Housing Pulse

November 2020

Westpac Institutional Bank

Contents

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Executive summary

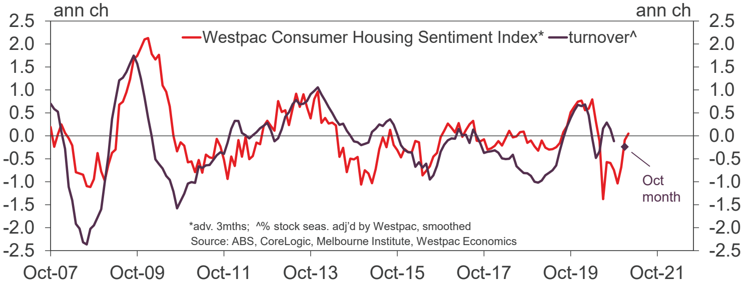
Pandemic developments over the last three months have been mixed but positive overall, particularly from the point of view of Australia's housing market. Outbreaks continue to worsen abroad but Victoria's 'second wave' lockdown has reined in the virus domestically, allowing for an easing of restrictions. Meanwhile, vaccine developments have been very positive with an effective COVID vaccine now likely to become widely available from mid-2021, perhaps earlier. That, in turn, should see major virus-related disruptions significantly curtailed by the end of next year.

Locally, the 'staggered' economic performance across states is clear, with Victoria's reopening only just beginning but strong rebounds well underway in other states. Significant headwinds are expected to emerge in 2021 as policy supports are withdrawn and some delayed effects from the COVID shock come through. However, activity is expected to accelerate strongly heading into 2022.

Our November **Housing Pulse** shows a major improvement with activity having resumed in most markets, prices stabilising and in some cases showing modest gains, and buyer sentiment much more upbeat across the board. Indeed, the milder and briefer than expected COVID hit to housing and the strength of the turnaround in conditions and sentiment has prompted us to significantly revise our forecasts with no further price falls expected and a lift in price growth to 4% next year and 10% in 2022 now expected.

By state, Vic remains the clear laggard and, along with NSW, is likely to see more enduring weakness in some segments. Other states are performing strongly, reopening rebounds well advanced and gains consolidating. In this month's **special topics** we **update the COVID-19 situation and outlook**; take a detailed look at **sub-regional price performances through the COVID shock**; and mull the outlook for **prudential policy** in coming years.

1. Australia: national housing conditions

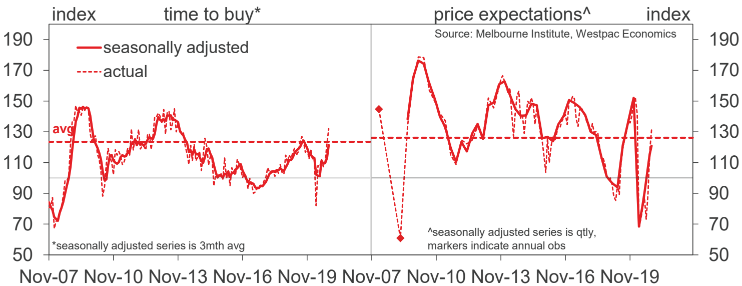


"… a major improvement … with market activity resuming quickly, prices stabilising and buyer sentiment much more upbeat."

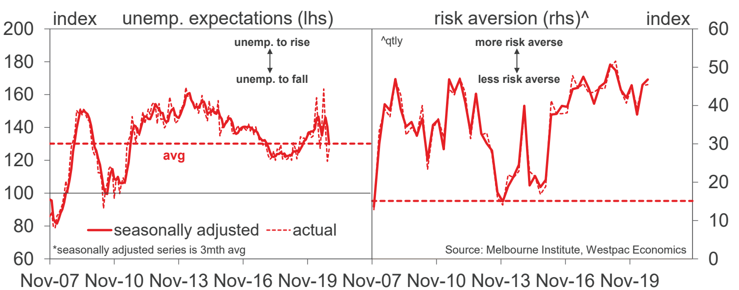
*The **Westpac Consumer Housing Sentiment Index** is a composite measure based on four housing-related components of the **Westpac Consumer Sentiment survey**. See **Appendix** on p42 for more details.

Overview: hope returns

2. Consumer sentiment: housing



3. Consumer sentiment: jobs & risk



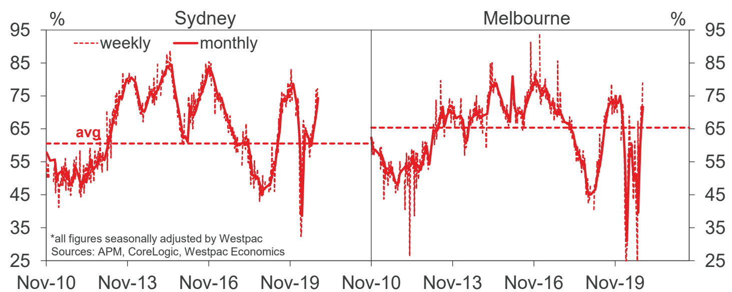
– Developments over the last three months have mostly been positive. While COVID outbreaks continue to wreak havoc abroad, the virus again looks to be under control locally, allowing for a relaxation in restrictions. Despite running longer than anticipated, Vic's 'second wave' lockdown looks to have had a milder than feared impact on the economy, with reopening rebounds well underway across other states.

– Overall, we now expect the economy to post solid gains in both Q3 and Q4. Compared to our last report in Aug, the forecast rebound in GDP over H2 has been lifted from +2.6% to +4.1%, leaving a contraction of –3.5% for 2020 as a whole. For 2021 we expect growth of 2.8% that will still leave activity 0.7% below pre–COVID levels by year end. The unemployment rate profile is lower, ending 2021 at 7.0% vs our forecast of 7.4% three months ago (see the discussion on p6-9 for more details).

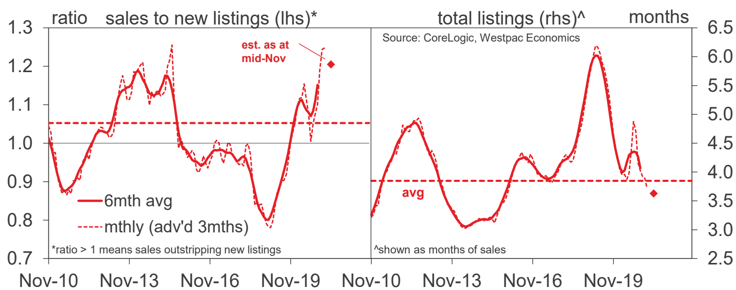
– Housing markets are also showing clear signs of improvement. Activity has recovered well, turnover ex Victoria now slightly above pre-COVID and year-ago levels (suggesting a degree of catch-up). Prices are also showing slight gains in most markets, even Melbourne tracking towards a small rise in Nov according to daily measures. Nationally, turnover in Oct was 3.7% below its pre–COVID level (having been down 40% in Apr). Prices are down 2.7% since Apr but still up 3.6%yr.

– Housing–related sentiment has rallied strongly since Aug – 'time to buy a dwelling', house price expectations and unemployment expectations indexes now all running at levels better than their long run averages. That said, risk aversion remains elevated.

4. Auction clearance rates



5. Residential property listings



– Auction markets have firmed through November, with conditions now looking buoyant, albeit with Melbourne still seeing thin volumes. Sydney's clearance rate has lifted into the 70-75% range. Melbourne's is around 70% but auction numbers are down about 40% on a year ago.

– The **Westpac Melbourne Institute 'time to buy a dwelling' index** has surged strongly since Aug, rising 23% to 132.0, comfortably above both pre-COVID levels and the long run average of 119.3. Indeed, remarkably, the Nov reading is a 7yr high for the index.

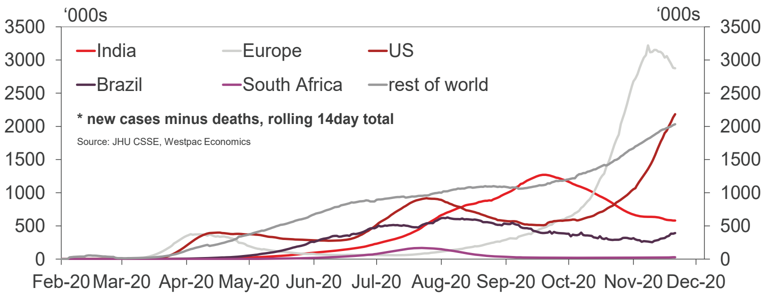
– Price expectations have seen an extraordinary turnaround. The **Westpac–MI Consumer House Price Expectations Index** collapsed 50% in Apr to an extreme low, clawed back about a quarter of the decline through May–Jul but gave most of that up again as the 'second wave' shock hit in Aug. The rebound has since resumed with a dramatic 78% surge lifting the Index to 131.4, back above the long run average of 126.2.

– Job loss fears have also whipsawed in 2020. The latest move has seen the **Westpac Melbourne Institute Unemployment Expectations Index** drop 22% over the three months to Nov, implying a significant easing in job loss fears (recall that higher reads mean more consumers expect unemployment to rise). The index is marginally below its long run avg although a rise in the Nov month suggests this newfound confidence is still tentative.

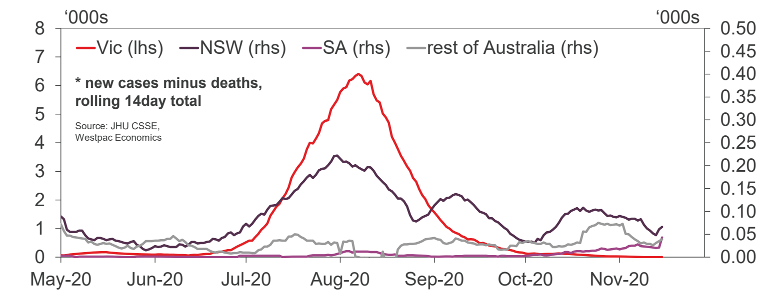
– The **Westpac Risk Aversion Index** rose from 46 in Jun to 47 in Sep, still above the 38 read in Mar and 42 read a year ago. The timing of the question – asked every three months – means it is not capturing more recent improvements although aversion is likely still elevated.

Special topic: COVID recession update and outlook

6. Global: COVID-19, 'current infections'



7. Australia: COVID-19, 'current infections'

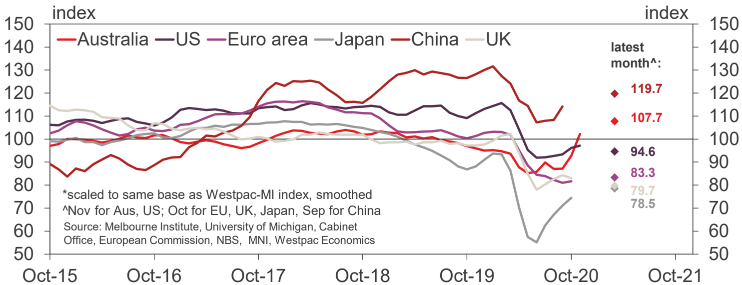


– It has been another momentous three months for pandemic developments. Most importantly, prospects for a vaccine now look much more promising with several frontrunning candidates poised to obtain Early Use Authorization from the US FDA in coming weeks – somewhat earlier than expected – and test results suggesting they are all highly effective. That bodes extremely well for a large scale rollout in 2021 bringing the worst of the pandemic crisis to an end. However, against this, both Europe and the US have seen another troubling surge in cases that is raising the risk of a widening round of heavier restrictions near term. Fortunately, Australia is facing a less threatening virus situation, despite a recent hiccup in SA. That said, the economy still faces significant challenges as economic fallout from the COVID shock continues to come through in 2021. This topic summarises key developments and prospects for Australia.

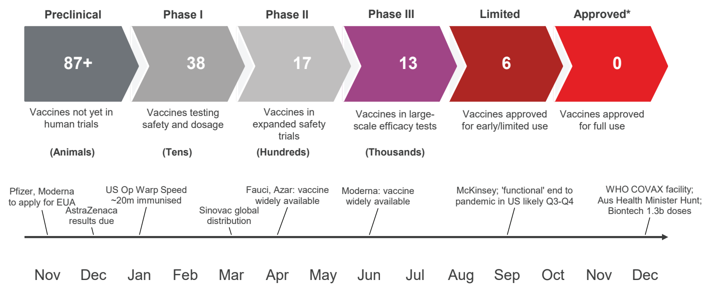
– Globally, the number of confirmed cases has continued to surge, rising from 23m at the time of our Aug report to over 55m currently. Daily new cases are now running at 580k vs 250k three months ago. Despite some ebb and flow, and major regional variations, the total case count globally has continued doubling about every 8-12 weeks.

– As outlined in previous reports, our preferred gauge of the course of the virus is 'current infections', proxied by the 14day total of new cases minus deaths. Chart 6 shows this for major regions. It highlights a startling surge in Europe in Oct that led to renewed lockdowns in many countries. These already look to have started reining in the outbreak although case counts remain high and current infections are only declining slowly. The US is the other major mover, and is now confronting a similar situation to Europe a month ago.

8. Consumer sentiment: international comparison



9. COVID vaccines: candidates and expected timeline



Sources: Westpac Economics, NYTimes, McKinsey

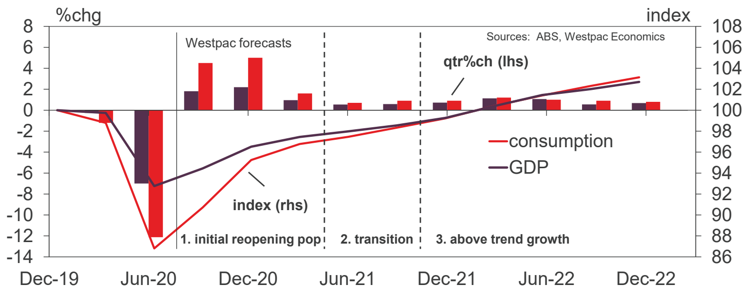
– The situation is markedly better in Australia. Vic's 'second wave' outbreak was brought back under control in Oct, allowing for a relaxation in restrictions. Despite a recent scare in SA, locally transmitted cases have been low with no 'unknown origin' cases in nearly a month. The situation has allowed for the reopening of interstate borders.

– COVID developments are having a major bearing on consumer sentiment, both here and abroad. The successful containment of the virus in Vic has driven a big surge in Australia – the 35% jump in sentiment between Aug and Nov the biggest 3mth surge on record. China's success has been a major rallying point as well, while sentiment remains weaker in the US and particularly weak in Europe and the UK which have seen heavy lockdowns reintroduced in many areas.

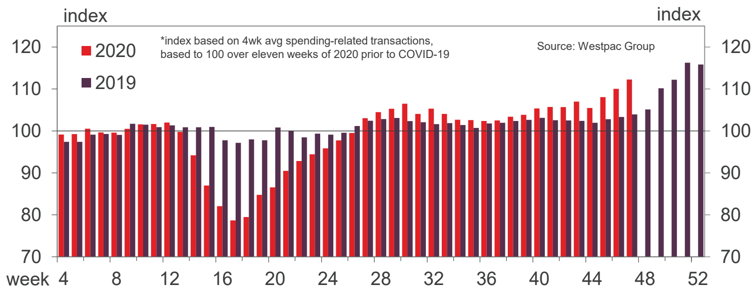
– Of course, the other major COVID development set to impact sentiment in coming months is the greatly improved prospects for a vaccine (all the measures in Chart 8 pre-date the recent news on this front). Three of the front-running candidates – Pfizer, Moderna and AstraZeneca – have all reported very promising initial results and now look likely to obtain Early Use Authorization (EUA) from the US FDA in coming weeks.

– The good news here is three-fold: firstly, phase 3 testing is reaching key milestones earlier than expected; secondly, vaccines are performing better than expected – results showing they are over 90% effective vs hopes of anything higher than 70%; and thirdly, the fact that there are three means there are fall-back options if one is later found to have safety issues.

10. Australia's recovery: three distinct phases

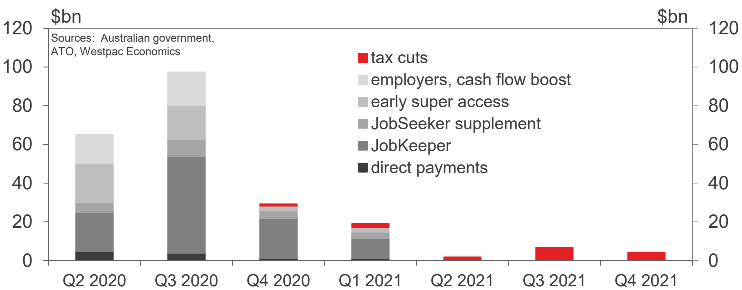


11. Westpac Card Tracker

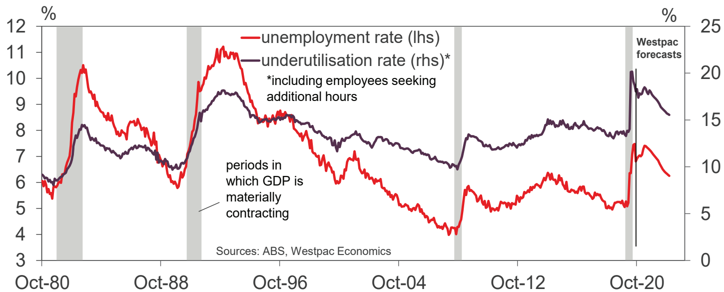


- The bottom line is that a vaccine remedy is now highly likely to emerge in 2021. A fast tracked EUA would see an initial rollout to frontline health workers and 'at risk' groups starting in Dec and likely running through Q1 next year. This would be followed by a rollout to the wider public from Q2 on. The exact strategies, sequencing and timing are of course highly uncertain. There are also questions about the speed at which vaccines can be distributed and the point at which the program materially slows the spread of the disease. However, reputable estimates suggest the COVID pandemic could be 'functionally over' in many countries by Q3 next year.
- While the situation and prospects have both improved, the path ahead is still expected to be a challenging one for the economy. Australia's recovery from the deep shock of this year's COVID recession will still be gradual – activity only just reaching its pre-COVID level by late 2021. We expect it to unfold in three distinct phases: 1) an initial reopening pop; followed by 2) a transition period; and then 3) a sustained period of above trend growth.
- The 'reopening pop' reflects the removal of direct COVID restrictions. Timely indicators show this is already well underway (e.g. Chart 11, more details here). Strong gains will extend into Q1 2021 as Vic continues to reopen.
- As we move further into 2021, this initial rebound will give way to a 'transition period', with growth slowing as temporary support measures wind down and some delayed impacts from the COVID recession come through.

12. Government fiscal measures impacting households



13. Australia: unemployment and underutilisation



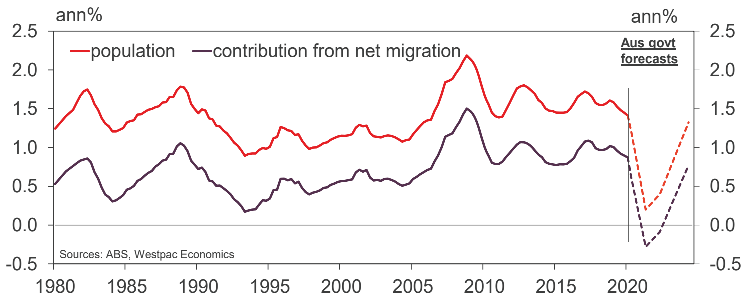
– Various government fiscal supports peaked at just under $100bn in Q3 – a whopping 5% of annual GDP – but drop back to $29bn in Q4, $19bn in Q1 and an average of $4bn a quarter through the rest of 2021. While the 2020 boost will continue to provide underlying support to demand and activity near term, the effects of the drop-off will become more apparent as we get further into next year and cycle through initial 'reopening rebounds'.

– Meanwhile, there will also be some delayed effects from the COVID recession still coming through. In particular, temporary amendments to insolvency laws limiting liability for 'insolvent trading' during the crisis, expire at the end of 2020. Temporary loan repayment deferrals will also progressively expire in late 2020 and early 2021. Businesses and borrowers will face a more stringent test of their financial situations. For some this will trigger decisions to close operations or liquidate assets. The combined effect is highly uncertain but we expect a material headwind for the economy with sluggish growth likely for much of 2021.

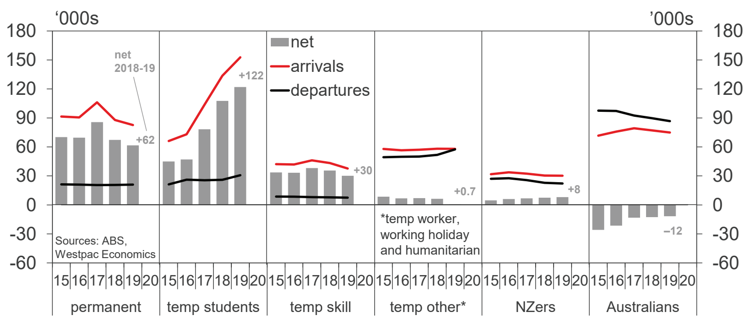
– However, as these headwinds subside and other positives come into play – around vaccines and border restrictions in particular – activity should see a sustained pick up to above trend growth from Q4 next year. A clearer improvement in labour markets and rising confidence will be more supportive and Budget measures targeting business investment are also likely to gain more traction.

– Population growth is one particularly notable area of uncertainty. As noted previously, the government expects annual growth to collapse from 1.4% in 2019 to just 0.2-0.4% over the two years to June 2022 before gradually lifting back to 1.3% by June 2024.

14. Population growth: migration hit



15. Migration flows: key components

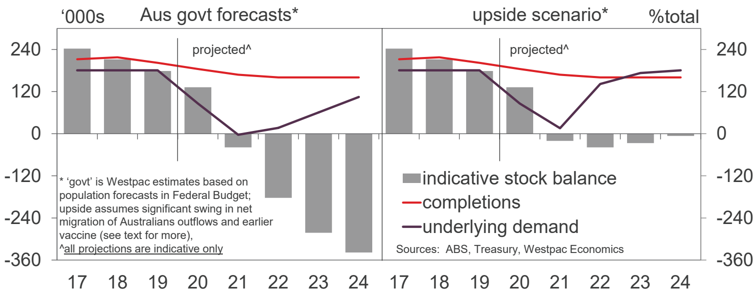


– That profile – which rests on a 300k swing in net migration from a 230k inflow to a 70k net outflow – may prove to be far too negative. While the immediate effects of border closures are clear, the scale of the hit in 2021 may be being overestimated for several reasons. Firstly, while foreign student and temporary migrant inflows will be heavily impacted, some of the shock could be materially offset by a swing to net inflows of Australians, where departures are set to collapse and arrivals could see a boost from returning ex-pats who will likely qualify for priority entry. Permanent migration could also be supportive as arrivals may be more inclined to quarantine and more local residents on temporary visas may switch category (lowering their departure numbers).

– But the real game-changer is the prospect of an earlier emergence of a more effective vaccine. The timeline already suggests international border restrictions could be relaxed from Q4 next year, possibly even from Q3 if a vaccine rollout is fast-tracked. That in turn suggests the rebound in migration and population growth could come through much earlier than the Budget forecasts assume.

– This is of particular importance for housing markets from 2022 on. Chart 16 shows projections for underlying demand based on the Budget forecasts and an upside scenario assuming a significant swing in net migration of Australians and an earlier vaccine roll-out. The chart also shows indicative estimates of the housing 'stock balance' given a starting point deficiency of 180k dwellings projected completions. The picture is clear – if they came to pass, the Budget's population forecasts would likely see a severe overhang of stock emerging in 2022-23 while the upside scenario leaves the market closer to balanced.

16. Housing supply-demand balance: indicative estimates



17. Dwelling price forecasts

	avg*	2018	2019	2020e	2021f	2022f	comments
Sydney	5.3	-8.9	5.3	1.8	3	9	Exposed to tourism/migration hits and service sector disruptions
Melbourne	4	-7.0	5.3	-1.8	2	8	Bigger COVID shock due to 'second wave', services exposed & prices stretched prior
Brisbane	0.9	0.2	0.3	2.6	8	10	Better fundamentals; less exposed to migration but tourism and global trade hit
Perth	-1.7	-4.7	-6.8	0.6	8	8	Exited COVID shock early, export mix well place, less exposed to key service sectors
Adelaide	1.4	1.3	-0.2	4.3	5	5	Exited COVID lockdown early but housing lacks strong demand supports
Hobart	3.3	8.7	3.9	3.9	5	4	Tight market returning but affordability stretch after strong run in recent years.
Australia	3.4	-6.4	3.1	0.7	4	10	Initial COVID hit milder than feared and price momentum to sustain then surge.

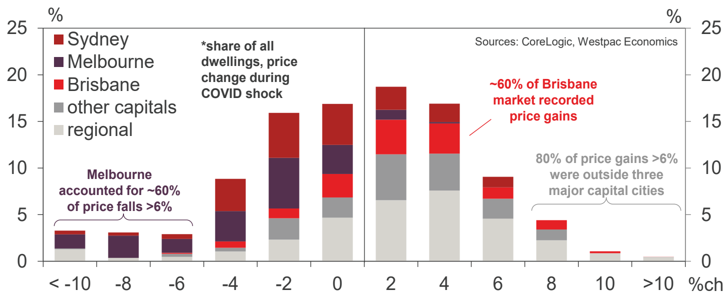
All dwellings, Australia is five major capital cities combined measure; *10yr avg; Forecast periods cover 2020 peak to mid-2021 trough, and subsequent two years (shown in annualised growth terms).

Source: : CoreLogic, Westpac Economics

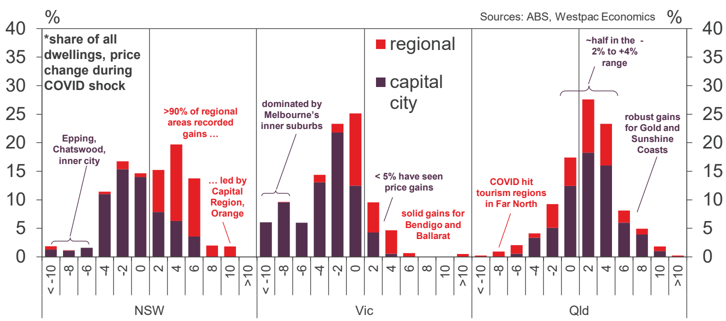
- Bringing this all together in terms of the outlook for dwelling prices: prospects have clearly improved.
- Back in mid-Sep, we revised our call for a 10% correction, acknowledging the milder than expected initial decline, the more material support coming from low interest rates (fixed rate mortgages in particular) and a somewhat milder recession. Prices were still expected to remain soft but with a further 2.3% decline taking the total peak to trough fall to 5% by mid 2021. That in turn was expected to be followed by a sustained surge lifting prices 15% over the two years to June 2023 (see here for more).
- That further decline through to June now looks unlikely given the strength of current market momentum and sentiment; developments suggesting next year's 'soft patch' will be somewhat milder for housing; and the earlier timing on vaccines.
- There will still be areas of weakness. Parts of the Sydney and Melbourne high rise market look particularly vulnerable with further declines in the order of 10% likely. But this segment accounts for about 12% of all dwellings across the major capital cities. Other 'units' in Sydney and Melbourne account for a further 8% but should be better supported price-wise. Meanwhile the remaining 80% of dwellings should continue to see solid gains.
- The bottom line is that we now expect prices nationally to rise 4% in 2021 and 10% in 2022. In effect our 15% surge has been brought forward. Strong momentum will be welcome to begin with but will start to test the nerve of regulators and the RBA in late 2022. That in turn will bring policy responses – macro-prudential measures in particular – back into frame.

Special topic: price performances in detail

18. Distribution of price changes: Australia



19. Distribution of price changes: NSW, Vic, Qld



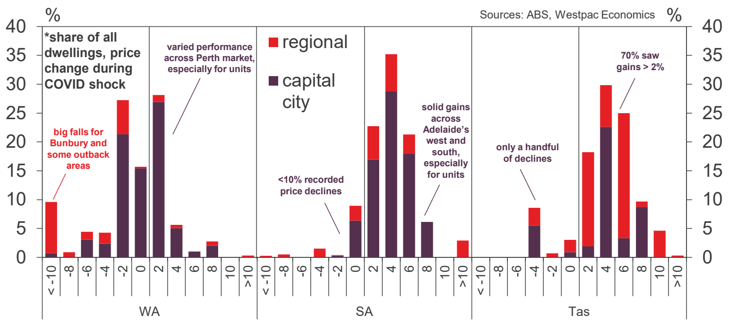
– Dwelling prices have proven to be more resilient than expected in 2020. As at Oct, prices across the major capitals have declined 2.7% from their pre-COVID peak while Australia-wide, including regional areas, they are down just 1.7%. In this topic we explore the distribution of price moves in more detail, drawing on the full range of price indexes covering houses and units across 334 different suburbs or regions.

– Chart 14 shows the distribution of price moves since March, with each sub-regional measure weighted according to its share of the total stock of dwellings (based on Census counts in 2016) and stacked by Sydney, Melbourne, Brisbane, other capital cities and regions. Charts 15 and 16 show the same distributions for each of the major states, stacked by capital city and region. Chart 17 shows the three major capital cities stacked by houses and units.

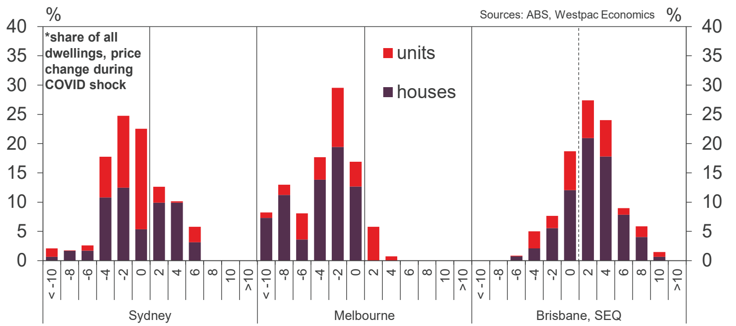
– The first takeaway is the heavy geographic skew. Price declines have been predominantly in Sydney and Melbourne – the latter accounting for about 60% of price declines over 6%. Other capital cities have seen much more evenly balanced performances with local areas accounting for well over half of all properties recording price gains. Regional performances have been stronger still – while there have been pockets of weakness, regional areas accounted for 80% of all 'strong' price gains through this period (viewed as anything over +6%).

– The concentration of weakness in Sydney-Melbourne stands out even more at the state level, with price moves in regional NSW and Vic resembling those in other states more than their state capitals.

20. Distribution of price changes: WA, SA, Tas



21. Distribution of price changes: major capital cities



– Drilling down further, the heaviest price declines in Sydney have been in Epping, Chatswood and the inner-city – all areas closely linked to migration inflows. However, the bulk of the city, accounting for about two thirds of dwellings, recorded declines in the 0-6% range. Interestingly, while there was a higher incidence of price declines amongst units (87% vs 59% for houses) these were not over-represented in terms of 'large price declines' of over 6%.

– The 'weak tail' is understandably bulkier in Melbourne and heavily concentrated in inner areas. Again though, it's more a case of location than property type with a higher proportion of houses recording 6%+ declines than units (22% vs 7% respectively). This may be partly due to the dated nature of the Census dwelling counts which pre-date Melbourne's latest high rise building boom. Only 6% of properties in Melbourne recorded price gains in their local area. Interestingly, regional Vic does look to have underperformed compared to other regions, although prices have been flat rather than weak.

– The distribution of price moves in Qld is fairly tight and symmetrical around 0-2% gains, for capital city areas, by region and by houses and units. Large falls have been confined to regional tourism centres while price gains have been a little firmer in the Gold and Sunshine Coasts – a little surprising given these tend to be 'bellwether' markets for investor activity and tourism-related shocks.

– It's a similar story across the other states, price declines particularly rare in SA and Tas, and confined to regional areas in WA (some of which are very thinly traded).

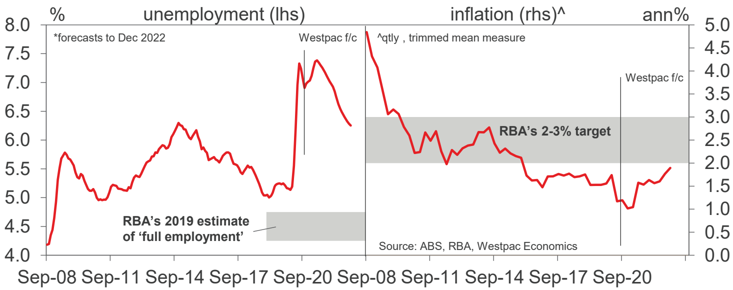
Special topic: prudential policy update

22. Summary of prudential policy measures

	'Macro' prudential	'Micro' prudential
2015	10% limit on investor loan growth	Tightened serviceability assessment guidelines and improved consistency across lenders, including minimum 'floor' rates >7%.
2016	–	Tightened serviceability assessment guidelines; scaling of benchmark minimum expenses; discounts applied to 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 'high debt to income' loans, improve collection and verification of info on expenses, income & 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.
2020	Capital buffers available to be drawn on	Planned bank capital regulatory reforms deferred; COVID repayment holidays and loan restructuring temporarily exempted from arrears treatment; and full serviceability test requirements temporarily relaxed.

Source: APRA, Westpac Economics

23. RBA objectives: jobs and inflation



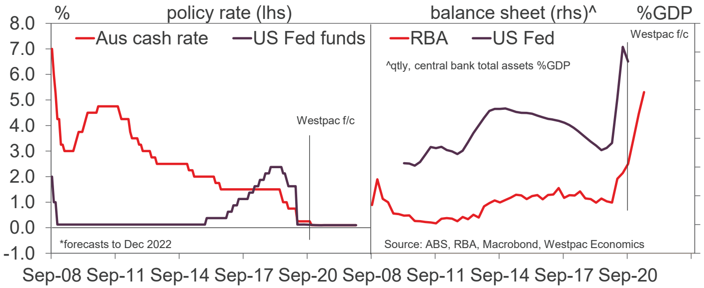
– Prudential policy remains firmly on the back-burner for what is likely to be an extended period. The wider policy priority is generating a sustained recovery via monetary and fiscal stimulus. Prudential policy's main role in this situation is, in the words of APRA Chair Wayne Byres, to "assist in making the adjustment process more orderly and limit unnecessary costs." That said, recent shifts in the RBA's policy approach suggest prudential policy measures are likely to make a return in coming years, particularly if housing markets heat up in the way we expect.

– Policy developments have again come thick and fast over the last three months, including a major expansion in 'the RBA's quantitative easing' program, a Federal Budget in Oct and some significant state budget initiatives in Nov. However, the key shift from a prudential policy perspective has been around the framing of policy decisions by the RBA.

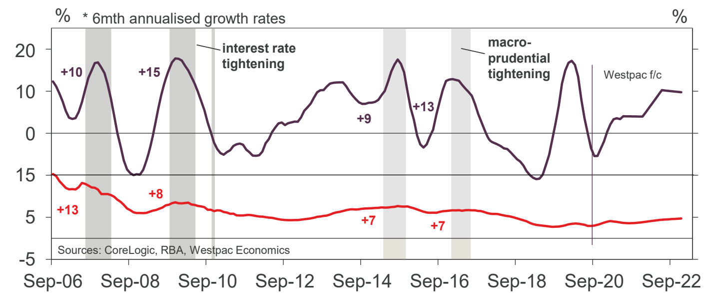
– The RBA Governor set this out clearly in a speech in mid-Nov, highlighting four key changes: 1) the RBA will now "place much more weight on actual outcomes, rather than forecast outcomes, in our decision-making and in our forward guidance"; 2) the 'full employment' objective is the primary concern for policy over the next few years rather than inflation; 3) that policy will be more tightly guided by developments abroad, the 'gravitational pull' of low global interest rates in particular; and 4) much more of its focus will be on quantitative measures.

– Combined, this implies that there is unlikely to be any increase in policy rates for a very long time – until the Bank is actually meeting its full employment objective and the wider global policy backdrop allows.

24. RBA policy: global rates, quantities



25. Macro-prudential 'triggers': prices, borrowing



- The subsequent Q&A offered additional insights into the Governor's thinking around housing market risks. He viewed the prospect of 'excessive froth' emerging as unlikely, emphasising population dynamics and likely continued caution around borrowing. However, he also noted that if prices and borrowing were to rise too quickly then macro prudential instruments could be effective in slowing the rise, citing the experience in 2015 and 2017-18.

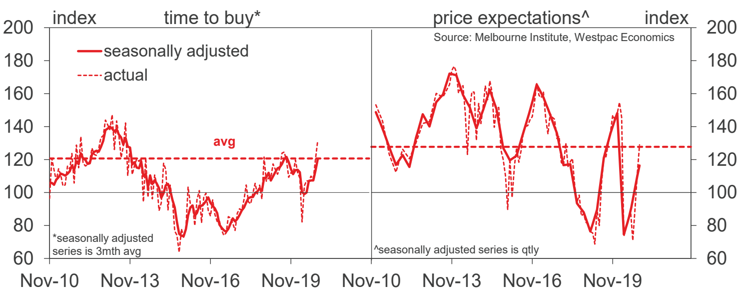
- This could well be the situation confronting the Bank in a year or two. Our forecasts have the unemployment rate at 6.3% by the end of 2022, well above anything that might be considered full employment, with other utilisation and wages growth measures also still showing a large amount of slack. Policy rates globally are expected to still be stuck at their lower bounds. Even with growth above trend, that would seem to completely rule out an interest rate rise.

- However, at the same time, Australian dwelling prices are expected to have risen 14% over two years. If market optimism, investor activity and borrowing are all starting to take off, a macro prudential response will clearly be the preferred tool to manage the situation.

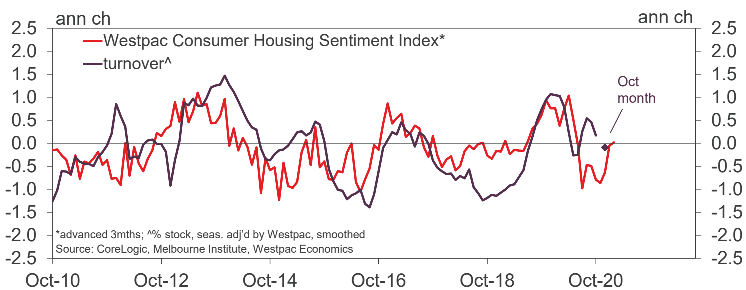
- Turning to other notable developments in the wider 'housing policy' space, state budgets have been of interest. In particular, the NSW budget on Nov 17 included a proposal to transition from stamp duty to a land tax system that could potentially begin in 2021. The Vic budget on Nov 24 included a range of stimulus measures including stamp duty concessions for both new and existing properties and an investment program to build 12k new social and affordable homes.

New South Wales: confidence building

26. NSW consumers: housing–related sentiment

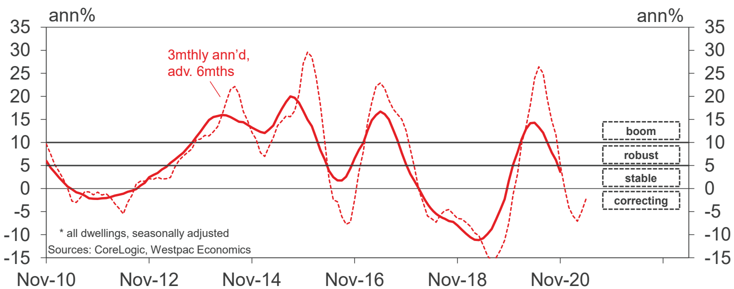


27. NSW housing composite vs turnover



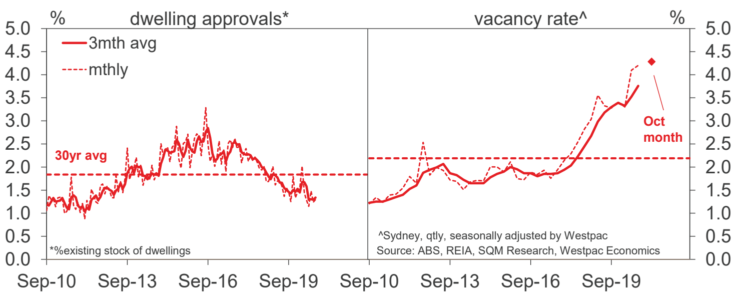
- After a shaky few months when the state looked on the brink of following Vic back into lockdown, NSW looks to be finishing the year on a much firmer footing. Housing market activity has staged a convincing turnaround, turnover back near pre–COVID levels and roughly level with this time last year. Auction markets have been particularly buoyant with clearance rates comfortably above 70% again and volumes for the year to date now running ahead of 2019 at the same stage, i.e. activity has more than caught up for the lockdown interruption.
- Sydney dwelling prices have also turned, lifting 0.4% over Oct-Nov after having declined 2.5% over the previous five months, annual growth still positive at 3.5%yr. Clearance rates suggest Nov-Dec will both see decent gains.
- The price detail continues to show lower prices holding up better in the lowest tier with similar-sized falls for other tiers and across houses and units over the last six months. Within Sydney, the Sutherland region and Ryde have been notably weaker as have parts of the inner city. The Central Coast has been firmer. Price performances have been more stable in regional NSW, Newcastle, Illawarra and the South Coast all maintaining steady gains around 5%yr.
- Listings are showing a tightening with new listings well short of sales and total stock on market declining below avg, to levels similar to at the start of the year. The shift is about houses rather than units, which still look to be carrying a mild overhang of stock. Rental vacancy rates continue to push higher, driven by inner ring areas.
- The **NSW Consumer Housing Sentiment index** has rallied since Aug and is now consistent with steady turnover over the next few months (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).

28. Sydney dwelling prices



Population: 8.2mn
Net migration: 48k pa
GSP: $625bn (32% Aus)
Dwellings: 3.3mn, $2.8trn
Capital: Sydney

29. NSW: dwelling approvals, vacancy rates

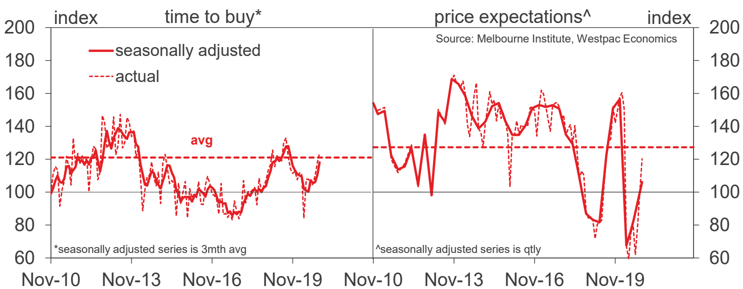


June years	avg*	2017	2018	2019	latest
GSP, ann%	2.6	2.8	2.4	2.6	-0.7
State final demand, ann%	3.3	3.5	3.4	2.1	-1.8
Employment, ann%	1.8	1.1	3.7	3.3	-2.1
Unemployment rate, %#	5.9	4.7	4.8	4.6	6.8
Population, ann%	1.2	1.7	1.4	1.3	1.1
Dwelling prices, ann%	5.9	16.2	-5.4	-9.8	6.2
Rental yield, %#	4.6	3.6	3.9	4.0	3.5
Sales/new listings, ratio#	1.22	1.15	0.96	1.14	1.31
Total listings, mths sales#	2.9	2.5	3.8	4.0	2.7

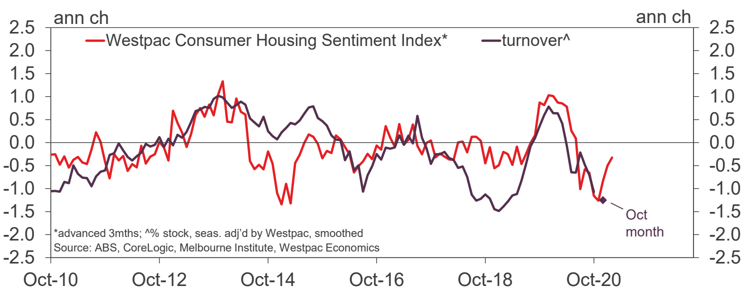
* avg last 25yrs; # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

Victoria: stabilising at last

30. Vic consumers: housing-related sentiment



31. Vic housing composite vs turnover



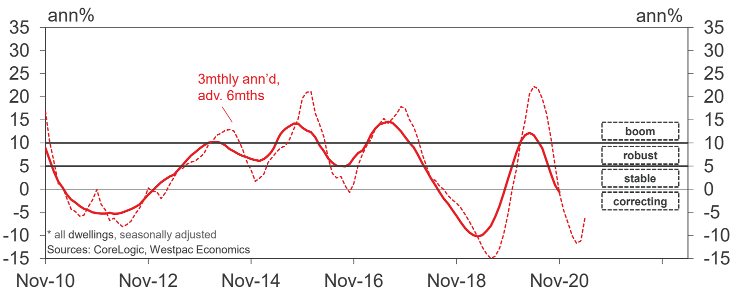
– Needless to say, Vic's housing market has had a torrid year, enduring two lockdowns and a more material price correction. The reopening is seeing activity come back online slowly, turnover in Oct still 25% below pre-COVID levels and more recent Nov figures on auction volumes still well down on the same time last year (bearing in mind Spring is typically peak season for auctions).

– That said, prices have shown a notable lift in Nov, seemingly drawing a line on the 5.56 decline since Apr, although some inner city market segments still look to be in bad shape. The price detail shows deeper corrections for houses, top tier properties and in Melbourne's inner areas. Regional areas are also showing an abrupt slowing. In contrast to other states, regional areas of Vic have seen price declines this year as well.

– Excess stock is weighing on key parts of the Melbourne market, units and inner areas in particular. Citywide, new unit listings have outpaced sales by 30% and the stock of unsold units now running at 8½ months of sales. While some of this reflects the very low level of sales during lockdown (sales figures are up to Oct), it suggests that even with a decent 'reopening pop' into year end there will be a substantial overhang of stock to absorb well into 2021. That view is supported by the continued surge in rental vacancy rates in recent months.

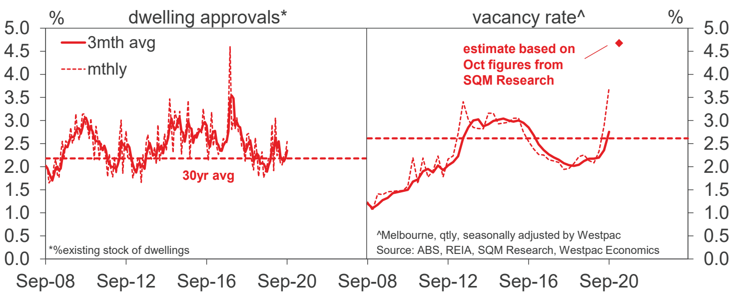
– The **Vic Consumer Housing Sentiment index** has lagged other states but is now clearly improving. It suggests that beyond a near term reopening rebound demand is still likely to be fairly soft. That said, State budget measures, including stamp duty concessions, should provide a welcome kick-along to demand.

32. Melbourne dwelling prices



Population: 6.7mn
Net migration: 81k pa
GSP: $459bn (24% Aus)
Dwellings: 2.7mn, $2trn
Capital: Melbourne

33. Vic: dwelling approvals, vacancy rates

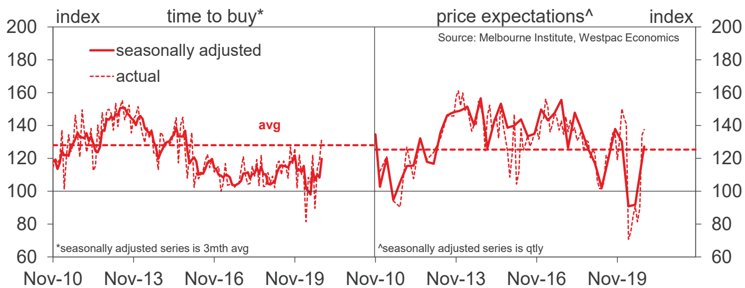


June years	avg*	2017	2018	2019	latest^
GSP, ann%	3.2	3.8	3.4	3.1	-0.5
State final demand, ann%	4.0	4.1	5.3	3.6	-1.0
Employment, ann%	2.2	3.9	2.0	3.7	-4.8
Unemployment rate, %#	6.4	6.0	5.3	4.8	7.1
Population, ann%	1.6	2.4	2.2	2.1	1.8
Dwelling prices, ann%	6.6	14.3	0.9	-9.0	0.9
Rental yield, %#	4.7	3.9	4.0	4.2	3.7
Sales/new listings, ratio#	1.07	1.13	0.86	0.97	1.26
Total listings, mths sales#	3.4	2.7	3.8	4.6	3.8

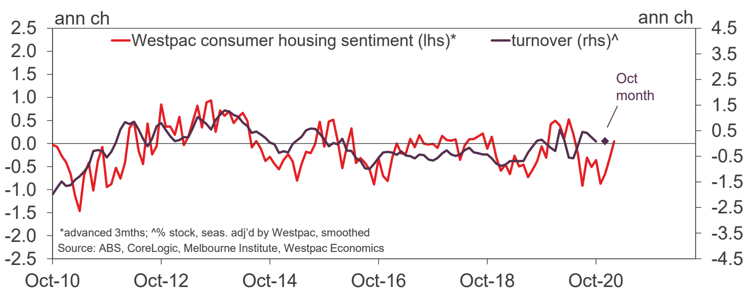
* avg last 25yrs; # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

Queensland: primed for gains?

32. Qld consumers: housing–related sentiment

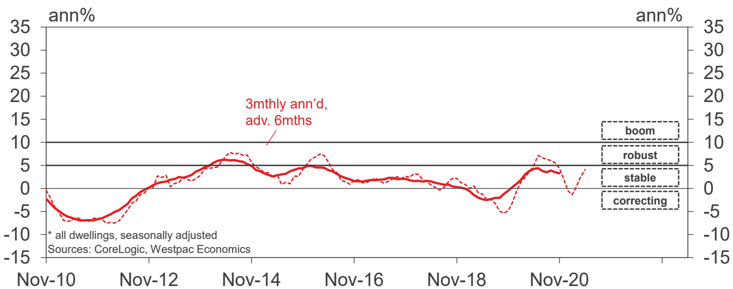


33. Qld housing composite vs turnover



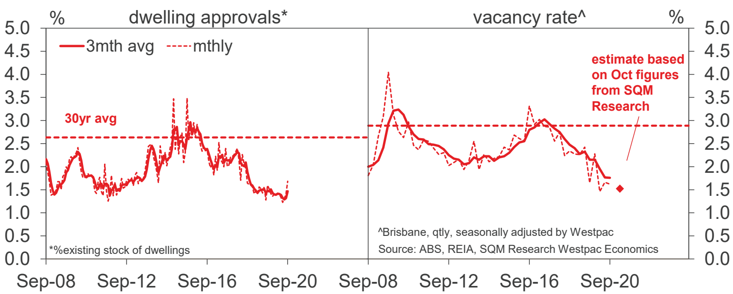
- Qld's post-COVID recovery is consolidating. Market turnover has been back to pre-pandemic levels for several months now and prices have regained all of their lost ground, pushing to new historic highs. Fundamentals remain constructive for sustained gains.
- Turnover has been a little softer in recent months, suggesting an initial 'reopening rebound' may have already run its course.
- Prices have maintained steady gains, despite a brief loss of momentum through the Sep quarter. The price detail shows Brisbane units and top tier properties have been a touch softer, recording some price slippage despite solid gains for houses and mid and lower tier properties. Brisbane's north, and the Gold and Sunshine Coast markets have been performing better. Regionally, Cairns – the centre of north Qld's hard hit tourism industry – remains the big underperformer. As noted earlier, price performances during the COVID correction have been tightly clustered in Qld.
- The supply-demand balance looks to be tightening materially with sales running ahead of listings for both houses and units and total listings down to just 4½ months of sales across the Brisbane market, well below the long run avg of 5 months. Rental vacancy rates are also tightening and are well below 2%. With new construction still at low levels, the market looks set for a sustained period of structural shortages.
- The **Qld Consumer Housing Sentiment index** suggests turnover will continue to hold near current levels in early 2021.

34. Brisbane dwelling prices



Population: 5.2mn
Net migration: 56k pa
GSP: $364bn (19% Aus)
Dwellings: 2.1mn, $1.1trn
Capital: Brisbane

35. Qld: dwelling approvals, vacancy rates

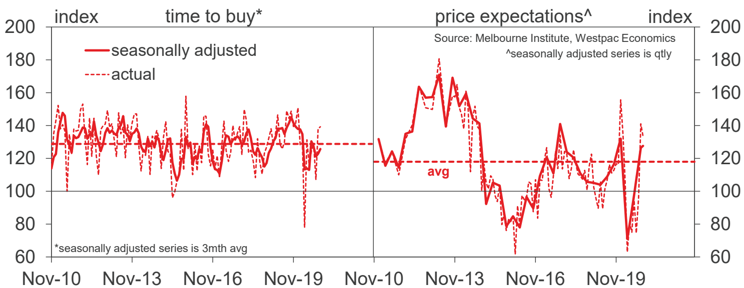


June years	avg*	2017	2018	2019	latest^
GSP, ann%	3.9	2.5	3.9	0.9	-1.1
State final demand, ann%	4.0	2.9	3.7	1.3	-0.1
Employment, ann%	2.3	2.0	3.1	1.7	-0.2
Unemployment rate, %#	6.6	6.2	6.2	6.2	7.6
Population, ann%	1.9	1.7	1.7	1.7	1.7
Dwelling prices, ann%	4.5	2.0	1.2	-2.5	3.5
Rental yield, %#	4.9	4.8	4.8	5.1	5.3
Sales/new listings, ratio#	0.93	0.83	0.78	0.77	1.17
Total listings, mths sales#	5.1	5.8	6.2	6.9	4.6

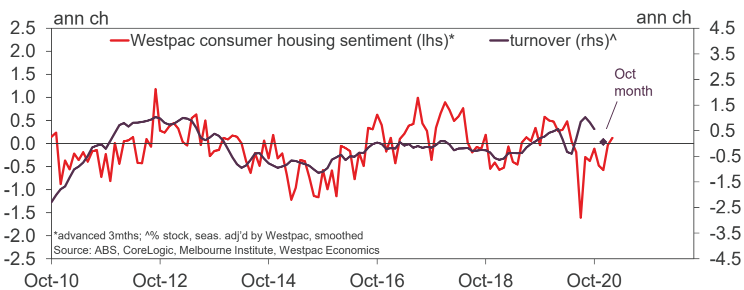
* avg last 25yrs; # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

Western Australia: convincing recovery

36. WA consumers: housing–related sentiment

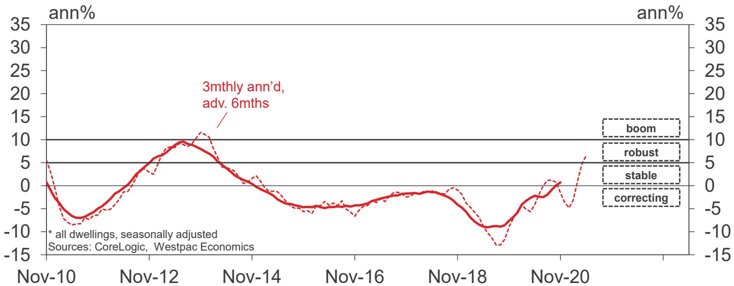


37. WA housing composite vs turnover



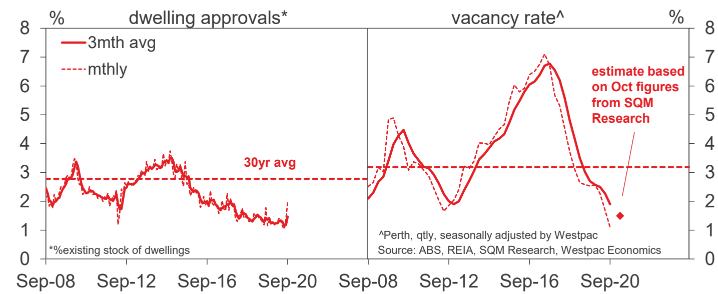
- WA's housing market has continued to perform surprisingly well. The state economy was always well positioned given its low exposure to migration and service export flows, positive supports from the mining sector and very few COVID cases locally. Housing has also been gaining strong support from Federal and State government grants. Even still, the resurgence in turnover and price growth seemed hard to believe initially, after over five gruelling years of price declines that saw recovery hopes repeatedly dashed.
- The current lift is looking much more convincing. Turnover is now well above pre-COVID levels and up nearly 10% on a year ago. Some of this undoubtedly reflects policy measures with the WA state government essentially doubling up on the Federal government's HomeBuilder assistance. First home buyers have been particularly active in the state.
- Importantly, WA's supply-demand fundamentals are also looking more supportive. Total listings are below their long run average in terms of months of sales, rental vacancy rates have fallen well below 2%, new building is near historic lows and, another surprise, migration flows were becoming more supportive of demand (prior to the closure of borders during the pandemic).
- Perth dwelling prices have lifted again with growth nudging 5%yr over the last three months. The detail has all except the top tier lifting, Perth's northwest outperforming marginally.
- The **WA Consumer Housing Sentiment index** has nudged back into positive suggesting turnover will be well supported into early 2021.

38. Perth dwelling prices



Population: 2.7mn
Net migration: 22k pa
GSP: $292bn (15% Aus)
Dwellings: 1.1mn, $0.6trn
Capital: Perth

39. WA: dwelling approvals, vacancy rates

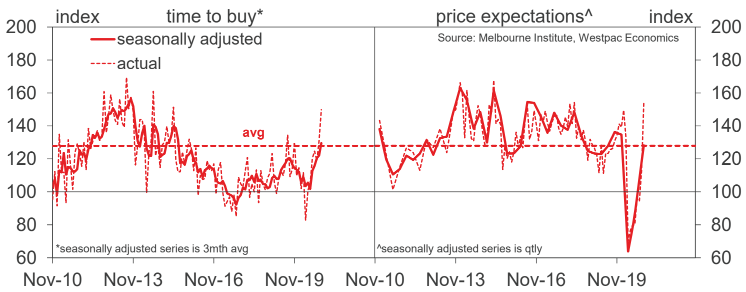


June years	avg*	2017	2018	2019	latest^
GSP, ann%	4.2	-1.3	2.4	1.6	1.4
State final demand, ann%	3.8	-7.2	0.6	-0.8	1.1
Employment, ann%	2.2	0.8	1.5	1.0	-0.4
Unemployment rate, %#	5.6	5.7	6.3	6.0	6.8
Population, ann%	1.7	0.7	0.8	1.1	1.5
Dwelling prices, ann%	3.8	-2.6	-1.4	-9.0	0.1
Rental yield, %#	4.8	3.9	4.0	4.5	5.1
Sales/new listings, ratio#	0.86	0.63	0.63	0.72	0.97
Total listings, mths sales#	6.3	9.0	9.3	9.4	5.5

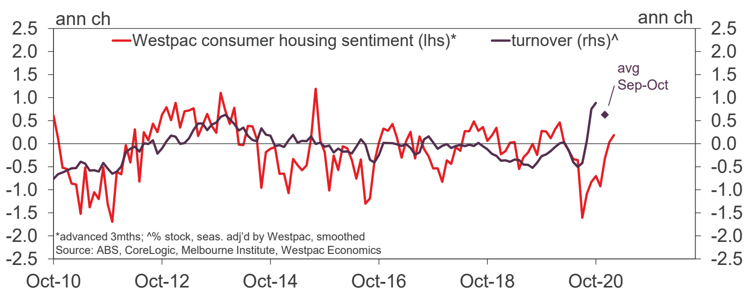
* avg last 25yrs; # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

South Australia: clear outperformer

40. SA consumers: housing-related sentiment

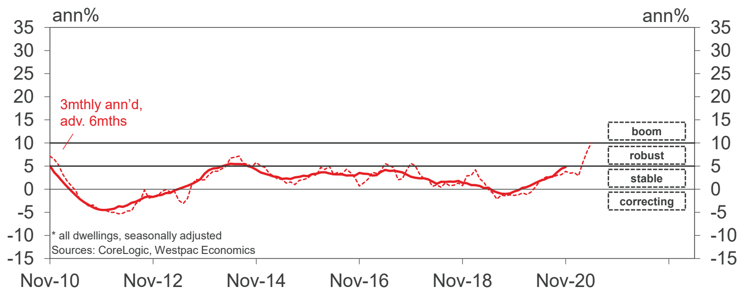


41. SA housing composite vs turnover



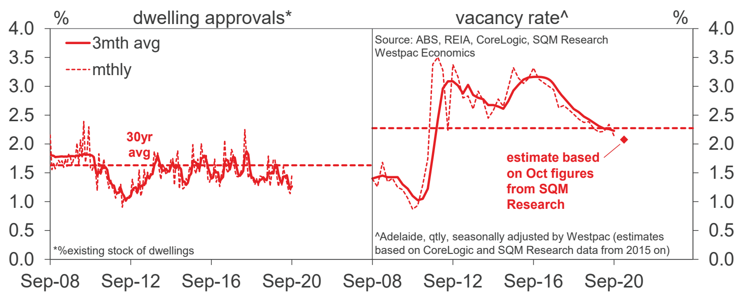
- The SA housing market has been the strongest of the major states with confidence also showing a notable lift. Despite a brief scare in recent weeks, SA has had a very mild pandemic, with no instances of local transmission with 'unknown' sources in well over six months. That has allowed an early reopening with the state also having a lower exposure to the migration and service export sectors hit hardest by COVID restrictions.
- Turnover has surged strongly in recent months, to be well above pre-COVID levels and up over 10%yr.
- Adelaide dwelling prices are also up strongly, having barely dipped 0.2% during the initial COVID shock – prices at new historical highs and gains pushing near a 10% annual pace over the last few months (a pace the Adelaide market has struggled to sustain in the past). The price detail shows a consistent performance across houses and units; across top, middle and lower tier properties; and even across suburbs.
- Around supply, conditions have become very tight with total listings down to just 2½ months of sales. Vacancy rates are also relatively low and new building subdued.
- The **SA Consumer Housing Sentiment index** is pointing to demand lifting further, views on both house price expectations and 'time to buy a dwelling' up strongly, the latter to a multi-year high in Nov. SA may be benefiting from some population shifts, both a reduced interstate outflow and possibly an inflow as some internal migrants return during the COVID crisis. Certainly conditions are looking more buoyant in the SA housing market now than they have in quite some time.

42. Adelaide dwelling prices



Population: 1.8mn
Net migration: 13k pa
GSP: $108bn (6% Aus)
Dwellings: 0.8mn, $0.4trn
Capital: Adelaide

43. SA: dwelling approvals, vacancy rates

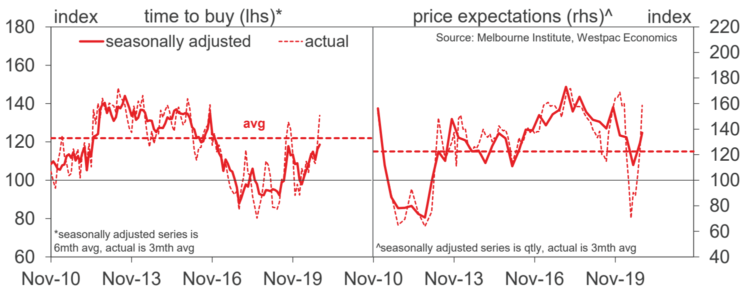


June years	avg*	2017	2018	2019	latest^
GSP, ann%	2.4	1.5	2.4	1.1	-1.4
State final demand, ann%	3.1	3.6	4.2	1.8	-1.6
Employment, ann%	1.2	1.1	2.9	1.7	-0.7
Unemployment rate, %#	6.9	6.9	5.7	6.0	7.3
Population, ann%	0.7	0.6	0.7	0.9	1.0
Dwelling prices, ann%	4.8	4.0	1.6	-0.3	4.4
Rental yield, %#	5.2	4.6	5.4	5.7	5.6
Sales/new listings, ratio#	0.98	0.92	0.92	0.93	1.76
Total listings, mths sales#	4.2	4.6	4.5	4.8	2.6

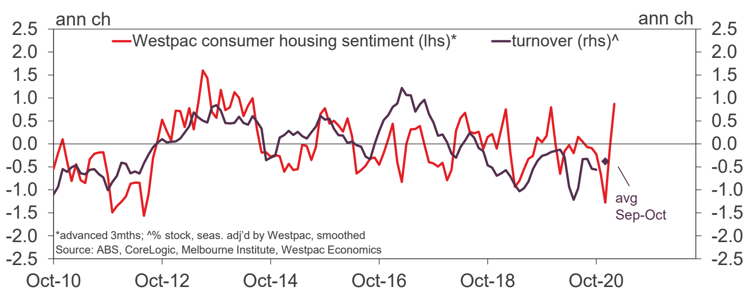
* avg last 25yrs; # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

Tasmania: supply shortages intensify

44. Tas consumers: housing–related sentiment



45. Tas housing composite vs turnover



– Tas's housing market has had a remarkable few years, posting strong price gains through 2016–17 that carried into 2018–19 despite corrections elsewhere. As seen in most of Australia's other smaller states, the COVID disruptions have been brief and mild. After a skittish few months, buyer sentiment is now clearly bullish and suggests ongoing issues around very tight supply will again come to the fore in 2021.

– Turnover has largely rebounded from lockdown effects earlier in the year although it remains down on a year ago, compared to the solid gains in WA and SA.

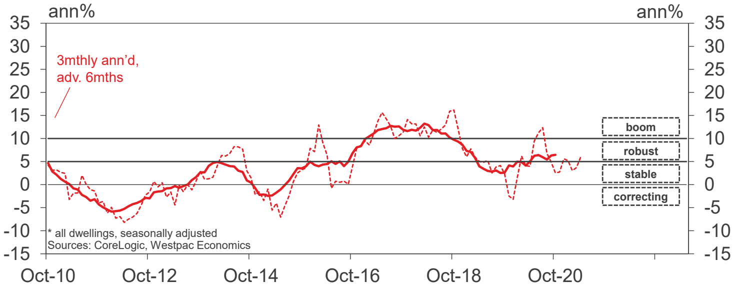
– Prices have shown steady gains tracking around 5%yr. Bottom and middle tier properties have outperformed slightly. Gains have been relatively well dispersed across Hobart and other centres as well.

– Both listings and vacancy rates are again pointing to significant issues with supply shortages. Total listings are back to just 2.3 months of sales and rental vacancy rates remain below 2%, albeit stable rather than tightening further.

– The **Tas Consumer Housing Sentiment index** is pointing to a strong lift in activity although excessive volatility in 2020 makes this less reliable than usual. That said, the latest gains look to be more than just noise.

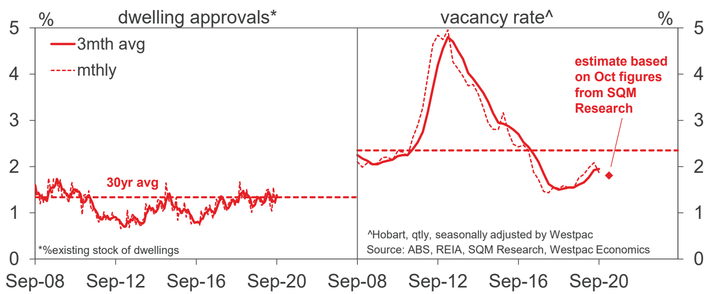
– Note that Tas state measures are smoothed due to the smaller sample size (which means underlying data is more volatile).

46. Hobart dwelling prices



Population: 0.5mn
Net migration: 5k pa
GSP: $32bn (2% Aus)
Dwellings: 0.2mn, $112bn
Capital: Hobart

47. Tas: dwelling approvals, vacancy rates

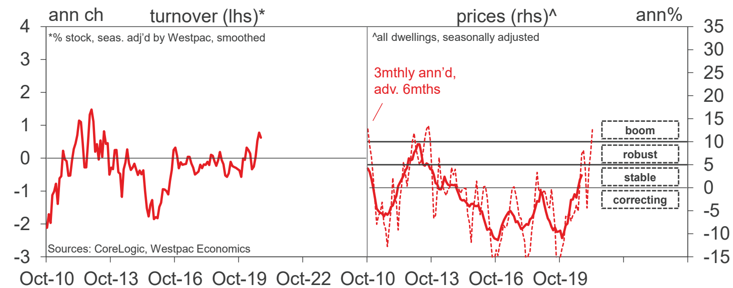


June years	avg*	2017	2018	2019	latest^
GSP, ann%	2.4	1.2	3.2	3.3	0.3
State final demand, ann%	2.7	1.7	5.0	4.5	-0.1
Employment, ann%	1.0	4.0	1.2	-0.4	0.9
Unemployment rate, %#	7.5	5.8	6.1	6.6	7.4
Population, ann%	0.5	0.9	1.1	1.2	1.1
Dwelling prices, ann%	5.2	12.3	11.9	3.0	6.3
Rental yield, %#	5.8	5.3	5.1	5.2	4.6
Sales/new listings, ratio#	1.01	1.15	1.18	1.02	1.46
Total listings, mths sales#	5.4	3.0	2.3	3.1	2.3

* avg last 25yrs (12yrs for listings); # June qtr readings
Sources: ABS, CoreLogic, REIA, Westpac Economics

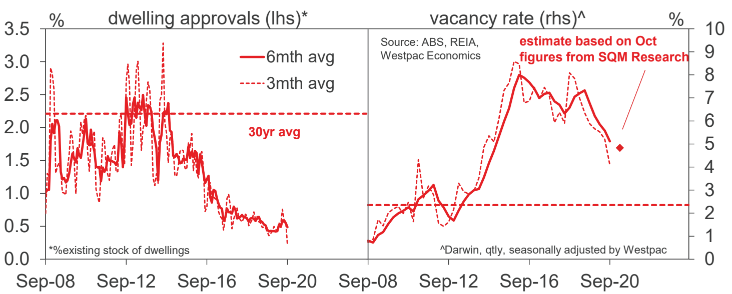
Territories: NT recovering; ACT holding strong

48. NT: turnover, Darwin dwelling prices



Population: 0.2mn
Net migration: –3k pa
GSP: $26bn (1% Aus)
Dwellings: 0.1mn, $35bn
Capital: Darwin

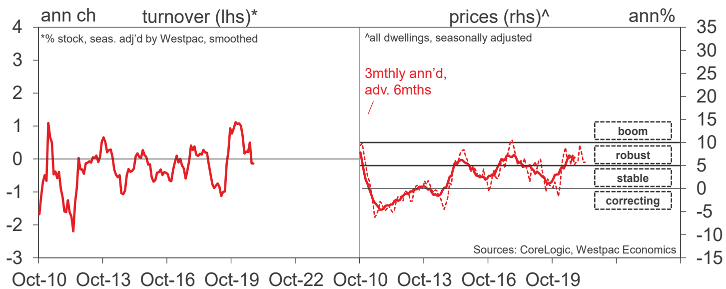
49. NT: dwelling approvals, vacancy rates



June years	avg*	2017	2018	2019	latest
GSP, ann%	3.9	1.4	1.8	–1.3	5.3
State final demand, ann%	3.7	8.9	–3.7	–16.5	–4.5
Employment, ann%	1.2	2.4	1.8	–1.9	–1.3
Unemployment rate, %#	7.6	5.9	6.2	6.6	7.0
Population, ann%	1.4	0.7	–0.2	–0.4	–0.2
Dwelling prices, ann%	3.1	–5.0	–6.6	–9.2	2.1
Sales/new listings, ratio#	1.12	0.75	0.96	0.92	1.90
Total listings, mths sales#	5.9	10.4	9.0	8.1	4.4

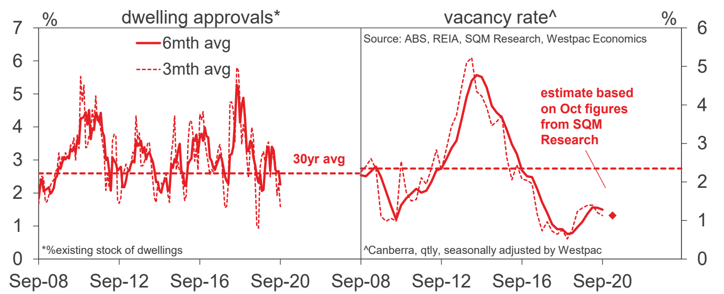
* avg last 25yrs (last 10yrs for listings); # June qtr readings
Sources: ABS, CoreLogic, Westpac Economics

50. ACT: turnover, Canberra dwelling prices



Population: 0.4mn
Net migration: 1k pa
GSP: $41bn (2% Aus)
Dwellings: 0.2mn, $125bn
Capital: Canberra

51. ACT: dwelling approvals, vacancy rates

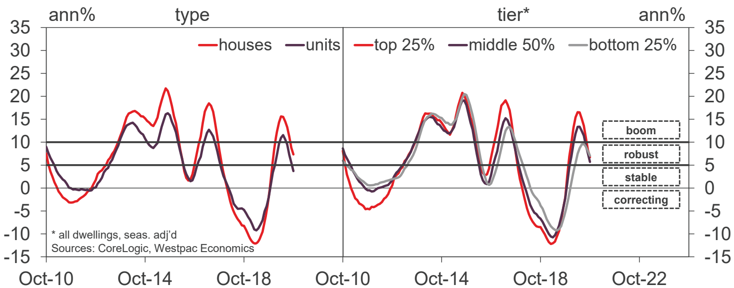


June years	avg*	2017	2018	2019	latest
GSP, ann%	3.5	3.9	3.9	3.8	2.4
State final demand, ann%	3.7	3.1	2.6	3.0	3.0
Employment, ann%	1.2	2.7	2.3	0.5	3.5
Unemployment rate, %#	7.6	5.9	6.2	6.6	7.0
Population, ann%	1.4	2.2	2.0	1.4	1.1
Dwelling prices, ann%	5.2	6.3	4.9	1.5	6.0
Sales/new listings, ratio#	1.41	1.01	1.03	0.98	1.35
Total listings, mths sales#	2.6	3.1	3.3	4.7	2.6

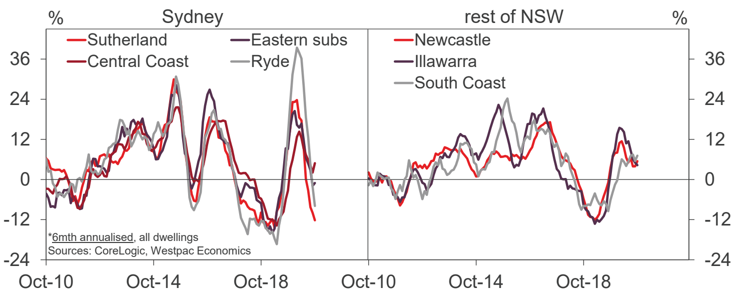
* avg last 25yrs (last 10yrs for listings); # June qtr readings
Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables

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



53. NSW dwelling prices: selected sub-regions

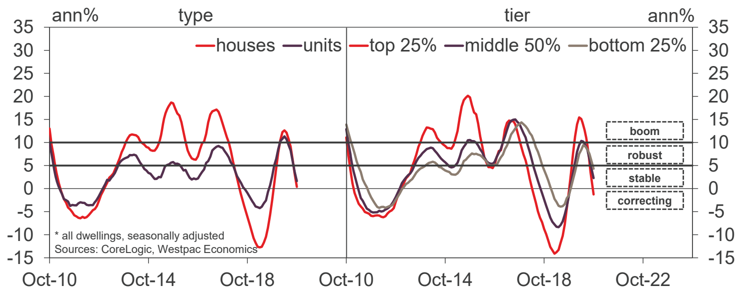


NSW	Sydney	rest of NSW
Population:	5.3mn	2.8mn
Net migration*:	48k pa	16k pa
Employ (%state):	68%	32%
Dwellings, no.:	1.9mn	1.3mn
Dwellings, value:	$2.1trn	$0.7trn

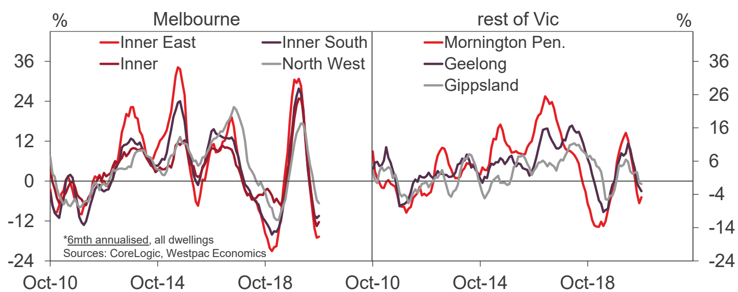
June years	avg^	2017	2018	2019	latest
Sydney					
Employment, ann%	1.7	2.3	4.0	3.1	-2.0
Unemployment rate, %	5.3	4.5	4.4	4.5	7.0
Houses – prices, ann%	6.2	17.9	-6.0	-10.7	7.3
– sales/new listings, ratio	1.05	1.00	0.92	1.14	1.35
– total listings, mths sales	3.3	2.7	3.9	3.8	2.3
Units – prices, ann%	5.4	12.1	-4.0	-8.0	3.7
– sales/new listings, ratio	1.51	1.38	1.04	1.17	1.37
– total listings, mths sales	2.4	2.2	3.7	4.2	3.1
rest of NSW					
Employment, ann%	1.1	-1.2	3.2	3.9	-5.1
Unemployment rate, %	7.1	5.1	5.8	4.7	6.6
Dwelling prices, ann%	4.7	11.1	3.4	-4.8	6.0

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

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



55. Vic dwelling prices: selected sub-regions



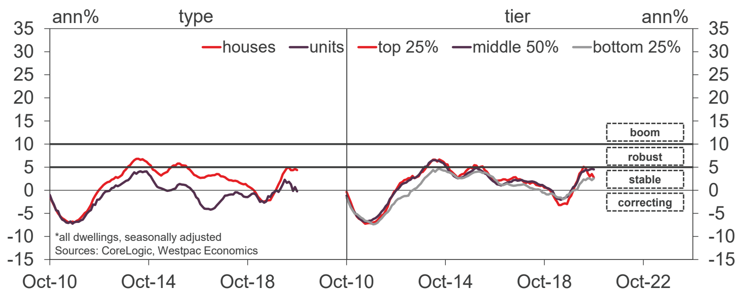
Vic	Melbourne	rest of Vic
Population:	5.1mn	1.5mn
Net migration*:	80k pa	17k pa
Employ (%state):	78%	22%
Dwellings, no.:	1.9mn	0.7mn
Dwellings, value:	$1.6trn	$0.3trn

June years	avg^	2017	2018	2019	latest
Melbourne					
Employment, ann%	2.1	4.1	3.1	4.1	-5.8
Unemployment rate, %	6.2	6.2	5.2	4.9	7.1
Houses – prices, ann%	6.9	16.9	0.4	-11.7	0.4
– sales/new listings, ratio	1.06	1.09	0.93	1.04	1.61
– total listings, mths sales	3.3	2.3	3.2	4.0	3.7
Units – prices, ann%	5.9	8.7	1.9	-3.2	1.6
– sales/new listings, ratio	1.09	1.15	0.70	0.78	0.70
– total listings, mths sales	3.6	3.3	5.3	5.9	8.4
rest of Vic					
Employment, ann%	1.3	3.6	-1.5	2.2	1.1
Unemployment rate, %	6.7	5.2	5.2	3.9	5.3
Dwelling prices, ann%	4.4	6.2	8.8	-0.3	3.9

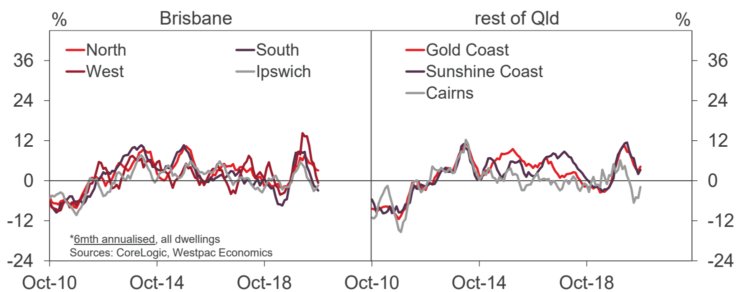
* incl. flows within state; ^avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables, continued

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



57. Qld dwelling prices: selected sub-regions

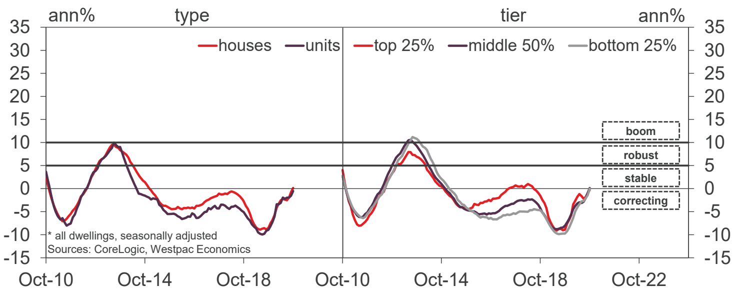


Qld	Brisbane	rest of Qld
Population:	2.5mn	2.6mn
Net migration*:	35k pa	21k pa
Employ (%state):	51%	49%
Dwellings, no.:	0.9mn	1.1mn
Dwellings, value:	$0.5trn	$0.6trn

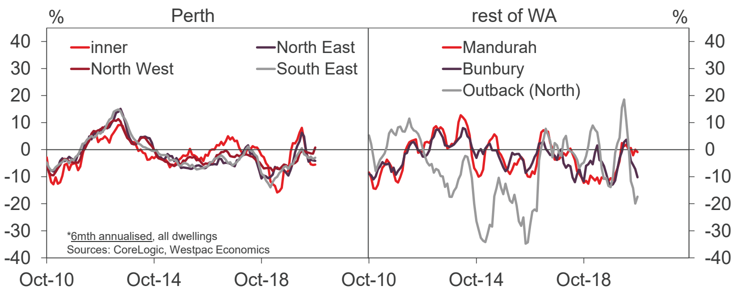
June years	avg^	2017	2018	2019	latest
Brisbane					
Employment, ann%	2.2	1.5	2.9	1.9	-2.2
Unemployment rate, %	6.2	6.5	6.2	6.2	7.4
Houses - prices, ann%	4.9	3.3	1.7	-2.5	4.4
- sales/new listings, ratio	0.85	0.87	0.81	0.81	1.16
- total listings, mths sales	5.5	5.2	5.7	6.4	4.0
Units - prices, ann%	3.0	-3.8	-0.7	-2.7	-0.2
- sales/new listings, ratio	1.41	0.75	0.73	0.73	1.12
- total listings, mths sales	4.2	7.9	7.9	8.2	5.7
rest of Qld					
Employment, ann%	1.9	2.5	3.3	1.4	-2.4
Unemployment rate, %	6.9	5.9	6.2	6.3	8.2
Dwelling prices, ann%	3.6	2.2	1.3	-1.9	5.1

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

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



59. WA dwelling prices: selected sub-regions



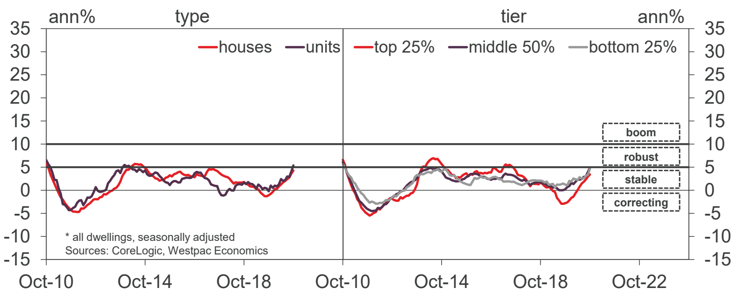
WA	**Perth**	**rest of WA**
Population:	**2.1mn**	**0.5mn**
Net migration*:	**13k pa**	**-3k pa**
Employ (%state):	**79%**	**21%**
Dwellings, no.:	**0.8mn**	**0.3mn**
Dwellings, value:	**$0.5trn**	**$0.1trn**

June years	avg^	2017	2018	2019	latest
Perth					
Employment, ann%	2.2	-0.4	1.8	2.0	-1.3
Unemployment rate, %	5.8	6.1	6.4	6.1	7.8
Houses - prices, ann%	4.0	-2.1	-0.9	-8.9	0.2
- sales/new listings, ratio	0.83	0.62	0.62	0.73	1.00
- total listings, mths sales	6.3	8.9	9.1	8.7	4.4
Units - prices, ann%	3.0	-4.5	-3.7	-9.8	-0.5
- sales/new listings, ratio	0.98	0.67	0.65	0.69	0.84
- total listings, mths sales	6.1	9.7	10.1	11.0	7.1
rest of WA					
Employment, ann%	1.2	5.4	0.9	-2.5	-1.9
Unemployment rate, %	5.2	4.2	5.6	5.0	5.0
Dwelling prices, ann%	2.2	-2.0	-4.1	-10.5	-6.5

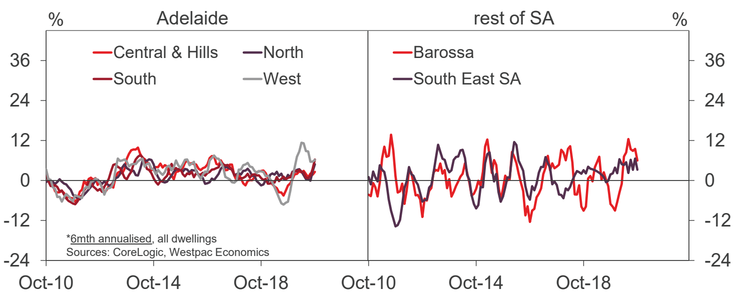
* incl. flows within state; ^avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

Additional material: charts and tables, continued

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



61. SA dwelling prices: selected sub-regions

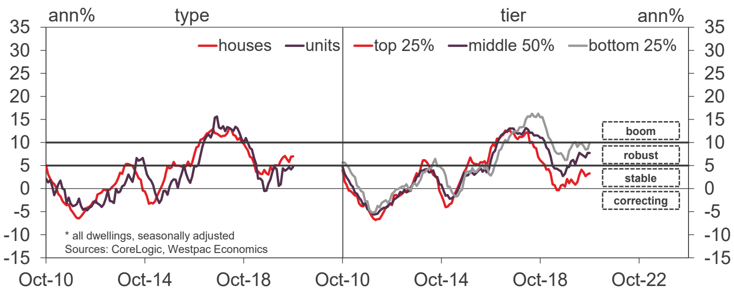


SA	Adelaide	rest of SA
Population:	1.4mn	0.4mn
Net migration*:	9k pa	1k pa
Employ (%state):	79%	21%
Dwellings, no.:	0.6mn	0.2mn
Dwellings, value:	$0.3trn	$0.1trn

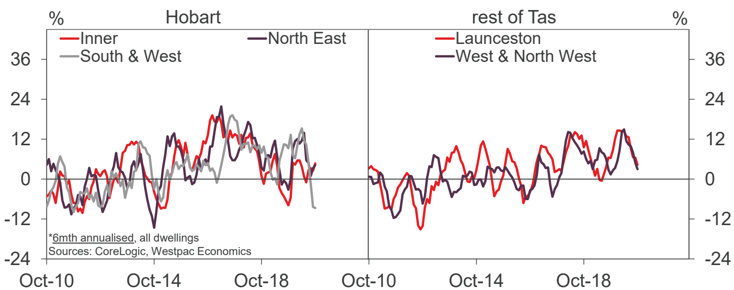
June years	avg^	2017	2018	2019	latest
Adelaide					
Employment, ann%	1.2	2.3	1.9	2.9	-1.9
Unemployment rate, %	7.1	6.9	5.9	5.8	7.8
Houses - prices, ann%	4.8	4.5	1.7	-0.5	4.3
- sales/new listings, ratio	0.98	0.96	0.99	0.99	1.78
- total listings, mths sales	4.1	4.2	4.0	4.0	1.9
Units - prices, ann%	4.8	1.3	1.0	0.9	5.4
- sales/new listings, ratio	1.01	0.85	0.72	0.73	1.66
- total listings, mths sales	5.0	6.6	7.4	7.7	3.5
rest of SA					
Employment, ann%	0.4	-3.0	6.9	-2.4	-3.2
Unemployment rate, %	6.3	6.2	4.3	6.2	6.6
Dwelling prices, ann%	3.9	0.2	-0.5	0.2	5.4

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

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



63. Tas dwelling prices: selected sub-regions



Tas	Hobart	rest of Tas
Population:	236k	298k
Net migration*:	3k pa	2k pa
Employ (%state):	47%	53%
Dwellings, no.:	101k	146k
Dwellings, value:	$54bn	$53bn

June years	avg^	2017	2018	2019	latest
Hobart					
Employment, ann%	1.2	7.7	1.4	0.3	1.4
Unemployment rate, %	6.9	5.5	6.2	7.0	5.7
Houses – prices, ann%	5.3	12.5	11.5	3.2	7.0
– sales/new listings, ratio	0.97	1.13	1.17	1.00	1.35
– total listings, mths sales	5.7	2.9	2.2	3.0	2.2
Units – prices, ann%	4.8	11.1	13.4	2.2	4.7
– sales/new listings, ratio	1.18	1.27	1.19	1.11	1.86
– total listings, mths sales	4.4	2.6	2.2	2.7	2.0
rest of Tas					
Employment, ann%	0.7	1.1	1.1	-1.0	1.6
Unemployment rate, %	8.0	6.0	5.9	6.2	7.4
Dwelling prices, ann%	4.5	4.4	7.5	5.5	9.8

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

Economic and financial forecasts

Interest rate forecasts

Australia	Latest (20 Nov)	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Jun-22	Dec-22
Cash	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
90 Day BBSW	0.02	0.02	0.02	0.02	0.02	0.02	0.06	0.10
3 Year Bond	0.11	0.10	0.10	0.10	0.10	0.10	0.20	0.30
3 Year Swap	0.12	0.08	0.08	0.08	0.08	0.08	0.15	0.25
10 Year Bond	0.86	0.80	0.95	1.05	1.15	1.25	1.50	1.70
10 Year Spread to US (bps)	3	0	5	5	5	5	10	20
US								
Fed Funds	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
US 10 Year Bond	0.83	0.80	0.90	1.00	1.10	1.20	1.40	1.50

Exchange rate forecasts

	Latest (20 Nov)	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Jun-22	Dec-22
AUD/USD	0.7291	0.75	0.76	0.78	0.79	0.80	0.80	0.78
NZD/USD	0.6921	0.70	0.71	0.71	0.71	0.71	0.71	0.70
USD/JPY	103.81	104	105	106	106	106	107	107
EUR/USD	1.1877	1.19	1.20	1.21	1.22	1.24	1.25	1.25
GBP/USD	1.3265	1.32	1.34	1.36	1.38	1.39	1.40	1.40
USD/CNY	6.5766	6.60	6.55	6.50	6.45	6.40	6.30	6.20
AUD/NZD	1.0535	1.07	1.07	1.10	1.11	1.13	1.13	1.11

Sources: Bloomberg, Westpac Economics.

Economic and financial forecasts

Australian economic growth forecasts

	2019	2020				2021	
	Q4	Q1	Q2	Q3	Q4f	Q1f	Q2f
GDP % qtr	0.6	-0.3	-7.0	1.8	2.2	1.0	0.5
Annual change	2.3	1.6	-6.3	-5.0	-3.5	-2.3	5.6
Unemployment rate %	5.2	5.2	7.0	7.1	7.0	7.3	7.3
CPI % qtr	0.7	0.3	-1.9	1.6	0.6	0.3	0.2
Annual change	1.8	2.2	-0.3	0.7	0.6	0.5	2.6
CPI underlying % qtr	0.4	0.5	-0.1	0.4	0.3	0.5	0.4
ann change	1.6	1.7	1.2	1.2	1.0	1.0	1.6

	Calendar years			
	2019	2020f	2021f	2021f
GDP %yr end	2.3	-3.5	2.8	3.5
Unemployment rate %	5.2	7.0	7.0	6.3
CPI % Annual change	1.8	0.6	1.6	2.1
CPI underlying % yr end	1.6	1.0	1.6	1.4

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

		2019				2020						
index*	**avg**	**Mar**	**Jun**	**Sep**	**Dec**	**Mar**	**Jun**	**Sep**	**Oct**	**Nov**	**%mth**	**%yr**
'Time to buy a dwelling'												
Australia	119.4	116.6	116.9	123.3	112.3	111.8	107.6	110.5	122.2	132.0	8.0	10.9
– New South Wales	115.8	117.4	114.6	119.5	111.2	108.8	107.1	108.1	120.4	131.6	9.4	17.4
– Victoria	115.5	115.5	119.0	121.4	112.6	111.2	107.9	110.3	118.0	124.2	5.2	11.4
– Queensland	128.0	116.9	118.4	126.8	101.9	109.1	104.7	113.6	118.6	132.4	11.7	5.0
– Western Australia	128.8	135.0	125.8	144.3	141.4	129.7	115.9	107.2	138.0	139.2	0.9	-0.1
– South Australia	127.9	99.0	109.8	109.2	109.6	111.7	105.0	118.9	131.1	149.8	14.2	15.1
– Tasmania	122.0	87.0	122.0	149.2	84.8	126.4	108.9	101.9	151.2	148.3	-1.9	38.8
House price expectations												
Australia	126.2	85.4	109.7	130.3	140.1	141.7	80.6	89.2	117.3	131.4	12.0	-3.3
– New South Wales	127.7	68.7	106.0	129.8	144.2	145.6	84.2	91.0	111.7	128.9	15.5	-12.2
– Victoria	127.3	80.5	104.2	132.4	149.4	150.7	75.3	80.1	100.6	120.2	19.5	-15.4
– Queensland	125.3	101.6	122.0	135.5	131.0	141.1	84.6	89.4	134.1	137.6	2.6	15.5
– Western Australia	118.0	89.7	101.7	111.1	116.3	106.9	75.0	96.3	141.0	133.5	-5.4	14.3
– South Australia	128.0	111.4	123.6	126.2	141.1	133.4	79.8	94.3	112.8	154.1	36.7	14.9
– Tasmania	128.0	136.8	107.6	156.2	167.8	154.2	79.5	100.7	154.1	168.9	9.6	2.8

*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

	2019					2020						
index*	**avg**	**Mar**	**Jun**	**Sep**	**Dec**	**Mar**	**Jun**	**Sep**	**Oct**	**Nov**	**%mth**	**%yr**
Unemp. expectations												
Australia	130.1	130.6	127.0	133.6	138.0	146.1	127.2	139.2	119.4	126.8	6.2	-7.1
– New South Wales	129.6	130.8	126.4	133.1	144.5	138.6	129.3	139.9	115.3	136.7	18.5	2.8
– Victoria	131.2	128.7	129.2	128.6	137.7	150.7	134.9	139.6	120.0	122.3	2.0	-8.8
– Queensland	133.2	136.0	125.8	134.9	138.8	151.2	116.2	135.1	124.4	113.9	-8.4	-20.3
– Western Australia	128.1	121.3	118.3	128.5	113.0	131.6	123.4	136.0	106.0	122.3	15.4	-7.0
– South Australia	135.3	136.7	129.8	145.6	139.1	158.7	123.4	144.8	131.4	142.5	8.5	-0.5
– Tasmania	**138.3**	**116.3**	**141.5**	**152.9**	**140.5**	**172.3**	**136.2**	**155.8**	**122.4**	**132.6**	**8.4**	**-12.5**
Risk aversion											**qtr ch**	**ann ch**
Australia	15.1	49.2	44.1	42.0	45.3	37.6	45.4	46.8	n.a.	n.a.	1.4	2.6
– New South Wales	11.7	42.7	38.1	36.2	42.7	40.9	45.4	47.0	n.a.	n.a.	1.5	6.4
– Victoria	11.0	53.4	42.7	43.5	35.5	36.8	44.0	38.6	n.a.	n.a.	-5.4	0.4
– Queensland	12.7	54.5	50.1	42.5	48.8	37.4	40.4	57.0	n.a.	n.a.	16.6	10.3
– Western Australia	7.0	55.8	53.1	63.6	58.0	33.9	52.4	53.3	n.a.	n.a.	0.9	-6.5
– South Australia	14.4	50.6	49.6	42.6	57.6	37.3	58.7	56.9	n.a.	n.a.	-1.8	4.3
– Tasmania	15.5	37.8	23.1	35.4	24.6	19.1	12.3	18.3	n.a.	n.a.	6.0	-10.0

*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

		2018		2019				2020				
	avg	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Oct	Nov
Dwelling prices, ann%*												
Australia	5.7	-4.1	-6.1	-8.2	-8.0	-4.3	3.0	8.9	8.9	4.9	3.7	2.6
– Sydney	5.9	-7.2	-8.9	-10.9	-9.9	-4.8	5.3	13.0	13.3	7.7	6.1	3.5
– Melbourne	6.6	-3.4	-7.0	-9.8	-9.2	-3.9	5.3	12.0	10.2	3.1	0.7	-1.1
– Brisbane	4.5	0.8	0.2	-1.3	-2.6	-2.1	0.3	3.1	4.4	3.8	3.5	2.9
– Perth	3.8	-2.7	-4.7	-7.7	-9.1	-9.0	-6.8	-3.1	-2.5	-1.0	0.0	0.1
– Adelaide	4.8	1.5	1.3	0.8	-0.3	-1.1	-0.2	0.9	2.0	3.6	4.4	4.4
– Hobart	5.2	10.2	8.7	6.0	2.9	2.5	3.9	4.2	6.4	6.4	6.5	n.a.
Turnover, %stock^												
Australia	5.9	3.9	3.6	3.6	3.7	4.1	4.3	4.1	3.4	4.2	4.1	n.a.
– New South Wales	6.0	3.8	3.5	3.6	3.8	4.3	4.6	4.4	3.7	4.7	4.5	n.a.
– Victoria	4.8	3.8	3.4	3.4	3.5	3.9	4.2	3.8	2.9	3.2	2.9	n.a.
– Queensland	6.9	4.4	4.2	4.2	4.2	4.5	4.7	4.5	3.9	4.8	4.6	n.a.
– Western Australia	6.6	3.3	3.2	3.1	3.1	3.4	3.6	3.2	3.3	4.3	4.1	n.a.
– South Australia	4.8	3.8	3.6	3.4	3.4	3.4	3.5	3.5	3.0	4.1	4.3	n.a.
– Tasmania	5.7	5.5	5.1	4.9	4.8	5.1	4.9	4.7	3.9	4.5	4.4	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

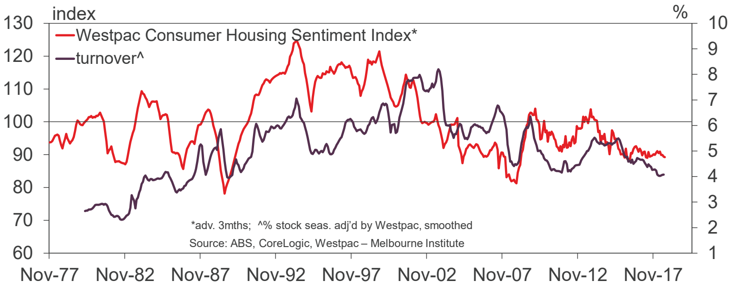
Residential property listings

		2018		2019				2020				
	avg	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Oct	Nov
Sales/new listings ratio*												
Australia^	1.05	0.79	0.80	0.88	0.92	1.03	1.12	1.11	1.05	1.19	1.25	1.26
– Sydney	1.22	0.88	0.90	0.99	1.14	1.28	1.32	1.24	1.17	1.25	1.31	1.32
– Melbourne	1.07	0.80	0.75	0.86	0.97	1.06	1.11	0.99	0.94	1.61	1.57	1.26
– Brisbane	0.93	0.76	0.75	0.79	0.77	0.91	0.93	1.00	1.06	1.09	1.13	1.17
– Perth	0.86	0.66	0.62	0.64	0.72	0.86	0.90	0.88	1.11	0.97	0.98	0.97
– Adelaide	0.98	0.95	0.95	0.93	0.93	0.98	0.94	1.14	1.13	1.30	1.50	1.76
– Hobart	1.01	1.09	1.06	1.08	1.02	1.21	1.14	1.11	1.27	1.27	1.31	1.46
Total listings, months of sales*												
Australia^	3.8	5.6	6.2	5.9	5.3	4.4	3.9	4.0	4.7	3.9	3.9	3.7
– Sydney	2.9	4.7	5.2	4.8	4.0	3.0	2.6	2.7	3.4	2.8	2.8	2.7
– Melbourne	3.4	4.6	5.6	5.4	4.6	3.7	3.2	3.5	4.8	4.2	4.3	3.8
– Brisbane	5.1	6.7	7.1	7.1	6.9	6.0	5.6	5.6	6.0	4.9	4.8	4.6
– Perth	6.3	9.5	10.3	10.2	9.4	7.8	7.1	7.5	6.7	5.4	5.5	5.5
– Adelaide	4.2	4.6	4.7	4.9	4.8	4.6	4.6	4.2	4.6	3.3	3.0	2.6
– Hobart	5.4	2.5	2.9	3.0	3.1	2.7	2.8	2.6	2.8	2.5	2.4	2.3

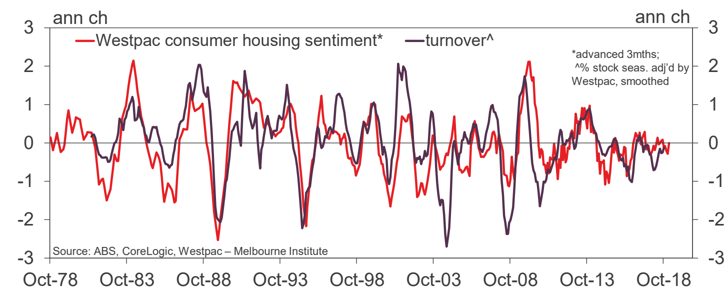
* figures show 3mth avg, readings for most recent months based on sales estimates modeled on preliminary data and latest weekly listings figures.
^ avg since 2007
Sources: CoreLogic, Westpac Economics

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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