dwellings, no.:	0.6mn	0.2mn
Dwellings, value:	\$0.3trn	\$0.1trn

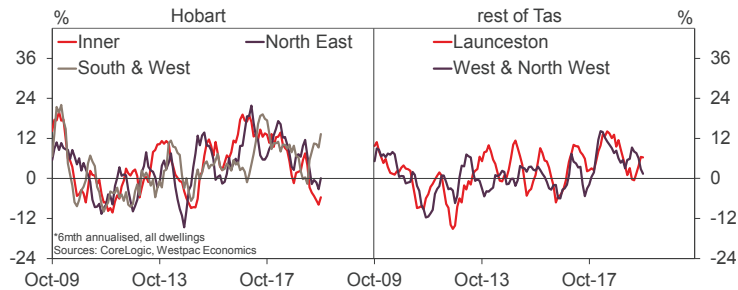
June years	avg [^]	2017	2018	2019	latest
Adelaide					
Employment, ann%	1.3	2.3	1.9	2.8	2.1
Unemployment rate, %	7.1	6.9	5.9	5.7	6.9
Houses - prices, ann%	4.6	4.5	1.7	-0.5	-1.1
- sales/new listings, ratio	1.00	1.11	1.13	1.19	1.26
- total listings, mths sales	3.9	3.4	3.2	3.5	3.2
Units - prices, ann%	4.6	1.2	1.0	0.8	-0.2
- sales/new listings, ratio	0.99	0.89	0.80	0.89	0.91
- total listings, mths sales	5.0	6.6	7.4	7.9	8.2
rest of SA					
Employment, ann%	0.6	-3.0	6.8	-2.6	-0.8
Unemployment rate, %	6.3	6.2	4.4	6.3	7.1
Dwelling prices, ann%	3.7	0.1	-0.6	0.2	0.8

* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

56. Tas: Hobart dwelling prices: by type, tier



57. Tas dwelling prices: selected sub-regions



Tas	Hobart	rest of Tas
Population:	233k	296k
Net migration*:	3k pa	2k pa
Employ (%state):	47%	53%
Dwellings, no.:	99k	143k
Dwellings, value:	\$47bn	\$45bn

June years	avg [^]	2017	2018	2019	latest
Hobart					
Employment, ann%	1.2	7.7	1.4	0.2	1.6
Unemployment rate, %	6.9	5.6	6.4	7.3	6.6
Houses - prices, ann%	4.9	12.5	11.4	3.2	3.0
- sales/new listings, ratio	0.98	1.16	1.20	1.10	1.29
- total listings, mths sales	5.8	2.6	2.1	2.8	2.4
Units - prices, ann%	4.1	11.1	13.4	2.2	1.0
- sales/new listings, ratio	1.18	1.50	1.31	1.08	1.22
- total listings, mths sales	4.5	2.2	1.9	3.0	2.4
rest of Tas					
Employment, ann%	0.8	1.1	1.0	-1.1	-1.4
Unemployment rate, %	8.0	6.0	5.9	6.2	6.0
Dwelling prices, ann%	4.1	4.4	7.6	5.5	4.1

* incl. flows within state; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

Economic and financial forecasts

Interest rate forecasts

	Latest (22 Nov)	Dec-19	Mar-20	Jun-20	Sep-20	Dec 20	Jun 21	Dec 21
Cash	0.75	0.75	0.50	0.50	0.50	0.50	0.50	0.50
90 Day BBSW	0.89	0.85	0.70	0.70	0.70	0.70	0.75	0.75
3 Year Swap	0.77	0.75	0.70	0.70	0.80	0.85	0.95	1.05
10 Year Bond	1.10	1.10	0.90	0.90	1.00	1.10	1.30	1.50
10 Year Spread to US (bps)	-67	-60	-60	-55	-40	-40	-30	-30
International								
Fed Funds	1.625	1.625	1.375	1.125	0.875	0.875	0.875	0.875
US 10 Year Bond	1.77	1.70	1.50	1.45	1.40	1.50	1.60	1.80
US Fed balance sheet USDtrn	4.03	4.10	4.28	4.43	4.55	4.61	4.73	4.85
ECB Repo Rate	-0.50	-0.50	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60

Exchange rate forecasts

	Latest (22 Nov)	Dec-19	Mar-20	Jun-20	Sep-20	Dec 20	Jun 21	Dec 21
AUD/USD	0.6787	0.67	0.66	0.66	0.67	0.67	0.69	0.72
NZD/USD	0.6405	0.63	0.62	0.62	0.63	0.63	0.65	0.67
USD/JPY	108.64	108	107	106	105	105	107	109
EUR/USD	1.1064	1.09	1.09	1.10	1.11	1.12	1.14	1.15
GBP/USD	1.2914	1.30	1.33	1.32	1.32	1.31	1.31	1.32
USD/CNY	7.0322	7.10	7.10	7.05	6.95	6.90	6.75	6.60
AUD/NZD	1.0598	1.06	1.06	1.06	1.06	1.06	1.07	1.08

Sources: Bloomberg, Westpac Economics.

Economic and financial forecasts

Australian economic growth forecasts

	2018	2019				2020	
	Q4	Q1	Q2	Q3f	Q4f	Q1f	Q2f
GDP % qtr	0.1	0.5	0.5	0.6	0.7	0.6	0.6
Annual change	2.2	1.7	1.4	1.8	2.3	2.4	2.5
Unemployment rate %	5.0	5.0	5.2	5.2	5.3	5.5	5.6
CPI % qtr	0.5	0.0	0.6	0.5	0.5	0.4	0.4
Annual change	1.8	1.3	1.6	1.7	1.7	2.1	1.9
CPI underlying % qtr	0.4	0.3	0.4	0.4	0.5	0.5	0.5
ann change	1.8	1.5	1.6	1.6	1.6	1.8	1.9

	Calendar years			
	2018	2019f	2020f	2012f
GDP % qtr/yr avg	2.2	2.3	2.4	2.7
Unemployment rate %	5.0	5.3	5.6	5.3
CPI % yr end	1.88	1.7	1.9	1.9
CPI underlying % yr	1.8	1.6	1.9	1.7

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

index*	2018					2019						
	avg	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Oct	Nov	%mth	%yr
'Time to buy a dwelling'												
Australia	122.4	104.5	105.7	103.5	110.3	116.6	116.9	123.3	116.6	119.0	2.1	3.7
- New South Wales	120.2	104.6	99.7	104.5	106.9	117.4	114.6	119.5	109.2	112.1	2.6	-7.8
- Victoria	118.6	100.3	102.8	100.4	112.9	115.5	119.0	121.4	114.0	111.4	-2.3	4.3
- Queensland	130.3	104.7	119.3	102.9	105.2	116.9	118.4	126.8	116.9	126.1	7.8	13.3
- Western Australia	128.9	123.5	108.3	110.4	132.2	135.0	125.8	144.3	148.8	139.4	-6.3	9.9
- South Australia	130.5	96.7	113.3	104.6	111.2	99.0	109.8	109.2	113.6	130.1	14.5	20.0
- Tasmania	124.2	94.5	77.7	93.6	87.6	87.0	122.0	149.2	84.8	106.9	26.1	-13.3
House price expectations												
Australia	126.5	129.6	119.9	109.4	100.0	85.4	109.7	130.3	138.0	135.8	-1.6	37.2
- New South Wales	128.4	115.8	103.9	85.8	81.1	68.7	106.0	129.8	136.9	146.9	7.3	79.4
- Victoria	128.3	141.1	123.9	110.4	84.3	80.5	104.2	132.4	151.8	142.1	-6.4	68.6
- Queensland	124.9	136.2	133.0	131.0	125.3	101.6	122.0	135.5	135.1	119.1	-11.9	-1.0
- Western Australia	117.3	113.7	110.4	112.7	122.6	89.7	101.7	111.1	112.8	116.7	3.4	1.1
- South Australia	128.7	141.4	139.9	130.7	128.6	111.4	123.6	126.2	130.9	134.2	2.5	1.7
- Tasmania	128.7	166.4	167.6	155.1	148.8	138.0	134.1	164.6	158.7	169.7	7.0	17.9

*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

index*	2018					2019						
	avg	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Oct	Nov	%mth	%yr
Unemp. expectations												
Australia	129.8	121.8	126.9	120.7	121.0	130.6	127.0	133.6	131.8	136.5	3.6	13.4
- New South Wales	129.5	124.5	123.3	122.6	122.7	130.8	126.4	133.1	135.6	132.9	-2.0	9.6
- Victoria	130.9	118.4	122.6	124.4	121.1	128.7	129.2	128.6	132.4	134.1	1.3	19.0
- Queensland	133.0	119.2	137.0	122.4	125.9	136.0	125.8	134.9	127.5	143.0	12.1	9.2
- Western Australia	127.6	117.7	132.8	96.4	98.3	121.3	118.3	128.5	114.9	131.6	14.5	18.0
- South Australia	134.0	135.4	122.5	129.3	130.6	136.7	129.8	145.6	141.0	143.2	1.6	7.9
- Tasmania	138.7	116.8	127.5	119.8	122.3	116.3	141.5	152.9	157.7	151.5	-3.9	36.3
Risk aversion											qtr ch	ann ch
Australia	12.1	40.3	45.0	46.2	50.4	48.9	44.2	42.5	n.a.	n.a.	-1.8	-6.6
- New South Wales	8.3	36.7	39.1	43.0	46.0	42.6	38.1	35.9	n.a.	n.a.	-2.2	-9.1
- Victoria	6.8	34.0	38.8	45.6	49.2	52.4	44.0	44.4	n.a.	n.a.	0.4	-3.6
- Queensland	8.1	43.0	47.1	48.2	60.9	52.6	49.0	44.7	n.a.	n.a.	-4.3	-12.0
- Western Australia	0.9	61.6	63.6	58.1	55.7	54.1	53.1	64.1	n.a.	n.a.	11.0	7.5
- South Australia	9.9	46.7	55.8	50.3	42.2	49.5	50.4	43.0	n.a.	n.a.	-7.4	-1.9
- Tasmania	13.4	33.1	27.5	31.2	43.2	37.2	18.3	40.4	n.a.	n.a.	22.1	1.2

*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

	2017			2018				2019				
	avg	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Oct	Nov
Dwelling prices, ann%*												
Australia	5.4	8.4	4.4	1.1	-2.1	-4.1	-6.1	-8.2	-8.0	-4.3	-2.4	0.8
- Sydney	5.6	10.3	3.2	-1.6	-5.4	-7.2	-8.9	-10.9	-9.9	-4.8	-2.5	1.2
- Melbourne	6.4	13.3	10.2	5.9	0.7	-3.4	-7.0	-9.8	-9.2	-3.9	-1.0	1.6
- Brisbane	4.3	2.0	1.8	1.6	1.1	0.8	0.2	-1.3	-2.6	-2.1	-1.3	-0.2
- Perth	3.7	-2.1	-1.7	-1.5	-1.5	-2.7	-4.7	-7.7	-9.1	-9.0	-8.7	-7.7
- Adelaide	4.5	3.6	2.5	2.2	1.6	1.5	1.3	0.8	-0.3	-1.1	-0.9	-0.6
- Hobart	4.8	12.6	11.9	13.2	11.7	10.2	8.7	6.0	2.9	2.5	2.6	n.a.
Turnover, %stock^												
Australia	5.8	4.6	4.6	4.4	4.2	3.7	3.6	3.6	3.7	3.8	3.6	n.a.
- New South Wales	6.0	4.9	4.7	4.6	4.3	3.7	3.6	3.6	3.8	4.0	3.8	n.a.
- Victoria	4.9	4.9	4.8	4.6	4.2	3.6	3.4	3.3	3.4	3.8	3.6	n.a.
- Queensland	6.9	4.9	5.0	4.8	4.8	4.5	4.2	4.1	4.1	3.9	3.8	n.a.
- Western Australia	6.7	3.6	3.8	3.5	3.4	3.4	3.3	3.2	3.4	3.5	3.4	n.a.
- South Australia	4.8	4.0	4.1	4.0	3.9	3.8	3.7	3.7	3.8	3.9	3.9	n.a.
- Tasmania	5.7	5.6	5.8	5.6	5.6	5.2	4.8	4.7	4.9	5.1	4.9	n.a.

* 'all dwellings' measures, ann% ch, latest is month to date

^ % dwelling stock; most recent months are estimates modeled on preliminary data

Sources: CoreLogic, ABS, Westpac Economics

Housing market data

Residential property listings

	2017			2018			2019					
	avg	Aug	Nov	Feb	May	Aug	Nov	Feb	May	Aug	Sep	Oct
Sales/new listings ratio*												
Australia^	1.02	1.00	1.01	1.03	0.91	0.87	0.85	0.93	1.00	1.14	1.12	1.04
- Sydney	1.14	1.07	1.04	1.00	0.92	0.90	0.88	1.03	1.21	1.42	1.36	1.19
- Melbourne	1.00	1.06	1.04	1.06	0.90	0.83	0.78	0.88	0.97	1.18	1.16	1.05
- Brisbane	1.00	0.99	1.00	1.05	0.97	0.95	0.89	1.02	0.99	1.01	0.97	0.91
- Perth	0.82	0.79	0.77	0.78	0.72	0.76	0.72	0.77	0.85	0.99	0.96	0.93
- Adelaide	1.00	1.01	1.04	1.13	1.05	1.06	1.01	1.15	1.15	1.16	1.24	1.19
- Hobart	1.06	1.38	1.42	1.42	1.22	1.17	1.06	1.19	1.10	1.27	1.40	1.39
Total listings, months of sales*												
Australia^	4.1	4.0	4.1	4.1	4.6	5.3	5.7	5.8	5.6	4.8	4.7	4.8
- Sydney	3.3	3.0	3.3	3.6	4.1	4.7	5.4	4.9	4.5	3.5	3.4	3.6
- Melbourne	4.0	3.4	3.6	3.6	4.2	5.2	6.0	6.3	5.9	4.7	4.5	4.7
- Brisbane	4.8	4.6	4.8	4.7	4.8	5.0	5.5	5.8	5.9	5.7	5.9	6.0
- Perth	5.9	7.3	7.1	7.2	7.6	7.9	8.0	8.3	7.8	6.6	6.8	6.8
- Adelaide	4.0	4.0	4.0	3.8	3.9	3.9	4.2	4.0	3.9	4.0	3.8	3.8
- Hobart	5.3	2.3	2.1	2.0	2.0	2.1	2.6	2.7	2.9	2.5	2.2	2.2

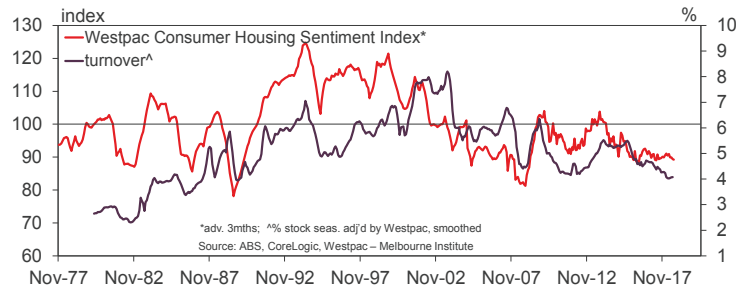
* figures show 3mth avg, readings for most recent months based on sales estimates modeled on preliminary data

^ avg since 2007

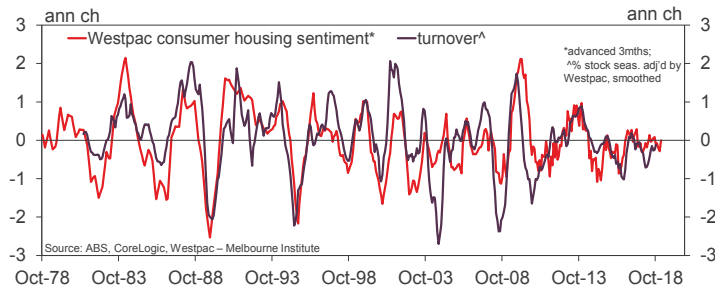
Sources: CoreLogic, Westpac Economics

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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