

HOUSING PULSE FEBRUARY 2022.

WESTPAC INSTITUTIONAL BANK



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EXECUTIVE SUMMARY



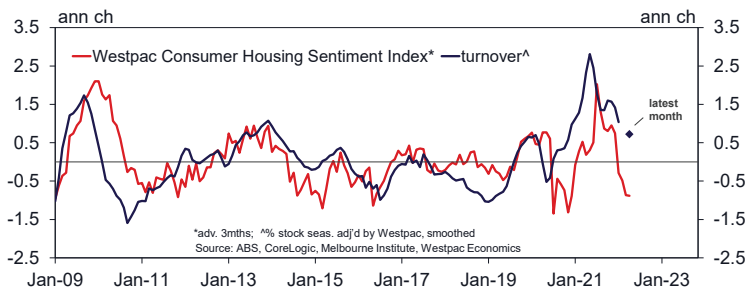
Australia's housing market boom is showing clearer signs of slowing with sentiment pointing to a decline in turnover through the first half of 2022. More importantly, the medium term outlook has shifted materially with an interest rate tightening cycle now expected to see a broad-based correction phase begin later this year, continuing throughout 2023 and into 2024. Our sentiment-based indicators are likely to capture this shift more fully in coming months.

Our February **Housing Pulse** provides more detail on the changed outlook, including the inflation and labour market challenges shaping the rate view and how this is in turn expected to flow through to property markets. The current picture on markets shows a gentle slowing with turnover still running at relatively high levels amid tight conditions in terms of both on-market supply and rental vacancies. Deteriorating affordability has continued to weigh on buyer sentiment but interest rate considerations have yet to really impact.

States trends are showing a further divergence that we expect to remain a feature throughout the coming slowdown and correction phases. Three distinct groups are forming, reflecting the extent of affordability pressures and susceptibility to higher rates. NSW and Vic sit firmly in the 'most sensitive' group and are already showing signs of price momentum stalling. WA and Tas look to be a little less sensitive, with a milder slowdown to date and other factors suggesting they will be less susceptible to weakness. Qld and SA already stand out as likely to be the least sensitive, with price momentum accelerating in recent months, tight markets and more headroom around affordability.

While performances will vary, the common shock of a sustained rise in rates will impact all markets over the next few years. Housing will in effect become hostage to outcomes across the wider economy with prospects resting heavily on how successfully policymakers, the RBA in particular, guide Australia through these looming challenges.

1. Australia: national housing conditions



“... clearer signs of slowing ... with an interest rate tightening cycle ... to see a broad-based correction phase begin later this year ...”

*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 38 for more details.

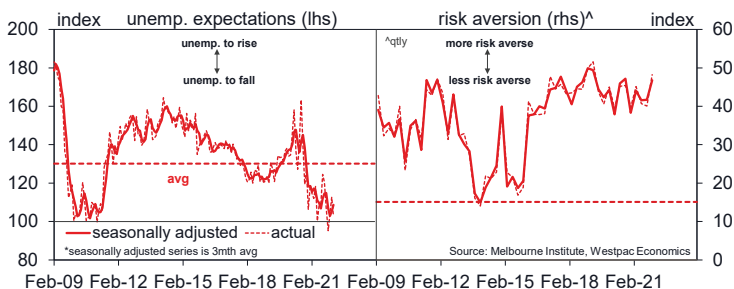
OVERVIEW: calm before the storm



2. Consumer sentiment: housing

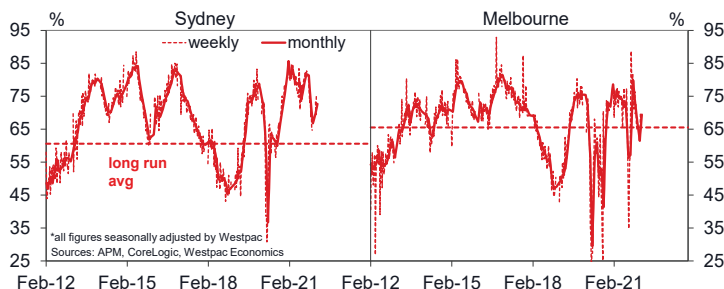


3. Consumer sentiment: jobs & risk

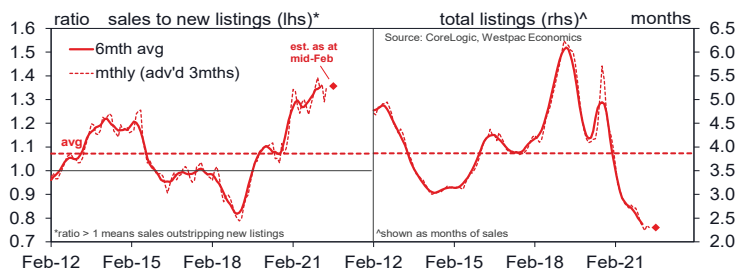


- The three months since our last report in Nov have been mixed for housing markets. Turnover showed a very strong resurgence coming out of 'delta' lockdowns but hit a mild set-back from the 'omicron' outbreak around the turn of the year. Price momentum has shown a further moderation, although it has lifted strongly in some capital city markets. With a range of virus disruptions in the mix and the added issue of reduced market information over the summer holiday hiatus, the extent of ongoing momentum at the start of 2022 is unclear but does look to have moderated a touch.
- Sentiment-wise, virus developments are again having only mild impacts, albeit with developments a little more unsettling for those in states that have yet to experience significant COVID outbreaks. Housing-related sentiment has been mostly unaffected except for a mild and brief loss of confidence around jobs that has largely reversed. Instead, the dominant themes continue to be around high and rising prices, stretched affordability weighing heavily on assessments of 'time to buy' but price expectations remaining bullish. Secondary considerations are mixed: job security in very good shape but risk aversion still elevated.
- Sales were very strong into year-end, a degree of 'catch-up' in previously locked down states contributing to a 16% surge in the Dec quarter. Jan looks to have been weak, with a decline over and above the usual steep drop-off over the holiday period suggesting omicron concerns had a significant dampening effect.
- Auction markets softened a touch into year end and look to have begun 2022 with a similar tone. That said, clearance rates in both Sydney and Melbourne are still comfortably above long run averages. New listings are lifting but still trailing the surge in sales, meaning the total stock on market remains at extremely low levels.

4. Auction clearances rates



5. Residential property listings

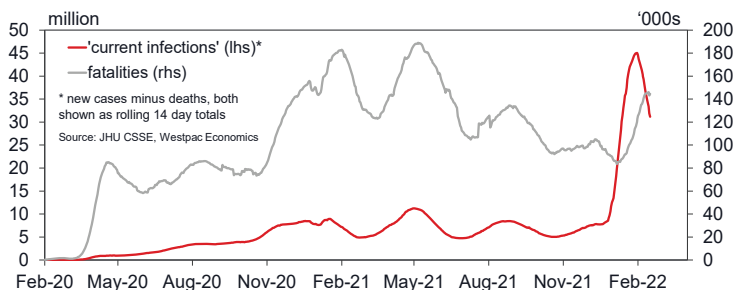


- Prices nationally have posted a 2.5% gain since Nov, a further step-down in the 3mth pace of gains which peaked at 7.1% peak in May last year. However, annual gains remain impressive at 21.1%yr.
- Nationally, the **Westpac Melbourne Institute 'time to buy a dwelling' index** has fallen a further 6.8% since Nov, remaining in deeply 'negative' territory. At 84.9, the Index is well below the 100 level, meaning the proportion of consumers saying its a bad time significantly outnumber those saying its a good time to buy. The long run avg is 120.
- In contrast, price expectations remain in strong positive territory. The **Westpac-MI Consumer House Price Expectations Index** lifted 2% over the 3mths to Feb. At 155.8, the Index is very bullish by historical standards, albeit off the 163.9 peak in Apr last year. The long run avg is 124.8.
- The **Westpac Melbourne Institute Unemployment Expectations Index** has again been buffeted by virus developments - workforce disruptions from the high incidence of COVID isolation requirements presenting an added uncertainty. The Index has risen 8% since Nov (recall that higher reads mean more consumers expect unemployment to rise in the year ahead). That said, the Nov read was an exceptionally confident one on jobs and the latest index reads are still considerably better than average - 102.8 vs a long run average of 130
- Risk aversion lifted again late last year. The **Westpac Consumer Risk Aversion Index** rose from 42.0 in Sep to 47.0 in Dec, well above the long run avg of 14.8. Notably, this lift large pre-dates the omicron surge and the shifting outlook for interest rates. Just 7% of consumers favoured 'real estate' as the 'wisest place for savings'.

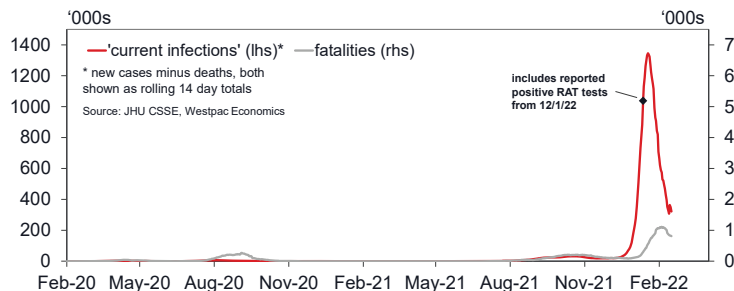
SPECIAL TOPIC: COVID-19, endemic phase begins



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

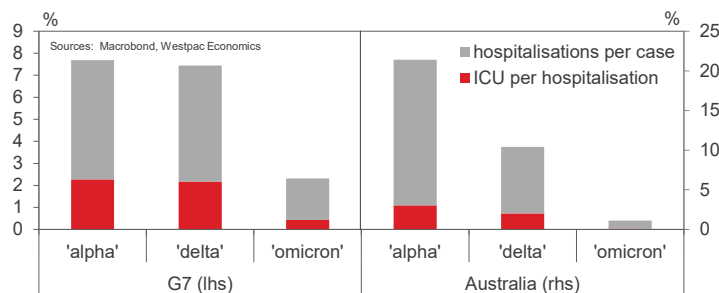


7. Australia: COVID-19 'current infections', fatalities

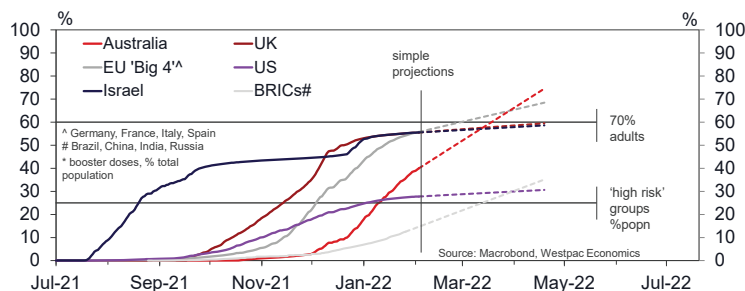


- While virus developments have continued to unfold quickly in the months since our last report, there are more signs that the disease has moved from a 'pandemic' to an 'endemic' phase – the key distinction being that the accumulated 'herd' immunity from infection and vaccination has significantly reduced the incidence of severe disease. This in turn has allowed policymakers to pursue a targeted rather than blanket approach to measures.
- At the time of our Nov report, NSW and Vic were moving into vaccine-led reopenings, having brought 'delta' outbreaks largely under control and achieved vaccination coverage high enough to allow for an easing in restrictions. Unfortunately, that reopening coincided with the emergence of a new, much more transmissible variant – omicron – which swept across the globe and Australia in a matter of weeks.
- The steep lift in cases dwarfs all previous outbreaks. However, the new variant has turned out to be significantly less life threatening. The flow-through from cases to hospitalisations and severe illness has been much lower than in previous waves – a by-product of both vaccination coverage and what looks to be an intrinsically milder form of the disease.
- The surge is now abating. Globally, current infections peaked in late Jan and have already fallen by just over 30%. Current infections have fallen even more dramatically in Australia to be down by over 75% from a peak in mid-Jan.
- Despite the turn, global cases remain much higher than pre-omicron levels. A clear by-product of the new variant is that the much larger pool of infections – at least four times larger – means new mutations are likely to emerge more frequently. Evolution will continue to select for strains that are better at replicating – more transmissible and less affected by vaccines, but not necessarily more severe.

8. COVID-19: incidence of severe illness by wave



9. Vaccinations: booster coverage



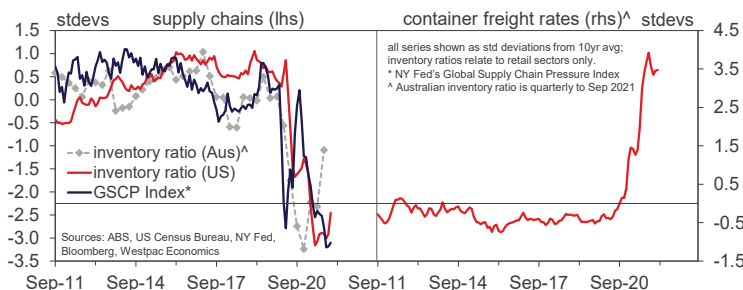
- Against this, 'herd' immunity across the global population is also much higher due to vaccinations and post-infection immunity which together now cover upwards of 5bn people globally. This is a definitive feature of a virus that has moved into its 'endemic' phase - compared to a 'novel' coronavirus spreading amongst a completely unprotected population, new versions spreading amongst a partially inoculated population pose a greatly reduced threat.

- There are two notable 'wrinkles' to the omicron phase of the virus. Firstly, hospital admissions remain a vital measure of health system loading and the potential need for other policy responses to limit the spread of infection. However, this metric has become more complicated under omicron. Chart 8 shows that amongst COVID hospitalisations, the share requiring ICU treatment has declined materially. This provides some comfort that the most critical care is not being overwhelmed as quickly.

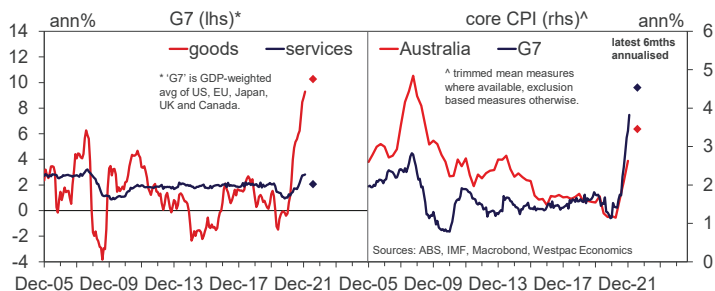
- Secondly, vaccines are less effective with a third booster required for protection to be comparable to two doses vs other strains. Chart 9 shows vaccine booster rates vary widely across countries - relatively high in Israel, the UK and Europe but much lower in the US and Australia. This looks to have contributed to differences in omicron's impact. Notably, coverage is rising rapidly in Australia, tracking towards what should be relatively high levels by late March.

- For the economy, the key takeout is that despite challenges we have not seen a return to the hard lockdowns that featured in 2020-21. Demand effects are being shaped by voluntary restraint rather than blanket bans, and are milder as a result. A more deadly 'son of omicron' variant still poses a clear threat but virus risks in general can be tentatively downgraded now that COVID has entered its 'endemic' phase.

10. Global supply chain disruptions

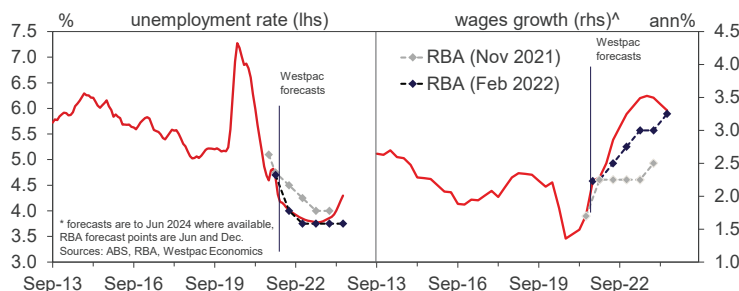


11. CPI inflation: G7 vs Australia



- We have again amended our forecasts to allow for recent omicron-related disruptions locally. However, the much bigger shift has been around prospects for inflation and labour markets, which now point to an earlier take-off for the RBA interest rate tightening cycle. That in turn has material implications for the outlook for housing markets and for prices in particular. For more details on latest changes to our economic and interest rate forecasts, see [here](#). For more details on our revised forecasts for house prices see [here](#).
- On inflation, Australia is now clearly facing into a more meaningful lift near term. Global price pressures have surged as resurgent demand, skewed heavily towards goods due to virus effects, has collided with virus-related supply chain disruptions and a big rise in oil prices. Container freight rates have soared and retail inventories have dropped to extreme lows. Notably, inventories in Australia were also tracking these developments up until around mid-2021 with the 'delta' lockdown shock to demand providing what looks to have been a temporary reprieve in the second half.
- Goods price inflation has risen sharply, pushing above 9%yr across the G7. The broad-based nature of the cost rise is also seeing underlying inflation measures lift, both abroad and in Australia. Westpac now expects core inflation to lift to 3.5%yr by mid-2022, holding above the RBA's 2-3% target band through to early 2023.
- Meanwhile, a faster than expected tightening in Australia's labour markets suggests a lift in wages growth will see more wages-driven 'follow through' on this near term inflation lift. Despite another round of virus-related disruptions, Australia's unemployment rate held at 4.2% in Jan, and is expected to push below 4% in the second half of 2022. Importantly, this is a view shared by the RBA, the main debate now being how and when this drives a lift in wages growth.

12. Australia: labour markets



13. Dwelling price forecasts

| | avg* | 2020 | 2021 | 2022 | 2023 | 2024 | comments |
|-----------|------|------|------|------|------|------|--|
| Sydney | 7.8 | 2.7 | 25 | 0 | -9 | -5 | Slowing rapidly, stretched affordability means more sensitive to rate hikes. |
| Melbourne | 5.8 | -1.3 | 15 | 0 | -9 | -6 | Still battling rental overhang, affordability also means more sensitive to rate hikes. |
| Brisbane | 5 | 3.6 | 27 | 8 | -4 | -1 | Strong fundamentals, very tight market, should be more resilient than others. |
| Perth | 1.3 | 7.3 | 13 | 2 | -6 | -1 | Looking a bit out of sorts and looks rate exposed despite reasonable affordability. |
| Adelaide | 4.6 | 5.9 | 23 | 8 | -4 | -1 | Largely unaffected by COVID and seeing strong lift but rate moves will take gloss off. |
| Hobart | 7.2 | 6.1 | 28 | 0 | -6 | -2 | Extremely tight but extremely unaffordable. Latter should dominate as rates rise. |
| Australia | 5.9 | 1.8 | 21 | 2 | -7 | -5 | Boom in 2021 losing momentum quickly with rate-driven correction phase looming. |

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

Source: CoreLogic, Westpac Economics

- In light of the shifting inflation and labour market outlook, we amended our forecasts for official rates in Jan with the expected start of the RBA tightening cycle brought forward from Feb 2023 to Aug 2022 and the projected 'terminal' cash rate peak in lifted to 1.75% in the first half of 2024.
- This earlier and slightly more aggressive tightening cycle has clear implications for the residential property. Housing will be 'collateral' damage in the RBA's efforts to keep inflation on target over the medium term. The sector is highly sensitive to interest rate changes. With affordability already stretched in many markets, rate rises will have a direct impact on the borrowing capacity of buyers and their ability and willingness to sustain high prices. The extraordinary surge in prices over the last year has seen affordability deteriorate to be near previous lows in 2010 and 2007 – both of these earlier benchmarks were at times when the average discounted variable mortgage rate was materially higher than it is now (around 7% and 9% respectively versus nearer to 3% today).
- Under our previous interest rate scenario, we had expected macro-prudential tightening and rate increases to drive a gradual move into a correction phase for Australia's housing market. Prices were forecast to lift by 8% in the first half of 2022, before flattening out in the second half prior to falls of 5% in both 2023 and 2024.
- We now anticipate an earlier fade in momentum, prices expected to flatten by May this year, ahead of a move into outright correction in the December quarter. Overall, that would see a net gain of just 2% over 2022. Prices are then forecast to fall 7% in 2023 and by a further 5% in 2024, stabilising towards the end of that year. Nationally, the peak to trough fall of 14% is around the average of corrections seen historically.

SPECIAL TOPIC: prudential policy update

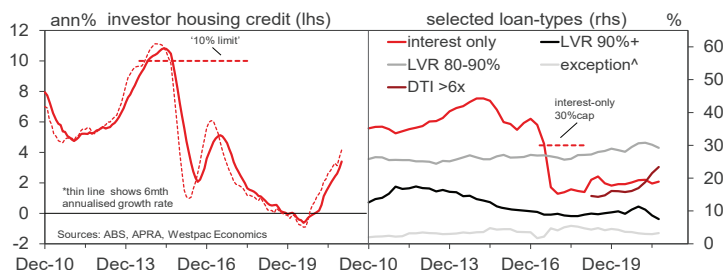


18. Summary of prudential policy measures

| | 'Macro' prudential | 'Micro' prudential |
|---|------------------------------------|---|
| 2015 | 10% limit on investor loan growth | Tightened serviceability guidelines and improved consistency lenders |
| 2016 | – | Tightened serviceability guidelines incl. scaling of minimum expenses. |
| 2017 | 30% limit on 'interest only' loans | Restrictions on high LVR interest only and investor loans. |
| 2018 | Investor loan growth limit removed | Improved collection and verification of expenses, income & existing debt. |
| 2019 | 'Interest only' limit removed | Removal of 7% minimum 'floor rate' on serviceability assessments. |
| 2020 | Capital buffers available to draw | COVID repayment holidays; arrears exempted from capital treatment. |
| 2021 | – | COVID measures ended. Serviceability buffer increased from 2.5 to 3% |
| Possible measures now likely shelved | | |
| 2022 | Caps on high LVR and DTI loans | Further increase in interest serviceability buffer used in assessments. |

Source: APRA, RBA, Westpac Economics

19. New home lending: selected aspects



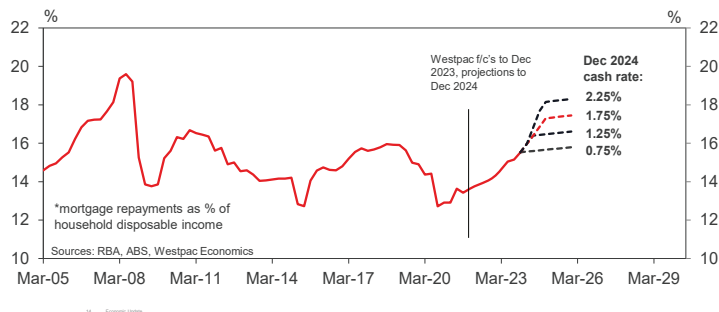
– The shifting policy view on interest rates effectively sidelines the use of more housing-targeted macro-prudential policy measures.

– Prior to recent inflation and labour market developments, this policy space looked to be very much 'live' in 2022 with APRA making a tweak to loan serviceability assessments guidelines in Oct and indications from the RBA Governor that 'more may need to be done'. Despite this, the Council of Financial Regulators (CFR) – the coordinating body for Australia's regulators – sounded unhurried in the [official statement](#) following its quarterly meeting on Dec 13, opting to stay in 'watch and wait' mode. As we noted in our Nov report, there appears to be a slow tempo to prudential policy changes with moves followed by a 'wait and assess' period and the rhythm dictated by the quarterly timing of both CFR meetings and updates on the detailed lending data.

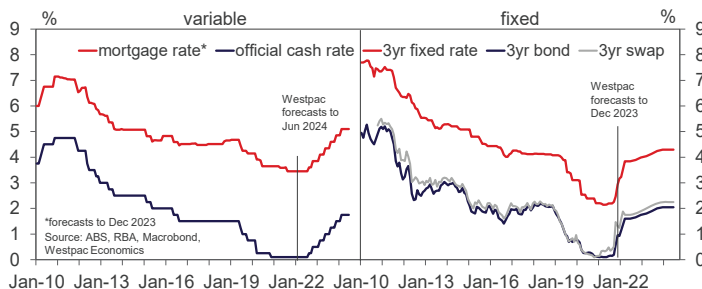
– Previously, we had expected the regulator to follow up with additional measures in the first half of 2022. Rate hikes clearly preclude the need for this more focussed style of policy intervention.

– A key role of prudential policy is to ensure the financial system remains resilient in the face of more difficult circumstances. Macro and micro prudential measures around borrowing and lending have a dampening effect near term but should mean borrowers and lenders are in a better position when challenges emerge. An interest rate tightening cycle and a housing market correction phase is exactly the sort of challenge past policy measures have been seeking to manage risks around. The 2022-24 period may be one of hibernation for prudential policy but it shapes as a critical test of past performance.

20. Household debt servicing ratio



21. Interest rates forecasts: floating vs fixed

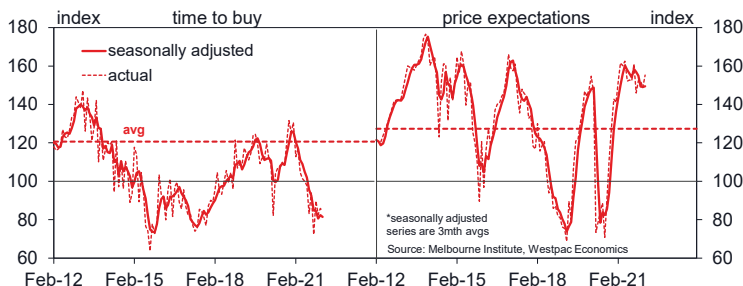


- Heading into this challenge, where are the strengths, weaknesses and key areas of uncertainty?
- On the plus side, the latest lending figures continue to show no obvious areas of concern. Investor credit growth has lifted but remains subdued, running at less than half the 10%+ annual pace that prompted the prudential tightening in 2015. Likewise, the share of 'interest only' loans has been steady, well below the 30% cap that was briefly introduced in 2017-18. The share of high loan-to-value (LVR) loans has been creeping higher but mainly driven by loans in the 80-90% LVR range, with the share of 90%+ LVR declining. About the only area showing a notable rise is the share of high debt-to-income (DTI) with those at six times income rising from 15% to 23%.
- Also on the plus side, households have accumulated large financial buffers during the pandemic, the 'forced saving' leading to an estimated \$250bn in additional reserves being set aside over the last two years, some \$98bn of which is sitting in mortgage offset accounts. If drawn, these funds could absorb much of the cash flow impost of forecast rate hikes in 2022 and 2023. If and how mortgage borrowers choose to deploy these funds is a key area of uncertainty.
- On the negative side, consumers have not experienced a sustained tightening cycle for over a decade. Our forecast cash rate peak of 1.75% is conditioned on an estimated debt repayment burden that is well above recent peaks, albeit short of the highs in 2007-08 (Chart 20). Most consumers expect rates to rise but few appear ready for this scale of increase.
- Finally, there is a more specific issue around the surge in fixed rate loans in 2021. Many of these were on extremely low rates that will see a significant step up when the fixed period rolls off, some potentially facing a 'rate reset shock' in the order of 1-2ppts. See [here](#) for more.

NEW SOUTH WALES: cooling quickly



22. NSW consumer: housing-related sentiment

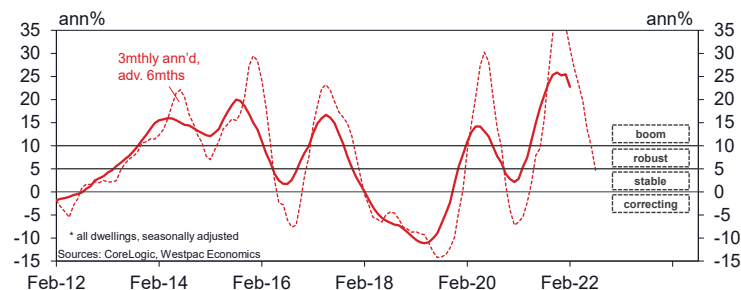


23. NSW housing composite vs turnover



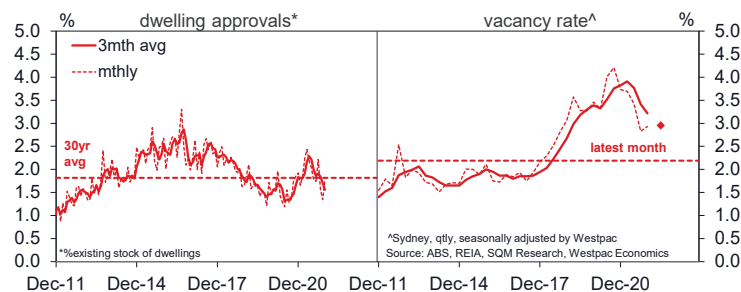
- Housing markets look to be cooling rapidly in NSW with buyer sentiment discouraged, price momentum stalling and notable weakness in turnover at the start of the year. While the latter may prove to be an omicron 'air pocket', our sentiment-based indicators continue to point to a material pull back in turnover through the first half of 2022.
- Market turnover showed strong gains coming out of the delta lockdown, surging 18% in Q4 to historic highs. Jan was a different story with very little transacting – the lowest month for turnover since 1988, omicron concerns clearly a factor. Auction activity for the first few weeks of Feb look a lot better with volumes tracking ahead of last year and clearance rates above average.
- While the picture on turnover is uncertain, the latest price data is tracking a clear slowdown. Monthly gains moderated throughout 2021, prices nearly stalling flat in Jan-Feb. This likely has little to do with virus disruptions as previous hard lockdowns had little or no effect on prices.
- The more granular price detail shows a broad-based slowing in Sydney, more abrupt for previously red hot segments at the upper end albeit with these segments still showing slightly better gains overall. Houses continue to outperform units, although the margin has closed right up. Regions have seen a milder slowing but again with previously very strong markets such as Byron Bay seeing a more substantive cooling. Demand continues to outstrip on-market supply, with total listings still at extreme lows despite weak sales in Jan.
- The **NSW Consumer Housing Sentiment index** points to a decline in turnover, suggesting some of Jan's weakness was more than just virus effects (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).

24. Sydney dwelling prices



Population: 8.2mn
Net migration: -22k pa
GSP: \$634bn (32% Aus)
Dwellings: 3.3mn, \$3.7trn
Capital: Sydney

25. NSW: dwelling approvals, vacancy rate



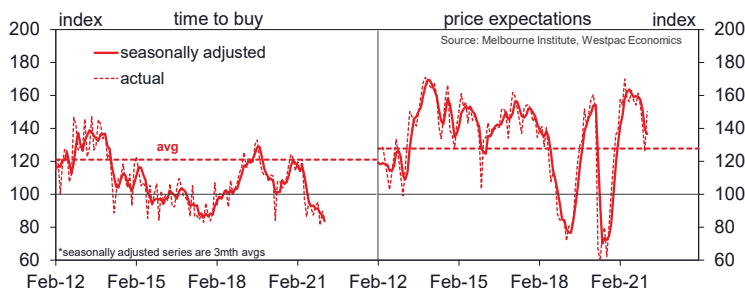
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|-------|------|------|--------|
| GSP, ann% | 2.3 | 2.5 | -0.6 | 1.4 | n.a. |
| State final demand, ann% | 2.9 | 2.0 | -1.9 | 2.9 | 2.9 |
| Employment, ann% | 1.6 | 3.3 | -5.6 | 6.3 | 1.5 |
| Unemployment rate, % | 5.9 | 4.6 | 6.5 | 5.2 | 4.2 |
| Population, ann% | 1.1 | 1.3 | 1.0 | 0.3 | n.a. |
| Dwelling prices, ann% | 6.6 | -10.1 | 13.1 | 14.9 | 25.5 |
| Rental yield, % | 4.6 | 4.0 | 3.5 | 3.1 | 3.3 |
| Sales/new listings, ratio | 1.26 | 1.27 | 1.18 | 1.33 | 1.20 |
| Total listings, mths sales | 2.8 | 4.1 | 4.0 | 2.1 | 2.4 |

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

VICTORIA: price growth stalls flat



26. Vic consumer: housing-related sentiment

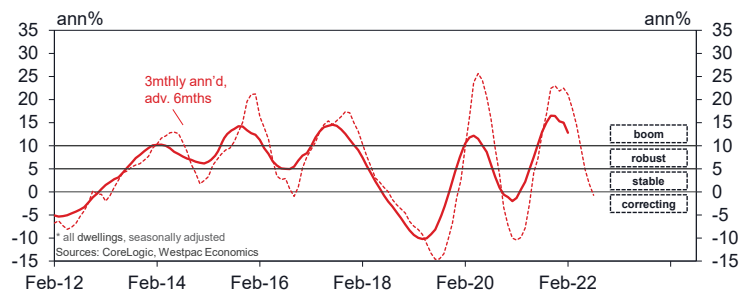


27. Vic housing composite vs turnover



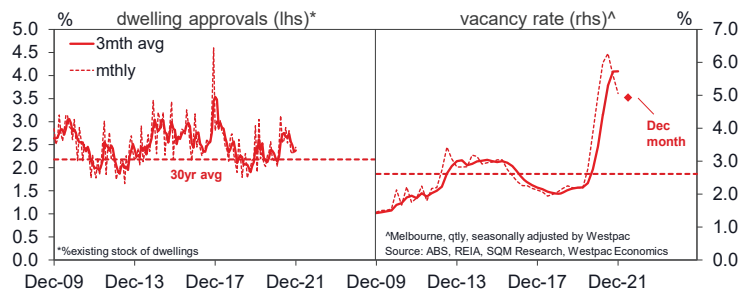
- Vic has also had a shaky start to 2022. As with NSW, turnover stopped abruptly in Jan after a big post-delta resurgence in Q4, and price momentum has stalled flat. While 'omicron' effects are in the mix, there looks to be a clear underlying slowdown coming through. Notably, the supply-demand balance looks less supportive in Melbourne with rental vacancy rates still elevated and much hanging on an eventual return of foreign student and other migrant inflows.
- The state had a torrid 2021, housing activity hit harder by intermittent restrictions and a somewhat heavier 'delta' lockdown. Turnover made up for time later in the year, posting a 50% gain in Q4 to be up over 41%yr. Jan sales were abruptly weaker – omicron concerns likely factoring as they appeared to in NSW.
- Prices have seen a more clear-cut moderation, Melbourne prices stalling dead flat over the three months to Jan, having lagged the rest of Aus throughout the upswing phase. The more granular detail shows the flattening is across all tiers but a little more pronounced for the top end which had outperformed slightly in the first half of the year. Melbourne's Inner East has seen a particularly rapid cooling. Regional Vic has held up better but is also seeing a broad-based slowing.
- The stock situation remains very uneven – on-market supply well short of demand for houses but units still carrying a significant overhang of supply. Melbourne's rental vacancy rate remains elevated despite a decent tick down. Migration flows will likely be key to absorbing spare capacity.
- The **Vic Consumer Housing Sentiment index** suggests turnover will decline materially in the first half, over and above virus disruptions.

28. Melbourne dwelling prices



Population: 6.6mn
Net migration: -74k pa
GSP: \$468bn (23% Aus)
Dwellings: 2.8mn, \$2.6trn
Capital: Melbourne

29. Vic: dwelling approvals, vacancy rate



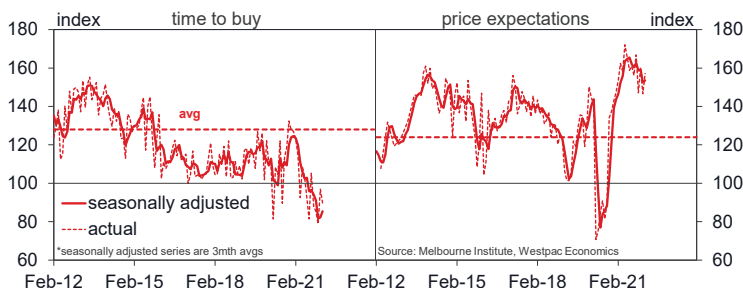
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 2.9 | 3.1 | 0.1 | -0.4 | n.a. |
| State final demand, ann% | 3.5 | 3.5 | -1.3 | -0.8 | -0.8 |
| Employment, ann% | 2.0 | 3.7 | -3.2 | 4.9 | 2.8 |
| Unemployment rate, % | 6.3 | 4.7 | 6.7 | 4.9 | 4.3 |
| Population, ann% | 1.5 | 2.1 | 1.5 | -0.7 | n.a. |
| Dwelling prices, ann% | 7.1 | -9.2 | 10.1 | 7.6 | 15.0 |
| Rental yield, % | 4.7 | 4.0 | 3.8 | 3.1 | 3.2 |
| Sales/new listings, ratio | 1.07 | 0.99 | 0.89 | 1.07 | 1.06 |
| Total listings, mths sales | 3.5 | 4.7 | 5.6 | 3.1 | 2.9 |

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

QUEENSLAND: bucking the trend



30. Qld consumers: housing-related sentiment

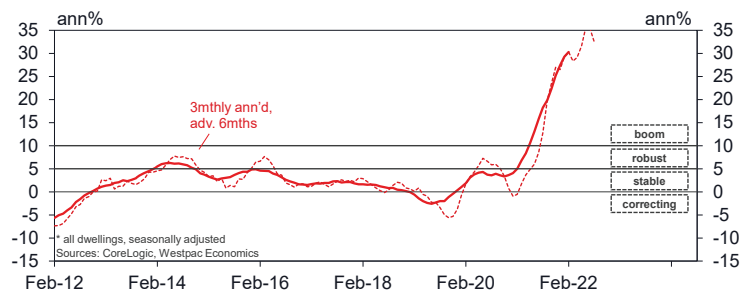


31. Qld housing composite vs turnover



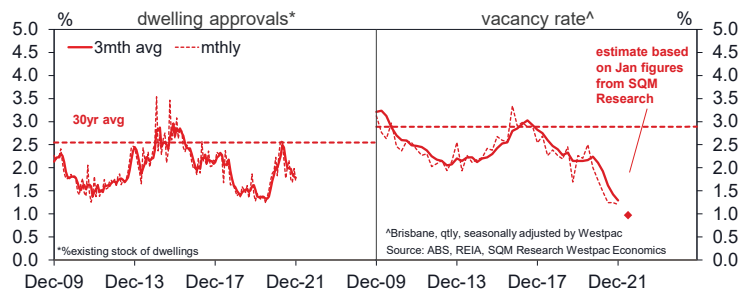
- The Qld housing market has posted an impressive pick-up despite the wider housing slowdown nationally and despite a clear weakening in buyer sentiment. The state remains the clear frontrunner across the major states. A super tight supply-demand balance and less constrained affordability have been big positives behind its recent performance.
- Turnover had been showing signs of flattening out at a very high level in mid-2021. Instead it kicked higher still, finishing the year with an extraordinary 10% of the dwelling stock changing hands in Q4, an 18yr high and all the more remarkable given that the state was not catching up for virus disruptions earlier in the year (Qld was relatively unscathed by COVID until the omicron outbreak). Note that Qld does tend to see higher turnover than other states due to stronger net migration inflows and lower stamp duties on transactions.
- Price momentum also bucked the wider slowing trend seen nationally, with a rollicking 8.5% gain in Q4 that looks to have carried into early 2022 (prices posting 2%+ gains in 9 of the last 12 months). Remarkably, annual price growth in Brisbane is now just under 30%yr. The detail shows particularly strong gains for houses and 'top tier' properties. Brisbane's West led initial gains but outer suburbs such as Ipswich are now driving gains. Regional performances vary widely, the Gold and Sunshine Coasts showing comparable gains to Brisbane but international tourism-dependent Cairns barely eking out double digit growth.
- The supply-demand balance has become excruciatingly tight with listings covering less than two months of sales and rental vacancy rates pushing below 1%.
- The **Qld Consumer Housing Sentiment index** has weakened sharply since Sep but this may do little to cool a red-hot market even with prospective rate hikes coming into view.

32. Brisbane dwelling prices



Population: 5.2mn
Net migration: 17k pa
GSP: \$369bn (18% Aus)
Dwellings: 2.1mn, \$1.5trn
Capital: Brisbane

33. Qld: dwelling approvals, vacancy rate



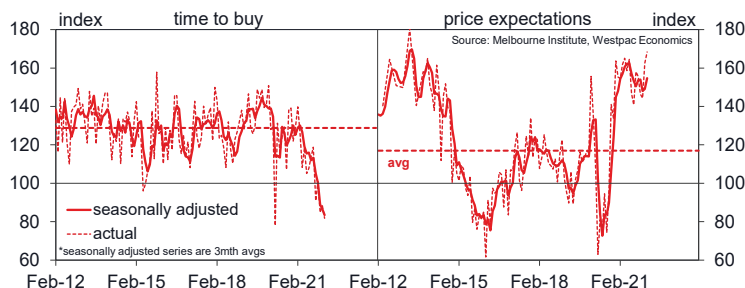
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 3.6 | 0.9 | -0.6 | 2.0 | n.a. |
| State final demand, ann% | 3.7 | 0.9 | -0.2 | 4.1 | 4.1 |
| Employment, ann% | 2.3 | 1.7 | -4.5 | 9.9 | 4.0 |
| Unemployment rate, % | 6.6 | 6.3 | 7.6 | 5.6 | 4.6 |
| Population, ann% | 1.8 | 1.7 | 1.6 | 0.9 | n.a. |
| Dwelling prices, ann% | 5.7 | -2.6 | 4.3 | 13.1 | 29.2 |
| Rental yield, % | 4.9 | 5.0 | 5.4 | 5.1 | 4.9 |
| Sales/new listings, ratio | 0.95 | 0.85 | 1.06 | 1.33 | 1.68 |
| Total listings, mths sales | 5.1 | 7.0 | 6.9 | 2.9 | 1.7 |

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

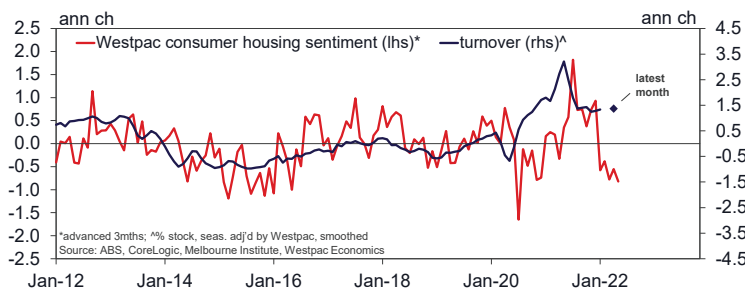
WESTERN AUSTRALIA: lacking direction



34. WA consumers: housing related sentiment

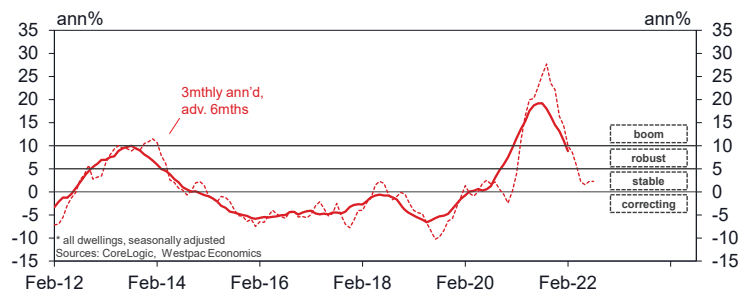


35. WA housing composite vs turnover



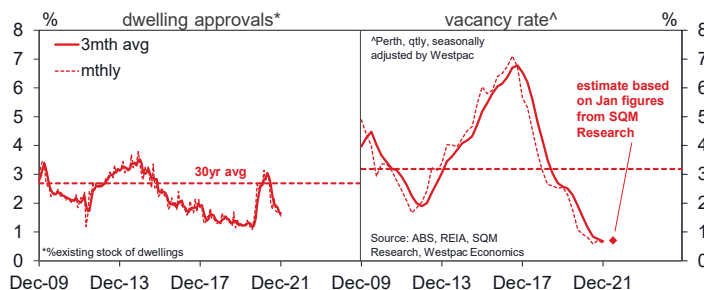
- The WA market continues to look a little listless despite some broad positives.
- Turnover posted a strong finish to 2021, having been relatively unperturbed by virus disruptions through the pandemic to date. An omicron outbreak in early 2022 now looks to be changing that, although disruptions early in the year also look to be minor.
- The main underperformance continues to be around prices which have seen a significant loss of momentum since mid-2021. This is despite the otherwise positive picture on the virus impact, turnover and other supply-demand and affordability fundamentals.
- As noted previously, the exact cause of the price slowdown is unclear but the timing coincides with the end of the Federal government's HomeBuilder support scheme which had a particularly large impact in WA, partly due to similar additional measures from the WA state government.
- The price detail shows the slowdown has been very uniform with little separating houses and units, different price tiers and different suburbs of Perth, albeit with a slightly more pronounced slowdown in the city's north. WA's regions have also seen price growth stall although Bunbury and the 'wheat belt' have outperformed Mandurah.
- Supply does not look to be part of the story with listings tight and rental vacancy rates below 1%. HomeBuilder-related supply looks largely to be drawing first home buyers out of family homes rather than siphoning demand away from rental markets. Its also likely to be a very brief impact.
- The **WA Consumer Housing Sentiment index** suggests sales will roll over in early 2022. With prices seemingly adrift, sentiment effects look likely to hold sway.

36. Perth dwelling prices



Population: 2.7mn
Net migration: -1k pa
GSP: \$321bn (16% Aus)
Dwellings: 1.1mn, \$0.7trn
Capital: Perth

37. WA: dwelling approvals, vacancy rate



| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 4.0 | 1.6 | 1.0 | 2.6 | n.a. |
| State final demand, ann% | 3.5 | -1.4 | 0.8 | 4.3 | 4.3 |
| Employment, ann% | 2.1 | 1.0 | -4.1 | 7.5 | 5.3 |
| Unemployment rate, % | 5.6 | 5.9 | 7.5 | 4.9 | 3.6 |
| Population, ann% | 1.7 | 1.1 | 1.6 | 0.7 | n.a. |
| Dwelling prices, ann%# | 4.7 | -6.2 | 0.3 | 18.7 | 11.2 |
| Rental yield, % | 4.7 | 4.3 | 5.1 | 5.0 | 5.4 |
| Sales/new listings, ratio | 0.88 | 0.79 | 1.03 | 1.03 | 1.15 |
| Total listings, mths sales | 6.1 | 9.0 | 7.7 | 3.9 | 3.2 |

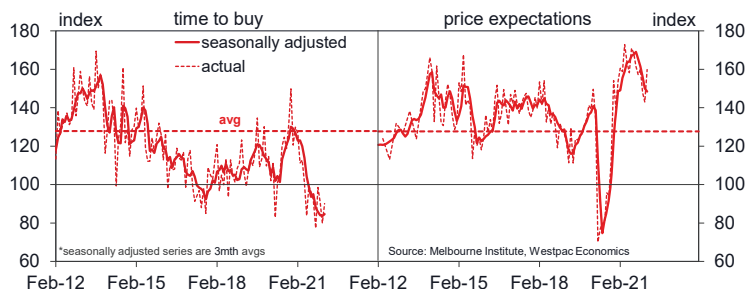
* avg last 25yrs; # June qtr readings

Note that WA price data has been suspended due to technical issues and is under review.
 Sources: ABS, CoreLogic, REIA, Westpac Economics

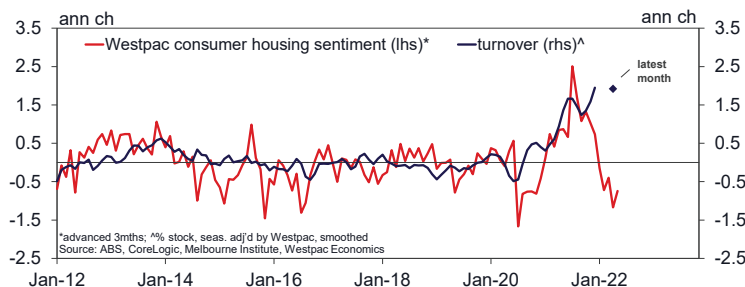
SOUTH AUSTRALIA: unusual boom rolls on



38. SA consumers: housing-related sentiment

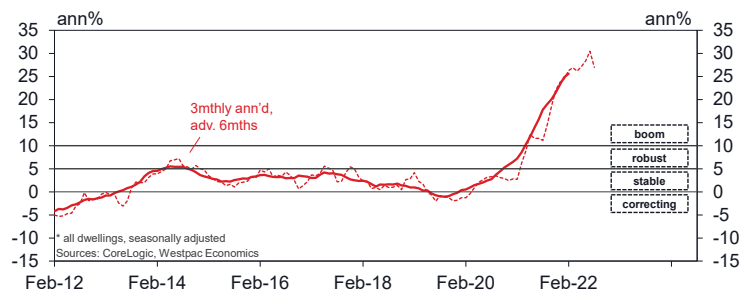


39. SA housing composite vs turnover



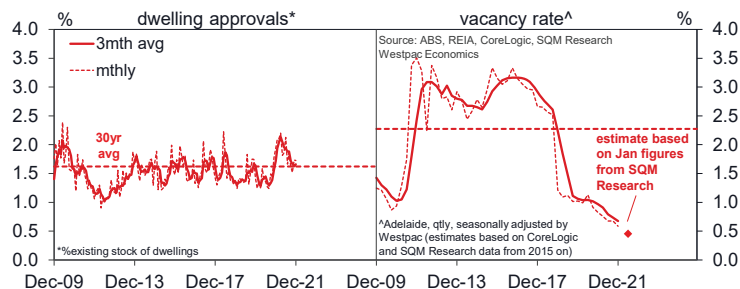
- The big surge in activity and prices in 2021 – out of character for SA's usually more sedate housing market – has carried into early 2022 despite signs that strained affordability is starting to weight on buyer sentiment. The state's current performance puts on a par with Qld with turnover and prices accelerating rather than slowing and supply-demand fundamentals exceedingly tight.
- Turnover posted a very strong finish to 2021, surging 17% in Q4, the share of SA homes transacting hitting a 20yr high.
- Price gains have also been impressive, Adelaide posting a string of 2%+ monthly gains between Oct and Jan, moderating just a touch in Feb. Annual price growth is set to push above 25%yr in Feb, a record on the CoreLogic measure, which goes back to 1993. The detail shows houses outstripping units by a wide margin, the latter making up a very small portion of the Adelaide markets. Top tier markets are starting to outstrip others but most parts of Adelaide are seeing similar gains. Regional SA has been mixed with Barossa shadowing the lift in Adelaide but other regions subdued.
- The supply side shows listings have fallen to barely 1½ months of sales while rental vacancy rates are pushing below 0.5% – essentially below the 'frictional' vacancy rates seen through regular market churn.
- The **SA Consumer Housing Sentiment index** has moved sharply lower as deteriorating affordability has weighed on assessments of 'time to buy' and price expectations have pulled back from extreme highs. That points to turnover rolling over in coming months although the extent of momentum and tightness of supply suggests the market will continue to see decent gains near term. A return to interstate migration outflows may see some pressures ease.

40. Adelaide dwelling prices



Population: 1.8mn
Net migration: -3k pa
GSP: \$115bn (6% Aus)
Dwellings: 0.8mn, \$0.5trn
Capital: Adelaide

41. SA: dwelling approvals, vacancy rate



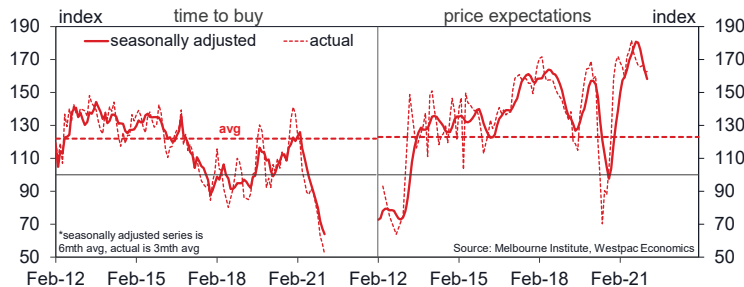
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 2.3 | 1.2 | -1.0 | 3.9 | n.a. |
| State final demand, ann% | 2.9 | 1.5 | -2.1 | 3.9 | 3.9 |
| Employment, ann% | 1.2 | 1.7 | -4.7 | 6.0 | 3.6 |
| Unemployment rate, % | 6.9 | 6.0 | 7.9 | 5.6 | 4.4 |
| Population, ann% | 0.8 | 0.9 | 1.0 | 0.2 | n.a. |
| Dwelling prices, ann% | 5.9 | -0.4 | 2.0 | 13.8 | 24.8 |
| Rental yield, % | 5.2 | 5.3 | 5.2 | 5.6 | 5.6 |
| Sales/new listings, ratio | 1.01 | 1.11 | 1.34 | 1.33 | 1.73 |
| Total listings, mths sales | 4.2 | 4.3 | 4.4 | 2.4 | 1.5 |

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

TASMANIA: cracks appear



42. Tas consumers: housing-related sentiment

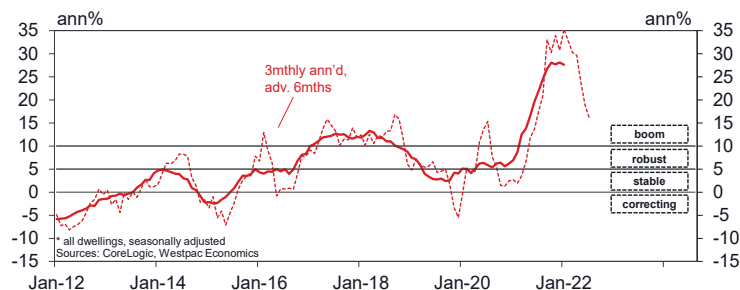


43. Tas housing composite vs turnover



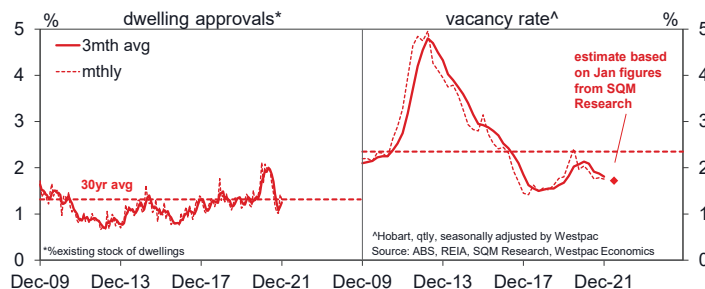
- The Tas housing market continues to be torn between extremely stretched affordability and an exceedingly tight supply-demand balance – a situation that has been a recurring problem through most of the last 8yrs. The last few months suggest affordability issues have the upper hand again with a collapse in buyer sentiment over 2021 to deeply pessimistic levels consistent with widespread buyer 'despair'. The shift now looks to be feeding into slowdowns in turnover and price growth as well.
- Tas came into the pandemic period with a housing market that had already seen several strong years and was facing very tight supply. With only minor COVID disruptions and no 'delta' problems to speak of, the market saw another sharp ramp higher in 2021, Hobart dwelling prices climbing 28%yr to be up 87% since late 2015. To put this into perspective, the median property value in Hobart has risen to \$707k, putting it on a par with Brisbane. In 2015, Hobart's median was \$330k and Brisbane's was \$470k.
- Turnover is again showing signs of strains, a 4.6% gain in Q4 lagging the rest of Aus by a long way and the share of the dwelling stock transacting also below long run averages. As noted previously, 'thin trading' may be a sign that affordability pressures are starting to bite.
- The price detail also points to affordability issues with an 'inverted' performance across price strata – lower priced tiers seeing stronger gains. Hobart's price growth has slowed noticeably since mid-2021, regional Tas holding up better.
- The supply situation remains extremely tight, total listings at just over two months of sales and rental vacancy rates stuck below 2%. However, current conditions suggest the sharp fall in the **Tas Consumer Housing Sentiment index** will dominate, with a further slowdown in the offing near term.

44. Hobart dwelling prices



Population: 0.5mn
Net migration: 0k pa
GSP: \$34bn (2% Aus)
Dwellings: 0.3mn, \$155bn
Capital: Hobart

45. Tas: dwelling approvals, vacancy



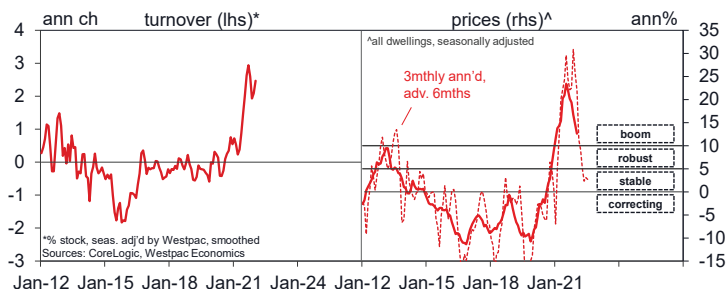
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 2.3 | 3.5 | 0.6 | 3.8 | n.a. |
| State final demand, ann% | 2.6 | 4.4 | -0.2 | 3.4 | 3.4 |
| Employment, ann% | 1.0 | -0.4 | -1.1 | 5.6 | 2.3 |
| Unemployment rate, % | 7.5 | 6.6 | 6.4 | 5.5 | 4.3 |
| Population, ann% | 0.5 | 1.2 | 1.1 | 0.2 | n.a. |
| Dwelling prices, ann% | 6.2 | 2.9 | 6.3 | 19.6 | 28.1 |
| Rental yield, % | 5.8 | 4.9 | 5.1 | 4.2 | 3.9 |
| Sales/new listings, ratio | 1.01 | 1.09 | 1.11 | 1.22 | 1.15 |
| Total listings, mths sales | 5.5 | 3.0 | 3.6 | 2.1 | 2.1 |

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

TERRITORIES: NT skittish; ACT boom 'checked'

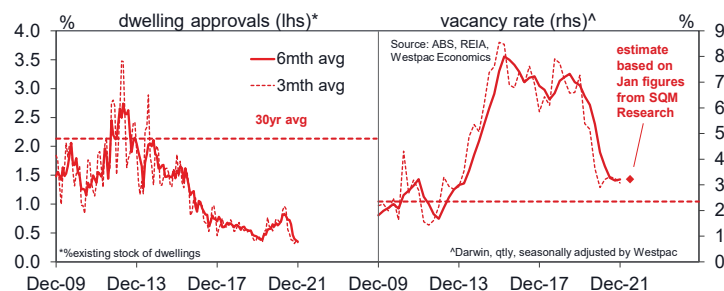


46. NT: turnover, Darwin dwelling prices



Population: 0.2mn
Net migration: -3k pa
GSP: \$26bn (1% Aus)
Dwellings: 0.1mn, \$41bn
Capital: Darwin

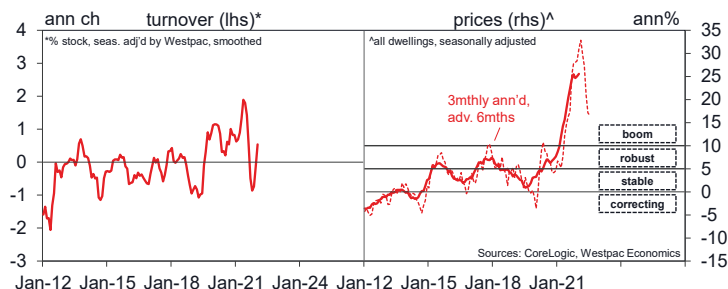
47. NT: dwelling approvals, vacancy rate



| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|-------|------|------|--------|
| GSP, ann% | 3.6 | -1.1 | 6.0 | -0.6 | n.a. |
| State final demand, ann% | 3.0 | -17.2 | -4.7 | 6.2 | 6.2 |
| Employment, ann% | 1.1 | -1.9 | -1.1 | 3.9 | 0.9 |
| Unemployment rate, % | 7.6 | 6.6 | 6.3 | 5.9 | 4.5 |
| Population, ann% | 1.2 | -0.4 | 0.0 | 0.0 | n.a. |
| Dwelling prices, ann% | 3.8 | -9.4 | -1.6 | 20.9 | 12.3 |
| Sales/new listings, ratio | 1.11 | 0.99 | 1.41 | 0.93 | 1.66 |
| Total listings, mths sales | 6.0 | 8.5 | 8.6 | 4.4 | 2.8 |

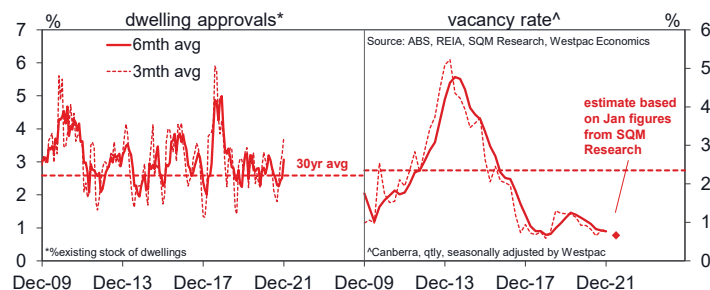
* avg last 25yrs (last 10yrs for listings); # June qtr readings
 Sources: ABS, CoreLogic, Westpac Economics

48. ACT: turnover, Canberra dwelling prices



Population: 0.4mn
Net migration: -2k pa
GSP: \$43bn (2% Aus)
Dwellings: 0.2mn, \$175bn
Capital: Canberra

49. ACT: dwelling approvals, vacancy rate



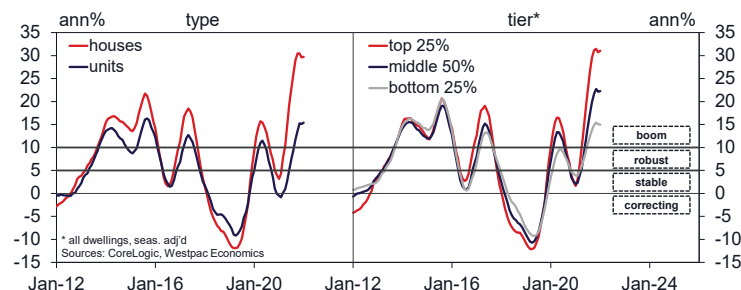
| June years | avg* | 2019 | 2020 | 2021 | latest |
|----------------------------|------|------|------|------|--------|
| GSP, ann% | 3.7 | 4.0 | 3.7 | 2.8 | n.a. |
| State final demand, ann% | 4.0 | 4.2 | 3.3 | 3.8 | 3.8 |
| Employment, ann% | 1.2 | 0.5 | -1.1 | 3.5 | -3.8 |
| Unemployment rate, % | 7.6 | 6.6 | 6.3 | 5.9 | 4.5 |
| Population, ann% | 1.3 | 1.4 | 1.2 | 0.2 | n.a. |
| Dwelling prices, ann% | 6.7 | 1.4 | 6.2 | 18.0 | 23.3 |
| Sales/new listings, ratio | 1.44 | 1.05 | 1.49 | 1.56 | 1.31 |
| Total listings, mths sales | 2.6 | 4.6 | 3.5 | 1.8 | 1.7 |

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

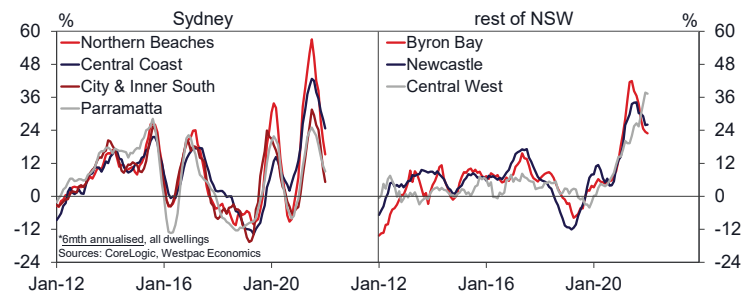
ADDITIONAL MATERIALS: charts and tables



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



51. NSW dwelling prices: selected sub-region

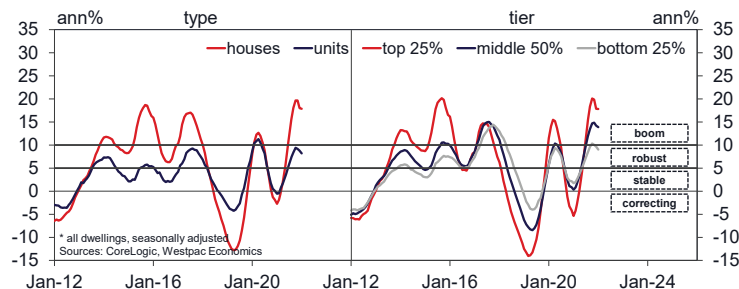


| NSW | Sydney | rest of NSW |
|--------------------------|----------|-------------|
| Population: | 5.4mn | 2.8mn |
| Net migration*: | 20k pa | 17k pa |
| Employ (%state): | 68% | 32% |
| Dwellings, no.: | 2.0mn | 1.3mn |
| Dwellings, value: | \$2.4trn | \$0.8trn |

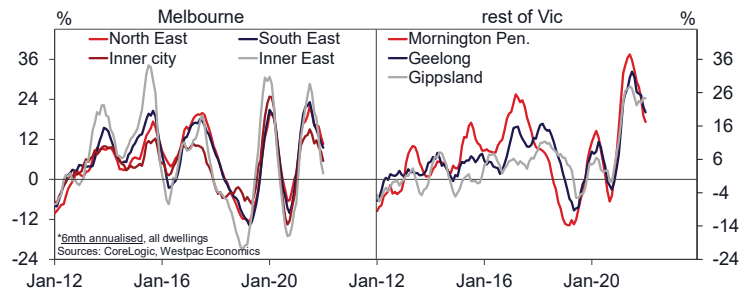
| June years | avg [^] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|-------|------|------|--------|
| Sydney | | | | | |
| Employment, ann% | 1.6 | 3.1 | -5.7 | 6.5 | -0.9 |
| Unemployment rate, % | 5.3 | 4.5 | 6.5 | 5.5 | 5.0 |
| Houses – prices, ann% | 6.9 | -10.9 | 14.4 | 19.3 | 29.7 |
| – sales/new listings, ratio | 1.10 | 1.31 | 1.29 | 1.31 | 1.04 |
| – total listings, mths sales | 3.2 | 3.8 | 3.6 | 1.9 | 2.4 |
| Units – prices, ann% | 5.5 | -8.1 | 10.5 | 5.1 | 15.4 |
| – sales/new listings, ratio | 1.56 | 1.30 | 1.10 | 1.47 | 1.16 |
| – total listings, mths sales | 2.3 | 4.2 | 4.5 | 2.3 | 2.9 |
| rest of NSW | | | | | |
| Employment, ann% | 1.3 | 3.9 | -5.3 | 6.2 | 2.1 |
| Unemployment rate, % | 7.1 | 4.8 | 6.4 | 4.4 | 4.3 |
| Dwelling prices, ann% | 5.5 | -5.0 | 3.8 | 21.1 | 30.1 |

* incl. flows within state, year to Jun 2020; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

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



53. Vic: dwelling prices: selected sub-regions



| Vic | Melbourne | rest of Vic |
|-------------------|-----------|-------------|
| Population: | 5.2mn | 1.5mn |
| Net migration*: | 47k pa | 17k pa |
| Employ (%state): | 79% | 21% |
| Dwellings, no.: | 2mn | 0.7mn |
| Dwellings, value: | \$1.9trn | \$0.4trn |

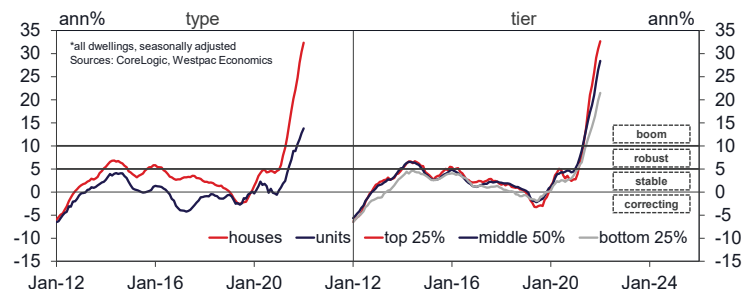
| June years | avg [^] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|-------|------|------|--------|
| Melbourne | | | | | |
| Employment, ann% | 2.2 | 4.2 | -4.3 | 5.3 | 3.1 |
| Unemployment rate, % | 6.2 | 5.0 | 7.4 | 5.3 | 5.1 |
| Houses – prices, ann% | 7.4 | -11.9 | 10.5 | 8.8 | 17.8 |
| – sales/new listings, ratio | 1.05 | 1.07 | 0.96 | 1.15 | 1.04 |
| – total listings, mths sales | 3.3 | 4.2 | 4.9 | 2.5 | 2.5 |
| Units – prices, ann% | 6.2 | -3.3 | 9.2 | 4.6 | 8.2 |
| – sales/new listings, ratio | 1.12 | 0.87 | 0.80 | 0.98 | 0.94 |
| – total listings, mths sales | 3.6 | 5.8 | 7.0 | 4.3 | 4.4 |
| rest of Vic | | | | | |
| Employment, ann% | 1.4 | 2.2 | 1.2 | 3.7 | 0.0 |
| Unemployment rate, % | 6.7 | 3.9 | 4.5 | 3.9 | 3.6 |
| Dwelling prices, ann% | 5.1 | -0.4 | 4.4 | 15.8 | 24.0 |

* incl. flows within state, year to Jun 2020; [^] avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

ADDITIONAL MATERIALS: charts and tables, cont.



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



Qld

Population:

Brisbane

2.6mn

rest of Qld

2.6mn

Net migration*:

30k pa

24k pa

Employ (%state):

51%

49%

Dwellings, no.:

1mn

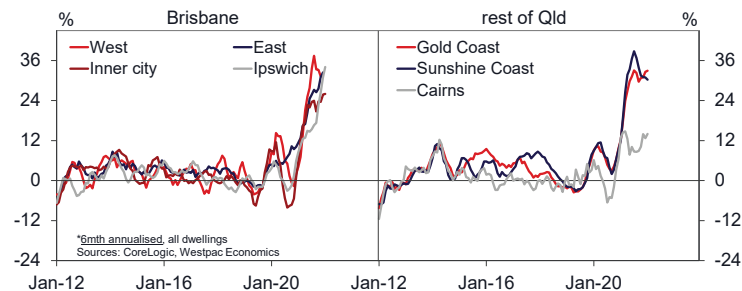
1.1mn

Dwellings, value:

\$0.6trn

\$0.7trn

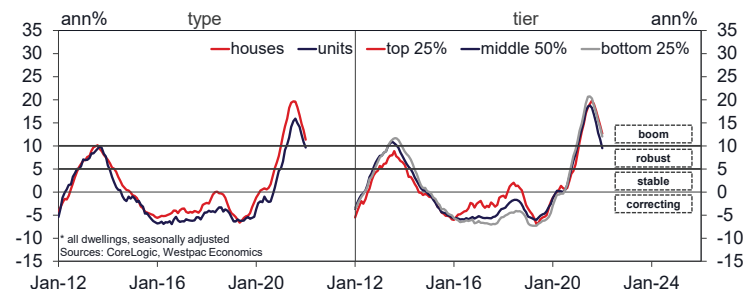
55. Qld dwelling prices: selected sub-regions



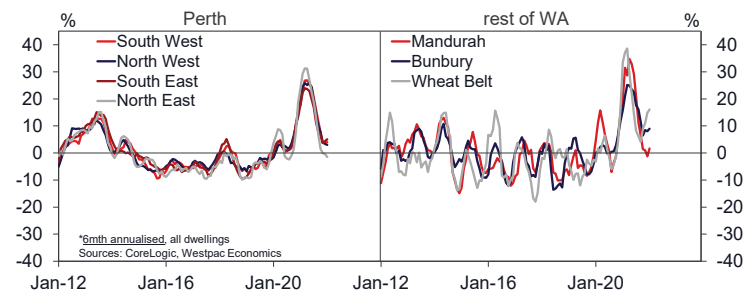
| June years | avg [^] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|------|------|------|--------|
| Brisbane | | | | | |
| Employment, ann% | 2.5 | 1.8 | -5.0 | 10.9 | 6.2 |
| Unemployment rate, % | 6.2 | 6.2 | 7.6 | 5.7 | 4.9 |
| Houses - prices, ann% | 5.5 | -2.6 | 4.8 | 14.7 | 32.4 |
| - sales/new listings, ratio | 0.90 | 0.86 | 1.10 | 1.28 | 1.59 |
| - total listings, mths sales | 5.4 | 6.6 | 6.4 | 2.7 | 1.6 |
| Units - prices, ann% | 3.2 | -2.8 | 1.8 | 5.6 | 13.8 |
| - sales/new listings, ratio | 1.47 | 0.83 | 0.88 | 1.38 | 2.26 |
| - total listings, mths sales | 4.0 | 7.9 | 8.8 | 3.2 | 1.4 |
| rest of Qld | | | | | |
| Employment, ann% | 2.1 | 1.4 | -4.2 | 8.7 | 1.5 |
| Unemployment rate, % | 6.9 | 6.2 | 7.5 | 5.2 | 4.9 |
| Dwelling prices, ann% | 4.3 | -2.0 | 4.4 | 17.0 | 25.7 |

* incl. flows within state, year to Jun 2020; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

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



57. WA dwelling prices: selected sub-regions



| | | |
|--------------------------|--------------|-------------------|
| WA | Perth | rest of WA |
| Population: | 2.1mn | 0.5mn |
| Net migration*: | 23k pa | 0k pa |
| Employ (%state): | 81% | 19% |
| Dwellings, no.: | 0.9mn | 0.3mn |
| Dwellings, value: | \$0.5trn | \$0.1trn |

| June years | avg [*] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|------|------|------|--------|
| Perth | | | | | |
| Employment, ann% | 2.4 | 2.1 | -3.8 | 8.5 | 5.9 |
| Unemployment rate, % | 5.8 | 6.2 | 7.9 | 4.9 | 3.9 |
| Houses - prices, ann%# | 4.9 | -6.2 | 0.6 | 19.3 | 11.4 |
| - sales/new listings, ratio | 0.88 | 0.79 | 1.04 | 1.08 | 1.29 |
| - total listings, mths sales | 6.0 | 8.4 | 7.4 | 3.5 | 2.6 |
| Units - prices, ann%# | 3.7 | -6.2 | -1.8 | 14.1 | 9.6 |
| - sales/new listings, ratio | 1.01 | 0.80 | 1.02 | 0.87 | 0.83 |
| - total listings, mths sales | 5.7 | 10.0 | 9.4 | 5.6 | 5.0 |
| rest of WA | | | | | |
| Employment, ann% | 1.3 | -2.4 | -4.4 | 4.2 | -0.2 |
| Unemployment rate, % | 5.2 | 4.8 | 5.4 | 4.5 | 3.7 |
| Dwelling prices, ann%# | 3.3 | -1.7 | -1.1 | 18.6 | 12.8 |

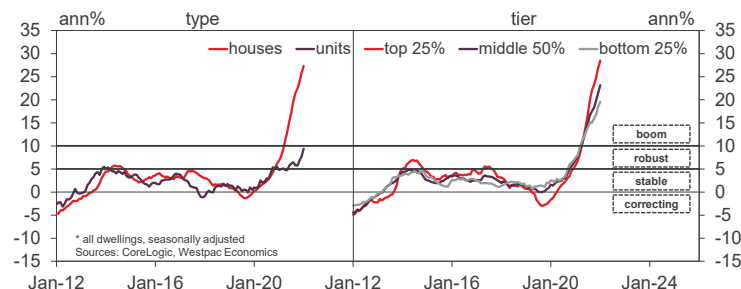
* incl. flows within state, year to Jun 2020; ^{*}avg last 25yrs (last 10yrs for listings).

Note that WA price data has been suspended due to technical issues and is under review.
Sources: ABS, CoreLogic, Westpac Economics

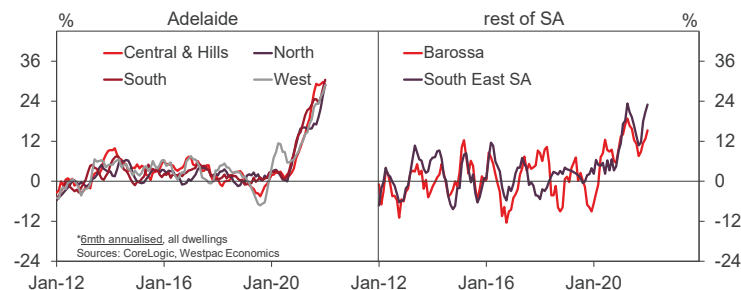
ADDITIONAL MATERIALS: charts and tables, cont.



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



59. SA dwelling prices: selected sub-regions

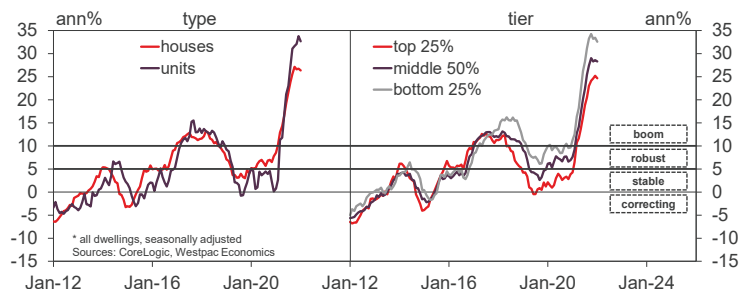


| SA | Adelaide | rest of SA |
|--------------------------|----------|------------|
| Population: | 1.4mn | 0.4mn |
| Net migration*: | 11k pa | 1k pa |
| Employ (%state): | 79% | 21% |
| Dwellings, no.: | 0.6mn | 0.2mn |
| Dwellings, value: | \$0.3trn | \$0.1trn |

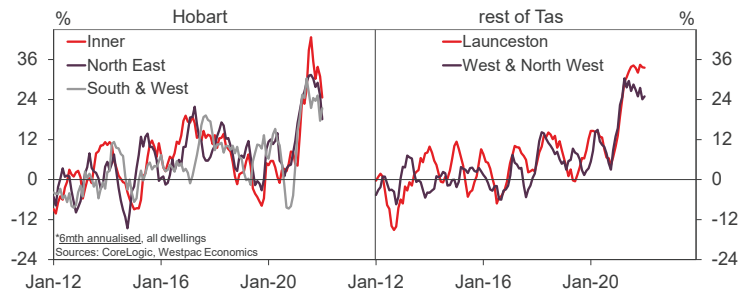
| June years | avg [^] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|------|------|------|--------|
| Adelaide | | | | | |
| Employment, ann% | 1.4 | 3.0 | -5.2 | 6.8 | 3.4 |
| Unemployment rate, % | 7.1 | 5.7 | 7.8 | 5.4 | 5.2 |
| Houses - prices, ann% | 5.4 | -0.5 | 2.0 | 15.2 | 27.3 |
| - sales/new listings, ratio | 1.02 | 1.08 | 1.30 | 1.30 | 1.67 |
| - total listings, mths sales | 3.9 | 3.9 | 4.0 | 2.3 | 1.3 |
| Units - prices, ann% | 4.9 | 0.9 | 2.2 | 5.6 | 9.4 |
| - sales/new listings, ratio | 1.13 | 1.13 | 1.39 | 1.32 | 1.82 |
| - total listings, mths sales | 4.3 | 5.1 | 5.6 | 3.1 | 1.7 |
| rest of SA | | | | | |
| Employment, ann% | 0.7 | -2.6 | -2.7 | 3.5 | 3.0 |
| Unemployment rate, % | 6.3 | 6.0 | 7.1 | 5.5 | 3.6 |
| Dwelling prices, ann% | 4.4 | 0.2 | 2.6 | 13.7 | 16.7 |

* incl. flows within state, year to Jun 2020; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

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



61. Tas dwelling prices: selected sub-regions



| | | |
|--------------------------|---------------|--------------------|
| Tas | Hobart | rest of Tas |
| Population: | 239k | 302k |
| Net migration*: | 2k pa | 3k pa |
| Employ (%state): | 46% | 54% |
| Dwellings, no.: | 102k | 147k |
| Dwellings, value: | \$67bn | \$63bn |

| June years | avg [^] | 2019 | 2020 | 2021 | latest |
|------------------------------|------------------|------|------|------|--------|
| Hobart | | | | | |
| Employment, ann% | 1.4 | 0.4 | -1.8 | 6.9 | 2.8 |
| Unemployment rate, % | 6.9 | 7.0 | 6.4 | 5.3 | 4.1 |
| Houses - prices, ann% | 6.0 | 3.1 | 7.0 | 19.2 | 26.4 |
| - sales/new listings, ratio | 0.98 | 1.07 | 1.13 | 1.24 | 1.09 |
| - total listings, mths sales | 5.5 | 3.0 | 3.7 | 1.9 | 2.1 |
| Units - prices, ann% | 5.4 | 2.0 | 3.6 | 21.2 | 32.6 |
| - sales/new listings, ratio | 1.21 | 1.24 | 1.07 | 1.25 | 1.51 |
| - total listings, mths sales | 4.2 | 2.5 | 4.0 | 2.1 | 1.8 |
| rest of Tas | | | | | |
| Employment, ann% | 0.9 | -1.1 | -0.5 | 4.6 | 3.3 |
| Unemployment rate, % | 8.0 | 6.3 | 6.5 | 5.7 | 4.8 |
| Dwelling prices, ann% | 5.2 | 5.4 | 10.3 | 20.8 | 29.8 |

* incl. flows within state, year to Jun 2020; [^]avg last 25yrs (last 10yrs for listings)
Sources: ABS, CoreLogic, Westpac Economics

ECONOMIC and FINANCIAL FORECASTS



Interest rate forecasts

| Australia | Latest (19 Nov) | Mar-22 | Jun-22 | Sep-22 | Dec-22 | Mar-23 | Jun-23 | Sep-23 | Dec-23 |
|----------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cash | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.25 | 0.50 | 0.75 |
| 90 Day BBSW | 0.04 | 0.07 | 0.10 | 0.15 | 0.20 | 0.40 | 0.65 | 0.70 | 0.95 |
| 3 Year Bond | 1.31 | 1.30 | 1.30 | 1.25 | 1.20 | 1.20 | 1.30 | 1.40 | 1.50 |
| 3 Year Swap | 1.03 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.10 | 1.20 | 1.30 |
| 10 Year Bond | 1.83 | 1.95 | 2.05 | 2.15 | 2.25 | 2.30 | 2.30 | 2.30 | 2.30 |
| 10 Year Spread to US (bps) | 28 | 20 | 15 | 15 | 15 | 10 | 5 | 0 | 0 |
| US | | | | | | | | | |
| Fed Funds | 0.125 | 0.125 | 0.125 | 0.125 | 0.125 | 0.375 | 0.625 | 0.875 | 0.875 |
| US 10 Year Bond | 1.55 | 1.75 | 1.90 | 2.00 | 2.10 | 2.20 | 2.25 | 2.30 | 2.30 |

Exchange rate forecasts

| | Latest (19 Nov) | Mar-22 | Jun-22 | Sep-22 | Dec-22 | Mar-23 | Jun-23 | Sep-23 | Dec-23 |
|---------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| AUD/USD | 0.75 | 1.00 | 1.50 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 | 3.00 |
| NZD/USD | 1.23 | 1.40 | 1.90 | 2.20 | 2.45 | 2.70 | 2.95 | 3.10 | 3.10 |
| USD/JPY | 2.57 | 2.55 | 2.75 | 2.90 | 2.95 | 3.00 | 3.00 | 2.95 | 2.90 |
| EUR/USD | 2.83 | 2.80 | 2.85 | 2.90 | 3.00 | 3.00 | 3.00 | 3.00 | 2.95 |
| GBP/USD | 81 | 80 | 55 | 50 | 50 | 50 | 60 | 70 | 75 |
| USD/CNY | 6.3845 | 6.35 | 6.30 | 6.25 | 6.25 | 6.20 | 6.20 | 6.15 | 6.10 |
| AUD/NZD | 1.0338 | 1.06 | 1.06 | 1.05 | 1.05 | 1.05 | 1.07 | 1.08 | 1.07 |

ECONOMIC and FINANCIAL FORECASTS



Australian economic growth forecasts

| | 2021 | | | 2022 | | | |
|-----------------------|------|------|-----|------|-----|-----|-----|
| % change | Q2 | Q3 | Q4f | Q1f | Q2f | Q3f | Q4f |
| GDP % qtr | 0.7 | -1.9 | 2.6 | 0.0 | 2.6 | 2.0 | 0.8 |
| %yr end | 9.5 | 3.9 | 3.2 | 1.4 | 3.3 | 7.4 | 5.5 |
| Unemployment rate % | 5.1 | 4.6 | 4.7 | 4.0 | 4.0 | 3.9 | 3.8 |
| CPI % qtr | 0.8 | 0.8 | 1.3 | 1.2 | 0.9 | 0.6 | 0.5 |
| %yr end | 3.8 | 3.0 | 3.5 | 4.2 | 4.3 | 4.2 | 3.3 |
| CPI trimmed mean %qtr | 0.5 | 0.7 | 1.0 | 0.8 | 0.9 | 0.8 | 0.7 |
| %yr end | 1.6 | 2.1 | 2.6 | 3.1 | 3.5 | 3.6 | 3.3 |

| | Calendar years | | | |
|-----------------------|----------------|-------|-------|-------|
| | 2020 | 2021f | 2022f | 2023f |
| GDP % qtr | - | - | - | - |
| %yr end | -0.8 | 3.2 | 5.5 | 2.7 |
| Unemployment rate % | 6.8 | 4.7 | 3.8 | 3.9 |
| CPI % qtr | - | - | - | - |
| %yr end | 0.9 | 3.5 | 3.3 | 2.5 |
| CPI trimmed mean %qtr | - | - | - | - |
| %yr end | 1.2 | 2.6 | 3.3 | 2.9 |

Consumer sentiment – housing-related measures

| index* | 2020 | | | 2021 | | | 2022 | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|-------|
| | avg | Jun | Sep | Dec | Mar | Jun | Sep | Dec | Jan | Feb | %mth | %yr |
| 'Time to buy a dwelling' | | | | | | | | | | | | |
| Australia | 119.4 | 107.6 | 110.5 | 124.2 | 116.4 | 96.1 | 96.7 | 81.9 | 87.0 | 84.9 | -2.4 | -29.6 |
| - New South Wales | 115.8 | 107.1 | 108.1 | 125.6 | 116.9 | 100.0 | 94.0 | 82.7 | 85.9 | 84.4 | -1.8 | -25.2 |
| - Victoria | 115.5 | 107.9 | 110.3 | 121.8 | 114.0 | 86.4 | 87.3 | 81.3 | 89.6 | 85.1 | -5.0 | -28.9 |
| - Queensland | 128.0 | 104.7 | 113.6 | 127.8 | 114.2 | 103.1 | 105.3 | 78.9 | 97.0 | 89.8 | -7.4 | -27.0 |
| - Western Australia | 128.8 | 115.9 | 107.2 | 121.9 | 126.2 | 105.1 | 118.8 | 84.8 | 88.4 | 81.8 | -7.4 | -41.4 |
| - South Australia | 127.9 | 105.0 | 118.9 | 120.6 | 111.3 | 83.8 | 92.2 | 91.0 | 80.0 | 90.1 | 12.7 | -29.0 |
| - Tasmania | 122.0 | 108.9 | 101.9 | 123.9 | 114.0 | 92.7 | 86.5 | 50.3 | 47.1 | 57.8 | 22.8 | -46.0 |

House price expectations

| | | | | | | | | | | | | |
|---------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Australia | 125.7 | 80.6 | 89.2 | 143.7 | 159.5 | 157.8 | 158.0 | 150.6 | 143.4 | 155.8 | 8.7 | 0.7 |
| - New South Wales | 127.3 | 84.2 | 91.0 | 142.8 | 161.6 | 152.1 | 161.0 | 152.2 | 148.7 | 155.2 | 4.4 | 2.1 |
| - Victoria | 127.8 | 75.3 | 80.1 | 136.2 | 154.2 | 156.2 | 154.1 | 141.4 | 126.1 | 150.2 | 19.2 | -4.7 |
| - Queensland | 124.0 | 84.6 | 89.4 | 143.0 | 162.4 | 165.2 | 156.2 | 160.2 | 146.7 | 157.1 | 7.1 | 2.3 |
| - Western Australia | 117.0 | 75.0 | 96.3 | 163.7 | 161.8 | 164.4 | 158.1 | 144.3 | 162.5 | 168.3 | 3.6 | 8.8 |
| - South Australia | 127.7 | 79.8 | 94.3 | 139.8 | 158.8 | 158.3 | 161.5 | 148.0 | 142.9 | 159.8 | 11.8 | -0.5 |
| - Tasmania | 127.7 | 79.5 | 100.7 | 168.1 | 158.2 | 183.6 | 165.8 | 165.7 | 158.7 | 163.1 | 2.8 | -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

| index* | 2020 | | | 2021 | | | | 2022 | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| | avg | Jun | Sep | Dec | Mar | Jun | Sep | Dec | Jan | Feb | %mth | %yr |
| Unemp. expectations | | | | | | | | | | | | |
| Australia | 130.1 | 127.2 | 139.2 | 106.3 | 112.0 | 108.4 | 120.5 | 104.1 | 112.7 | 102.8 | -8.7 | -10.2 |
| - New South Wales | 129.6 | 129.3 | 139.9 | 106.4 | 112.4 | 98.7 | 116.9 | 105.5 | 113.5 | 101.6 | -10.4 | -7.4 |
| - Victoria | 131.2 | 134.9 | 139.6 | 111.8 | 113.0 | 114.7 | 124.0 | 98.8 | 107.0 | 99.3 | -7.2 | -13.4 |
| - Queensland | 133.2 | 116.2 | 135.1 | 99.3 | 116.4 | 113.5 | 120.8 | 113.3 | 114.5 | 103.3 | -9.7 | -11.5 |
| - Western Australia | 128.1 | 123.4 | 136.0 | 102.5 | 101.6 | 109.5 | 112.5 | 94.8 | 116.9 | 116.6 | -0.3 | -2.0 |
| - South Australia | 135.3 | 123.4 | 144.8 | 120.8 | 109.9 | 114.7 | 130.8 | 107.8 | 113.6 | 106.6 | -6.2 | -8.5 |
| - Tasmania | 138.3 | 136.2 | 155.8 | 109.2 | 108.6 | 118.7 | 114.4 | 108.4 | 139.2 | 101.0 | -27.5 | -23.0 |
| Risk aversion | | | | | | | | | | | qtr ch | ann ch |
| Australia | 15.1 | 46.0 | 47.2 | 38.3 | 44.0 | 41.6 | 41.7 | 46.8 | n.a. | n.a. | 5.1 | 4.6 |
| - New South Wales | 11.7 | 45.7 | 45.3 | 37.5 | 50.6 | 38.1 | 34.4 | 42.0 | n.a. | n.a. | 7.6 | -4.2 |
| - Victoria | 11.0 | 43.7 | 39.2 | 37.1 | 40.6 | 41.5 | 41.2 | 50.0 | n.a. | n.a. | 8.8 | 10.5 |
| - Queensland | 12.7 | 41.7 | 53.6 | 43.3 | 43.9 | 43.8 | 48.0 | 46.2 | n.a. | n.a. | -1.8 | 2.5 |
| - Western Australia | 7.0 | 51.7 | 55.1 | 57.2 | 47.4 | 55.8 | 49.6 | 58.3 | n.a. | n.a. | 8.7 | 7.7 |
| - South Australia | 14.4 | 58.0 | 54.4 | 28.9 | 29.0 | 34.5 | 38.1 | 46.5 | n.a. | n.a. | 8.3 | 17.5 |
| - Tasmania | 15.5 | 15.7 | 16.8 | 28.2 | 18.5 | 12.2 | 52.1 | 0.4 | n.a. | n.a. | -51.7 | -21.3 |

*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

| | | 2019 | 2020 | | | | 2021 | | | | 2022 | |
|-------------------------------|-----|------|------|------|-----|------|------|------|------|------|------|------|
| | avg | Dec | Mar | Jun | Sep | Dec | Mar | Jun | Sep | Dec | Jan | Feb |
| Dwelling prices, ann%* | | | | | | | | | | | | |
| Australia | 6.3 | 3.0 | 8.9 | 8.9 | 4.9 | 2.0 | 4.8 | 12.4 | 19.5 | 21.0 | 21.3 | 20.2 |
| - Sydney | 6.6 | 5.3 | 13.0 | 13.3 | 7.7 | 2.7 | 5.4 | 15.0 | 23.6 | 25.3 | 25.5 | 22.5 |
| - Melbourne | 7.1 | 5.3 | 12.0 | 10.2 | 3.1 | -1.3 | 0.7 | 7.7 | 15.0 | 15.1 | 14.9 | 12.6 |
| - Brisbane | 5.7 | 0.3 | 3.1 | 4.4 | 3.8 | 3.6 | 6.8 | 13.2 | 19.9 | 27.4 | 29.2 | 30.2 |
| - Perth# | 4.7 | -2.8 | 0.2 | 0.4 | 3.0 | 7.3 | 13.6 | 18.8 | 18.1 | 13.1 | 11.2 | 8.8 |
| - Adelaide | 5.9 | -0.2 | 0.9 | 2.0 | 3.6 | 5.9 | 8.6 | 13.9 | 19.1 | 23.2 | 24.8 | 25.7 |
| - Hobart | 6.2 | 3.9 | 4.2 | 6.4 | 6.4 | 6.1 | 12.5 | 19.6 | 26.8 | 28.1 | 27.6 | n.a. |

Turnover, %stock^

| | | | | | | | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Australia | 5.6 | 4.3 | 4.1 | 3.3 | 4.5 | 5.2 | 5.8 | 5.8 | 5.8 | 6.7 | 6.4 | n.a. |
| - New South Wales | 5.8 | 4.6 | 4.3 | 3.4 | 5.0 | 5.6 | 5.9 | 5.9 | 5.5 | 6.1 | 5.4 | n.a. |
| - Victoria | 4.7 | 4.2 | 3.8 | 2.8 | 2.9 | 4.7 | 5.2 | 5.0 | 4.1 | 5.9 | 5.0 | n.a. |
| - Queensland | 6.6 | 4.6 | 4.5 | 3.9 | 5.5 | 6.3 | 7.0 | 7.3 | 8.3 | 9.9 | 9.9 | n.a. |
| - Western Australia | 6.3 | 3.6 | 3.4 | 3.2 | 4.7 | 5.3 | 5.5 | 5.7 | 6.1 | 6.6 | 6.8 | n.a. |
| - South Australia | 4.6 | 3.8 | 3.8 | 3.2 | 4.0 | 4.2 | 4.4 | 4.8 | 5.2 | 6.2 | 6.2 | n.a. |
| - Tasmania | 5.6 | 4.9 | 4.7 | 3.5 | 4.7 | 4.6 | 4.9 | 4.6 | 4.9 | 4.6 | 4.7 | n.a. |

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

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

Note that WA price data has been suspended due to technical issues and is under review.

Sources: CoreLogic, ABS, Westpac Economics

HOUSING MARKET DATA



Residential property listings

| | | 2019 | 2020 | | | | 2021 | | | | 2022 | |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | avg | Dec | Mar | Jun | Sep | Dec | Mar | Jun | Sep | Dec | Jan | Feb |
| Sales/new listings ratio* | | | | | | | | | | | | |
| Australia^ | 1.07 | 1.10 | 1.05 | 1.11 | 1.15 | 1.34 | 1.29 | 1.24 | 1.36 | 1.36 | 1.29 | 1.36 |
| - Sydney | 1.26 | 1.38 | 1.18 | 1.18 | 1.26 | 1.60 | 1.52 | 1.33 | 1.55 | 1.38 | 1.20 | 1.23 |
| - Melbourne | 1.07 | 1.14 | 0.97 | 0.89 | 1.13 | 1.17 | 1.14 | 1.07 | 1.13 | 1.29 | 1.06 | 1.03 |
| - Brisbane | 0.95 | 0.91 | 0.93 | 1.06 | 1.11 | 1.32 | 1.29 | 1.33 | 1.62 | 1.72 | 1.68 | 1.80 |
| - Perth | 0.88 | 0.87 | 0.89 | 1.03 | 1.01 | 1.27 | 1.08 | 1.03 | 1.19 | 1.13 | 1.15 | 1.24 |
| - Adelaide | 1.01 | 1.14 | 1.24 | 1.34 | 1.29 | 1.63 | 1.33 | 1.33 | 1.41 | 1.80 | 1.73 | 1.67 |
| - Hobart | 1.01 | 1.21 | 1.04 | 1.11 | 1.14 | 1.24 | 1.28 | 1.22 | 1.29 | 1.15 | 1.15 | 1.17 |

Total listings, months of sales*

| | | | | | | | | | | | | |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Australia^ | 3.9 | 4.1 | 4.4 | 5.4 | 4.2 | 3.2 | 2.8 | 2.8 | 2.6 | 2.2 | 2.3 | 2.3 |
| - Sydney | 2.8 | 2.7 | 3.0 | 4.0 | 3.0 | 2.4 | 2.1 | 2.1 | 2.1 | 2.0 | 2.4 | 2.5 |
| - Melbourne | 3.5 | 3.3 | 3.9 | 5.6 | 6.3 | 3.2 | 2.9 | 3.1 | 3.6 | 2.5 | 2.9 | 3.2 |
| - Brisbane | 5.1 | 6.1 | 6.2 | 6.9 | 4.9 | 3.9 | 3.2 | 2.9 | 2.2 | 1.7 | 1.7 | 1.5 |
| - Perth | 6.1 | 7.5 | 7.9 | 7.7 | 5.4 | 4.2 | 3.9 | 3.9 | 3.5 | 3.4 | 3.2 | 3.0 |
| - Adelaide | 4.2 | 4.1 | 4.0 | 4.4 | 3.5 | 2.9 | 2.6 | 2.4 | 2.1 | 1.6 | 1.5 | 1.5 |
| - Hobart | 5.5 | 2.8 | 3.0 | 3.6 | 3.2 | 2.7 | 2.2 | 2.1 | 1.8 | 2.2 | 2.1 | 2.1 |

* figures show 3mth avg, readings for most recent months based on sales estimates modeled on preliminary data and latest weekly listings figures.

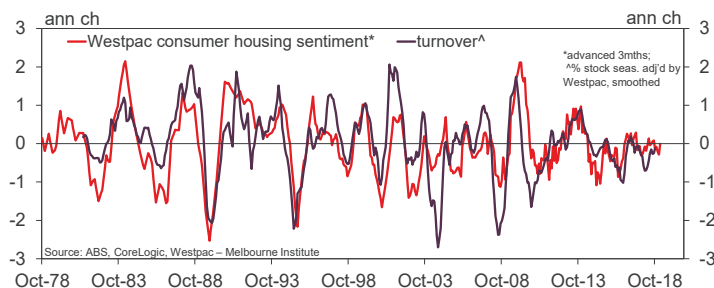
^ avg since 2007

Sources: CoreLogic, Westpac Economics

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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