INFLATION

CHART PACK OF Q1 CPI & CURRENT INFLATIONARY PRESSURES

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Westpac Institutional Bank

July 2022

Breakdown of Q1 CPI, actual vs. forecast

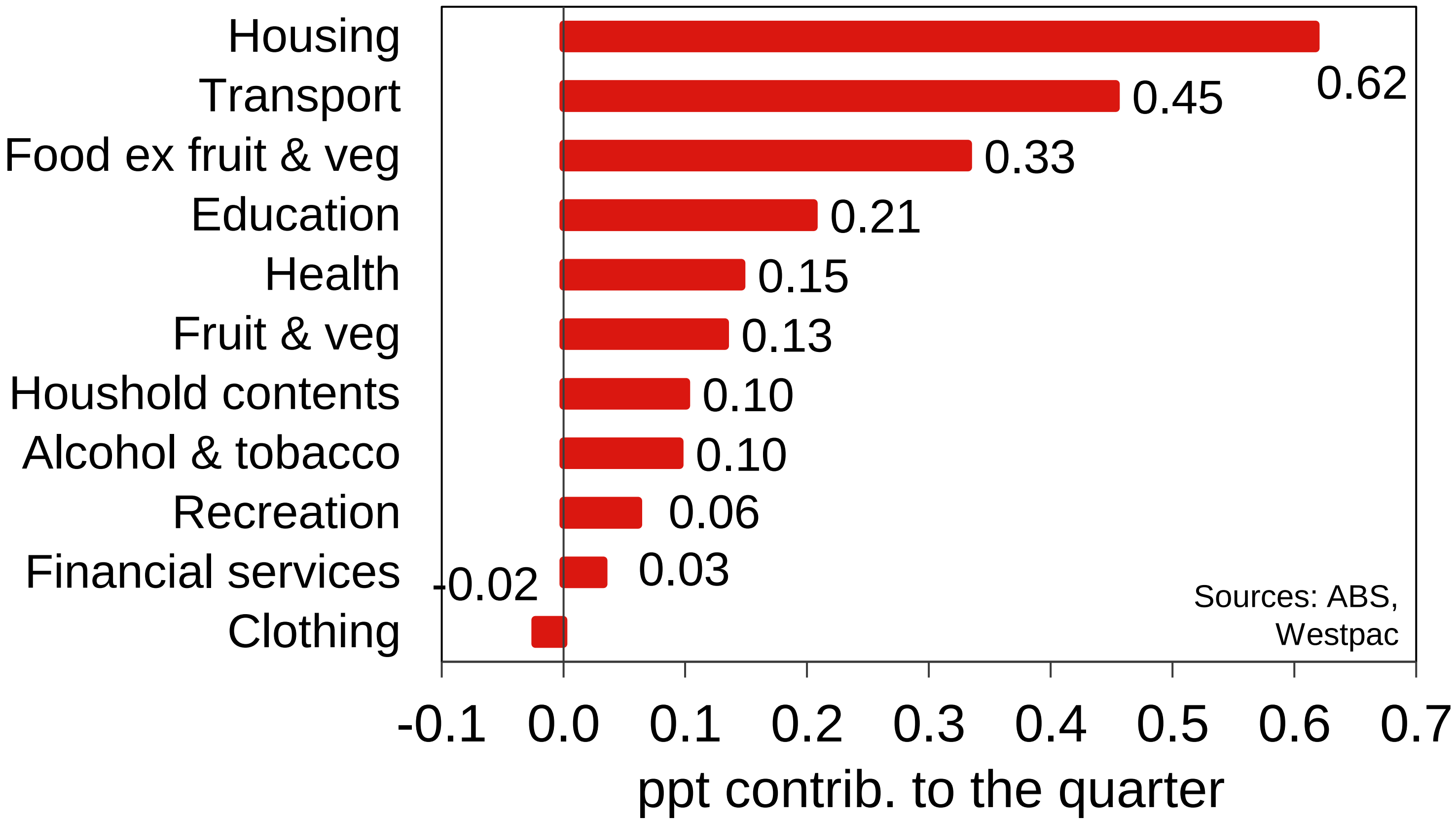
5.7%

The rise in dwelling prices was close to expectations but driven more by underlying cost push than a reduction in the use of construction grants.

CPI forecasts Item	Mar-22 Actual % qtr	contrib	Mar-22 Forecast % qtr	contrib
Food	2.8	0.46	2.1	0.35
of which, fruit & vegetables	5.8	0.13	6.6	0.15
Alcohol & tobacco	1.1	0.10	0.7	0.06
of which, Tobacco	1.2	0.04	0.2	0.01
Clothing & footwear	-0.6	-0.02	0.1	0.00
Housing	2.7	0.63	2.9	0.67
of which, Rents	0.6	0.04	0.7	0.05
of which, House purchases	5.7	0.51	5.4	0.48
of which, Utilities	1.1	0.05	2.1	0.09
H/hold contents & services	1.1	0.10	0.9	0.08
Health	2.3	0.14	1.9	0.12
of which, Pharmaceuticals	5.7	0.06	5.1	0.05
Transportation	4.2	0.45	4.3	0.46
of which , car prices	1.0	0.03	1.8	0.06
of which, auto fuel	11.0	0.38	10.9	0.38
Communication	0.3	0.01	0.0	0.00
Recreation	0.6	0.05	0.8	0.07
of which, audio visual & computing	-0.4	-0.01	-0.9	-0.02
of which, holiday travel	-0.6	-0.01	2.5	0.05
Education	4.5	0.21	2.7	0.12
Financial & insurance services	0.5	0.03	0.2	0.01
CPI: All groups	**2.14**	–	**1.98**	–
CPI: All groups % year	**5.1**	–	**4.9**	–

Contributions to 2022Q1 CPI 2.1%qtr print

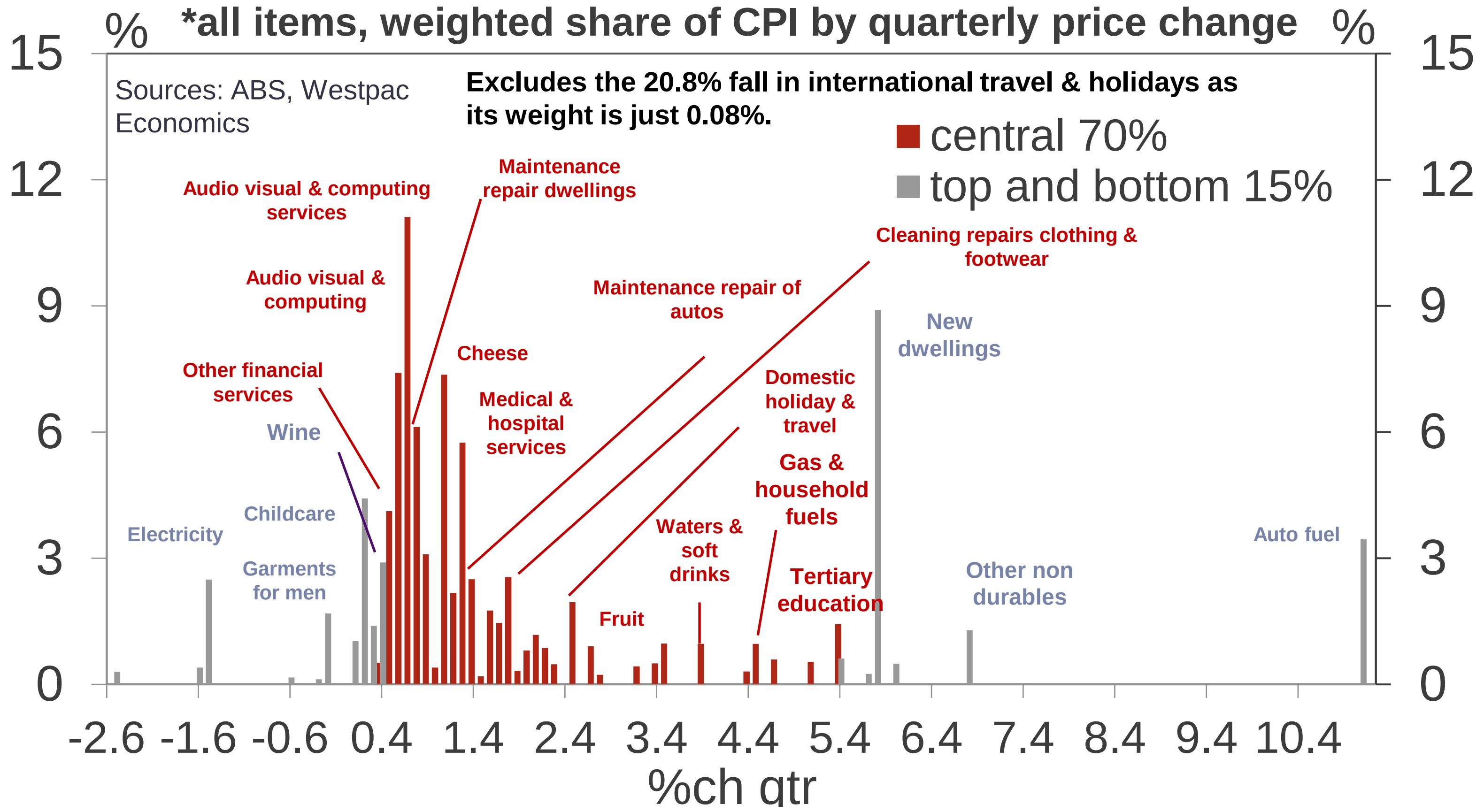
Housing again the critical component to inflation



- Inflation came in 2.1%, well above the market forecast of 1.7% exceeding even Westpac's top of the range forecast of 2.0%. This was the largest quarterly rise in the CPI since the introduction of the GST in 2000 (3.8% at September 2000). At two decimal places it was 2.14% so a rounded down or solid 2.1%.
- The ABS reports that most significant price rises were for new dwellings (5.7% vs 5.4% WBC), auto fuel (11.0% vs 10.9% WBC) and tertiary education (6.3% vs. WBC 2.4%). Also worth noting were the strong gains in food (2.8% vs 2.1% WBC) along with the unseasonal rise in furniture & furnishings (1.1% vs -1.1% WBC) and communication (0.3% vs flat WBC).
- A broad spread inflationary pulse was captured by 1.4% gain in the trimmed mean, both the market and Westpac were expecting 1.2% which, if you compare to the RBA historical estimates of the trimmed mean, it is the largest quarterly rise since the 1.8% print in December 1990.

Core inflation capturing broad based gains

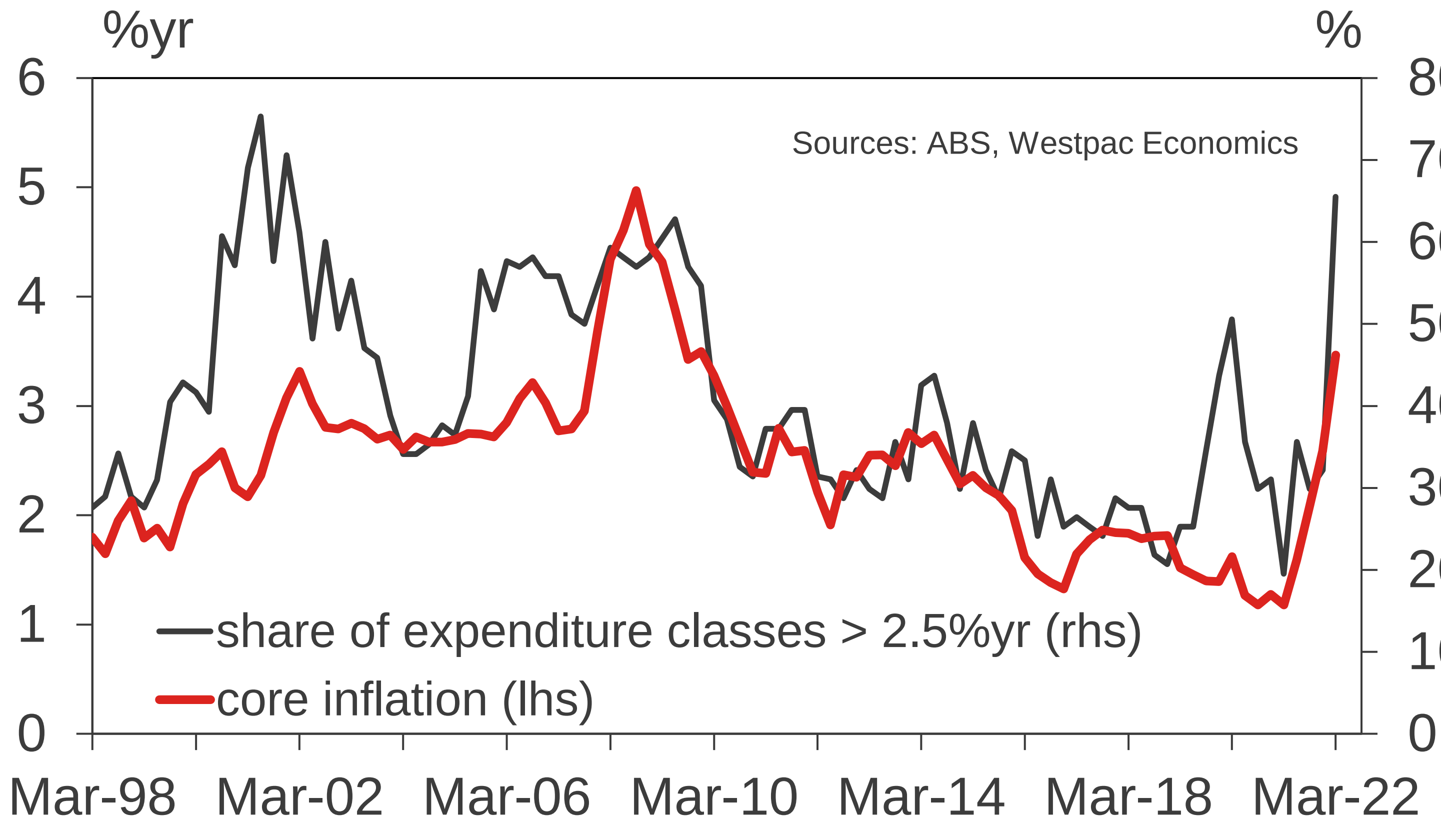
Distribution & trimming of seasonally adjusted %qtr changes



- The distribution of seasonally adjusted change in the components of the CPI is skewed to the high side.
- The trimming of the bottom 15% starts at a quite high 0.38% and there are not a lot of negatives. The negatives trimmed are; international holidays (-20.8% but with a weight of just 0.08% it is insignificant), footwear for women (-2.5%), glassware, tableware & utensils (-1.7%), electricity (-1.6%), therapeutic equipment (-0.6%), footwear for men (-0.3%), garments for women (-0.3%) and garments for men (-0.2%).
- There is a significant weighted clustering of changes from 0.6% to 1.3% the sample does have a long tail to the high side with the top 15% trimming not starting till 5.36%.
- Trimmed off the top are; tertiary education (5.4%), coffee, tea & cocoa (5.6%), new dwellings (5.7%), pets & related products (6.0%), other non durables (6.7%) and auto fuel (11.0%).

Inflationary pressures broadening

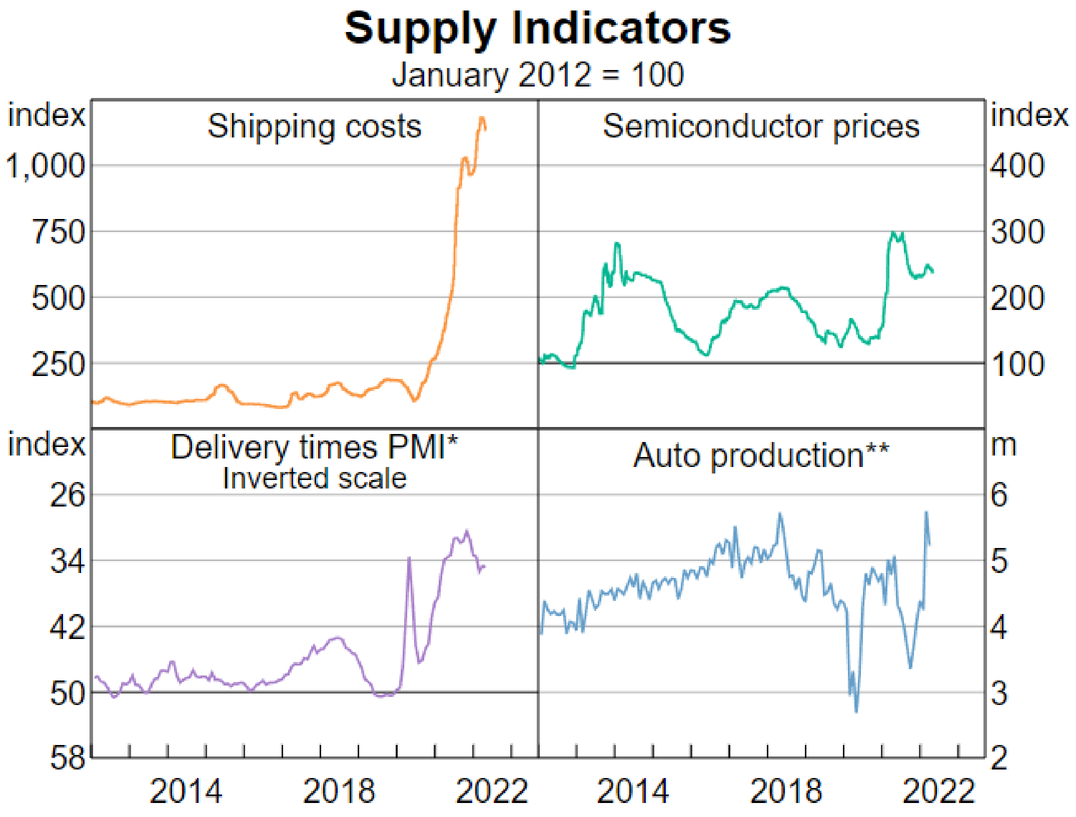
The number of sectors running faster than 2.5%yr in increasing



- The widespread nature of the inflationary pulse was further emphasised by the rise in the share of components of the CPI running faster than a 2.5%yr pace.
- The share lifted to 66% from 32% in March, the largest share of the CPI components running faster than 2.5%yr since December 2001 (post the introduction of GST).

Global supply chains still struggling

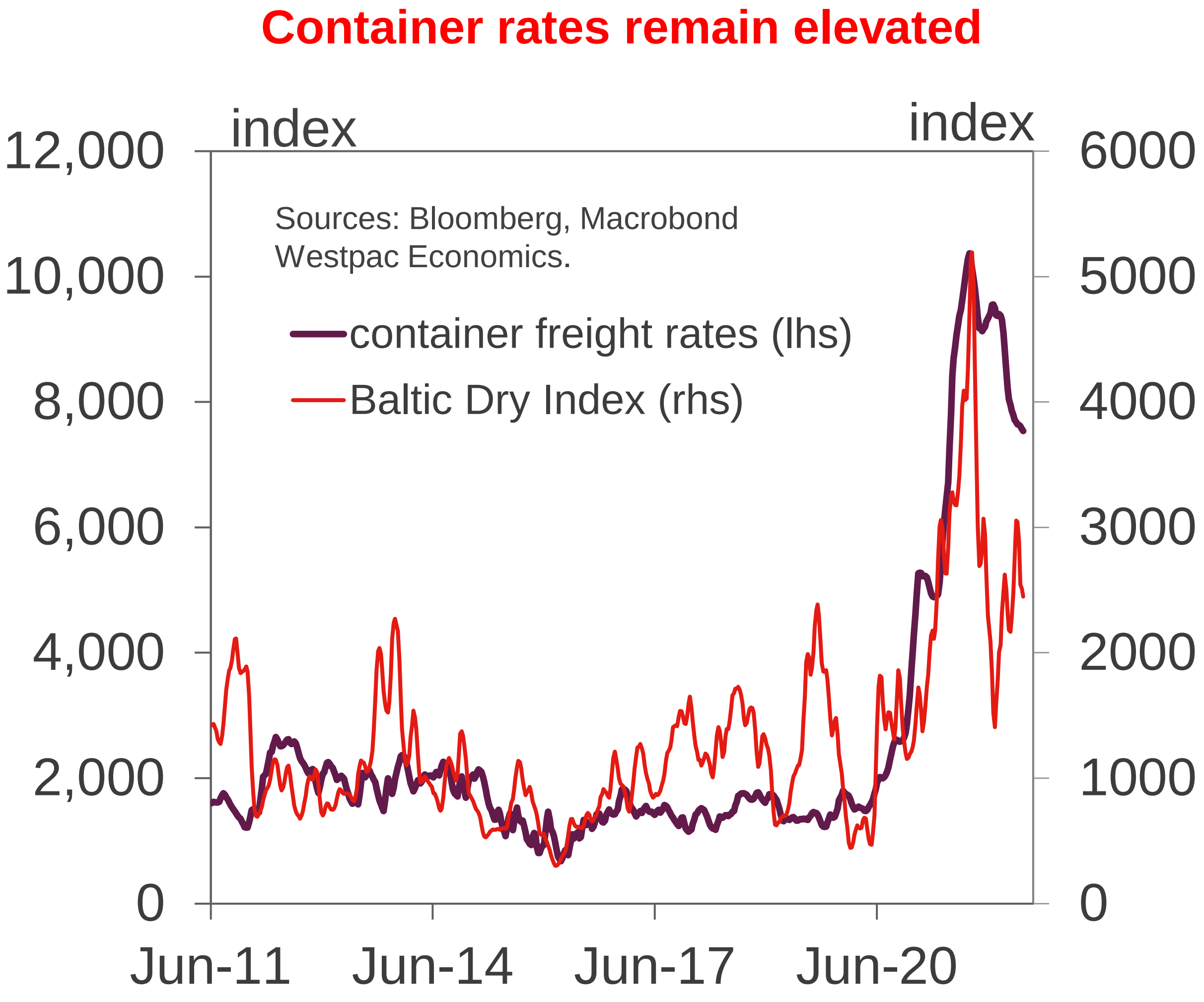
Shipping cost pressures remain even if there are signs of a peak

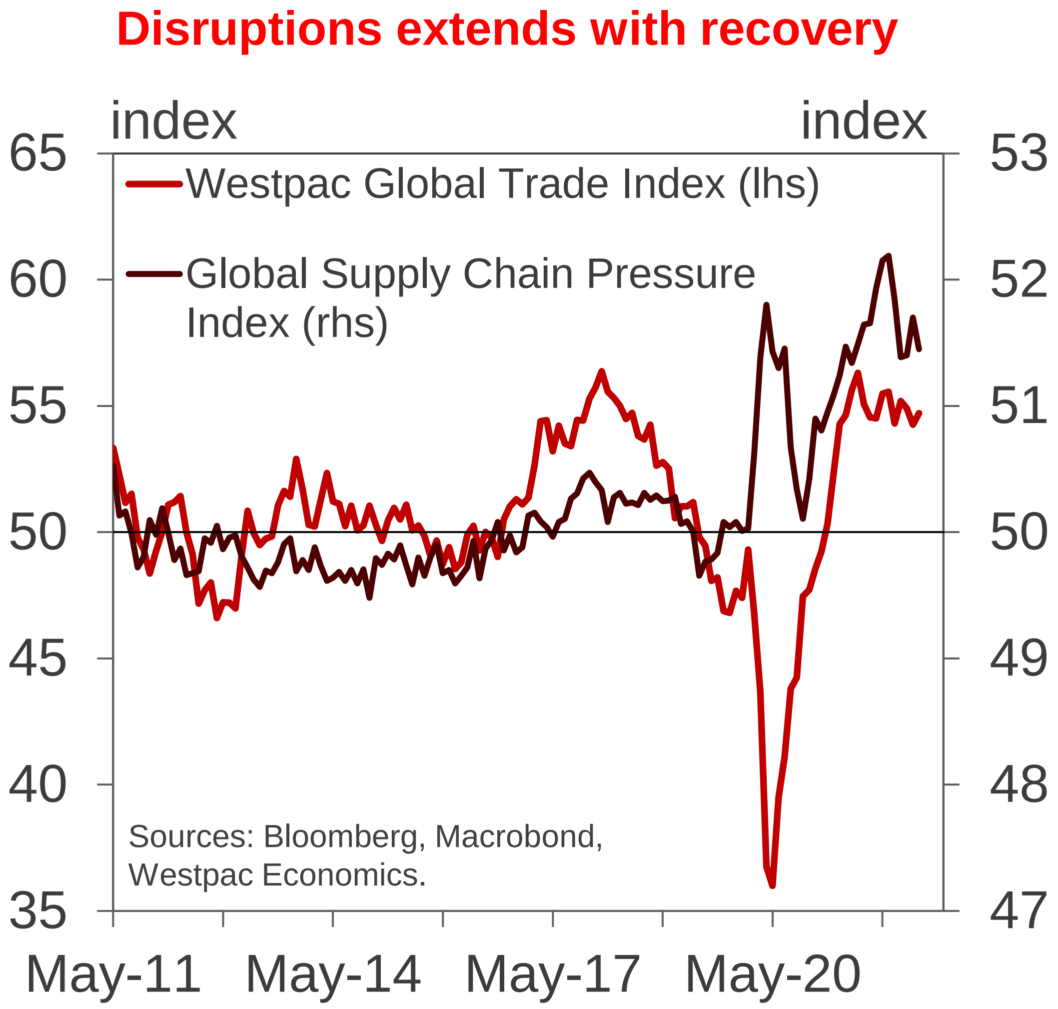


* Purchasing Managers' Index; excluding China.
** Top five producing countries.
Sources: IHS Markit; RBA; Refinitiv

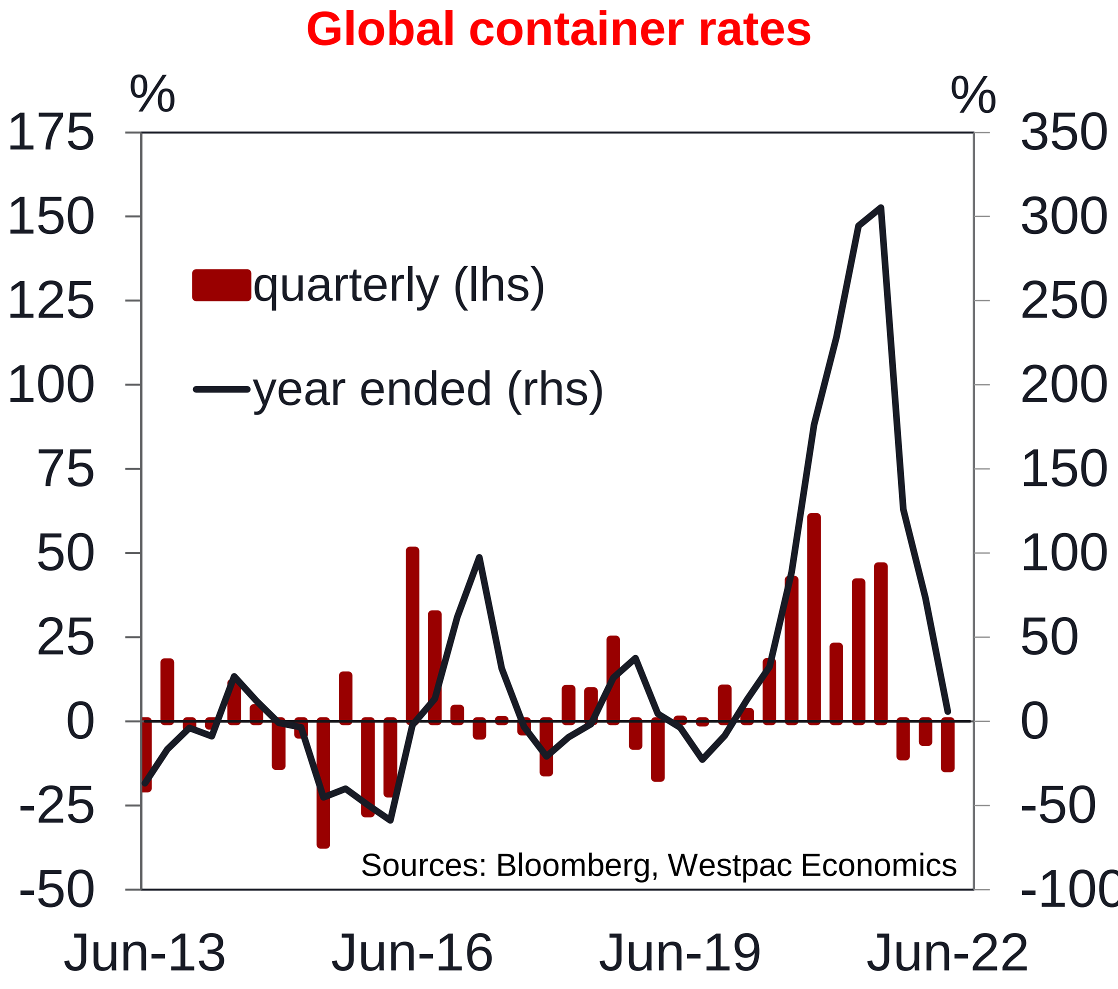
- China, which is following a zero Covid policy, presents a specific risk for trade.
- Continued intermittent disruptions from COVID restrictions very likely.
- Shipping costs look to have peaked but they are still a long way from what you would define as a meaningful correction.
- Current level of shipping costs remain a significant inflation risk that builds over time.
- The disruptions to trade with Russia & Ukraine, along with conflict in the Black Sea and new outbreak of Covid in China, has added a new level of complexity to international supply chains.

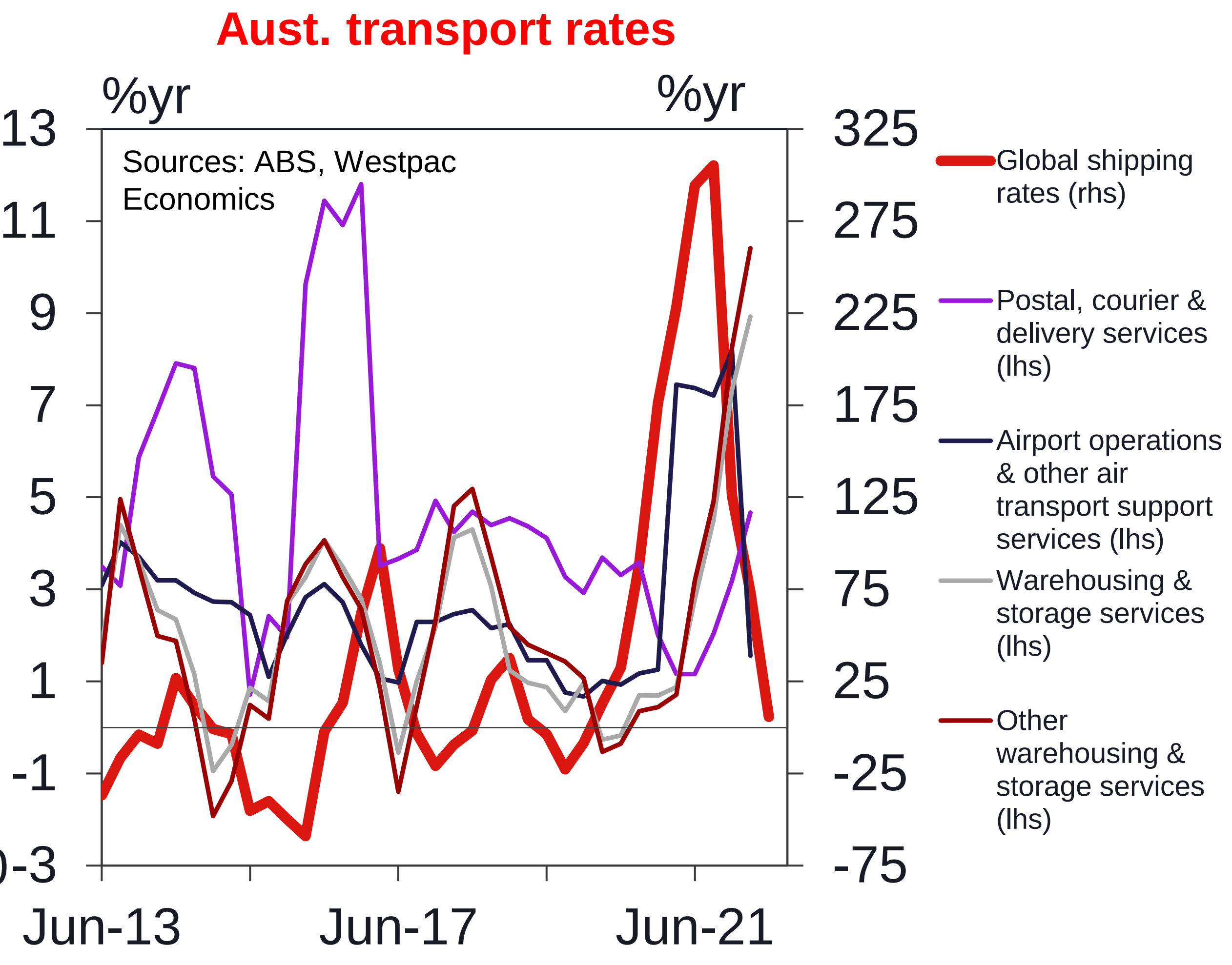
Shipping rates ease but still high, container rates extreme





Global freight rates peaking but local rates under pressure





Supply chain disruptions

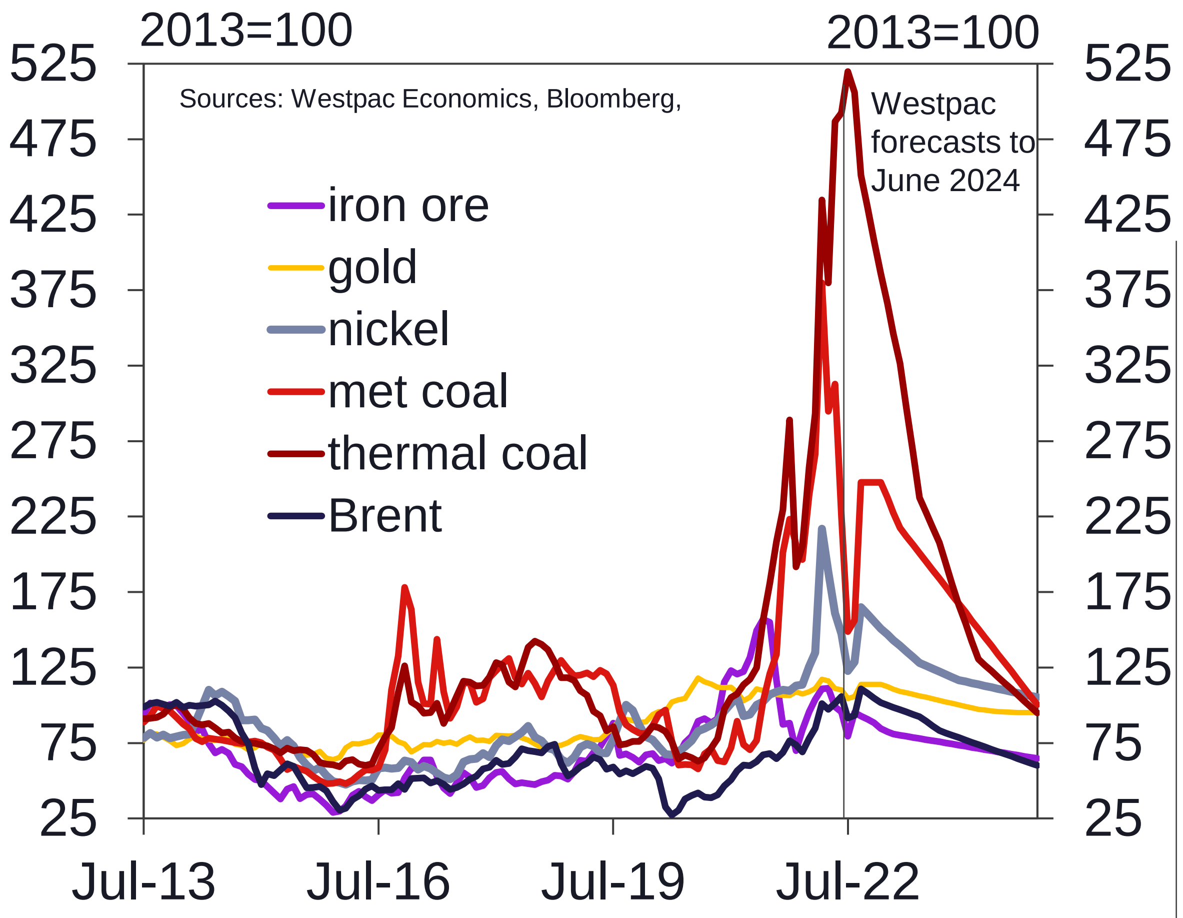
Temporary	Longer lasting
• Switch from services to goods during COVID reverses • Demand weakens in response to higher prices • End of major supply disruptions from COVID • ‘Great resignation’ moderates • Price pressures emanating from specific sectors such as oil eases. • Increased costs spur productivity drives	• Lagged effects from upstream cost increases continues. • Inflation starts feeding into expectations and wider price and wage setting. • Ongoing costs associated with virus – surveillance and intermittent disruptions? • Need for more ‘contingency’ capacity in case of future disruptions? • Under-investment in capacity. • Risk of ‘son of omicron’ variant wreaking more havoc

Ukraine shock as faded as recession fears loom

Commodities pre & post Ukraine

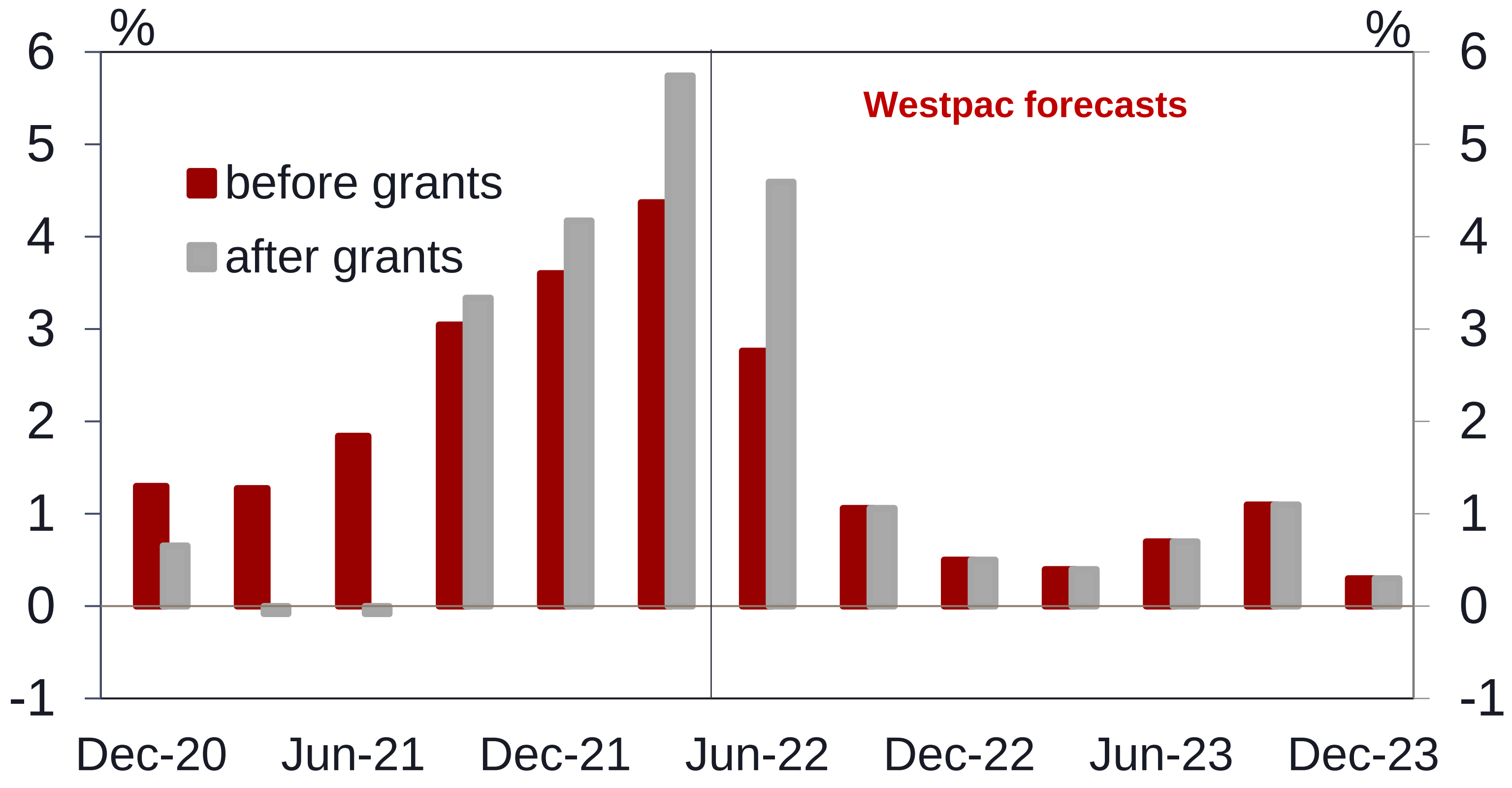
	Current	% change since	% change Jun 21 to
	14-Jul-22	24-Feb-22	Feb-22
Wheat	815	-12	37
Crude Oil, Brent	96	0	29
Thermal Coal	447	78	78
Met Coal	210	-49	143
Iron Ore	105	-23	-37
Nickel	21,336	-15	37
Copper	7,347	-26	6
Export Price Index	340	-12	14

Australian commodities



Grants first suppressed then boosting dwellings

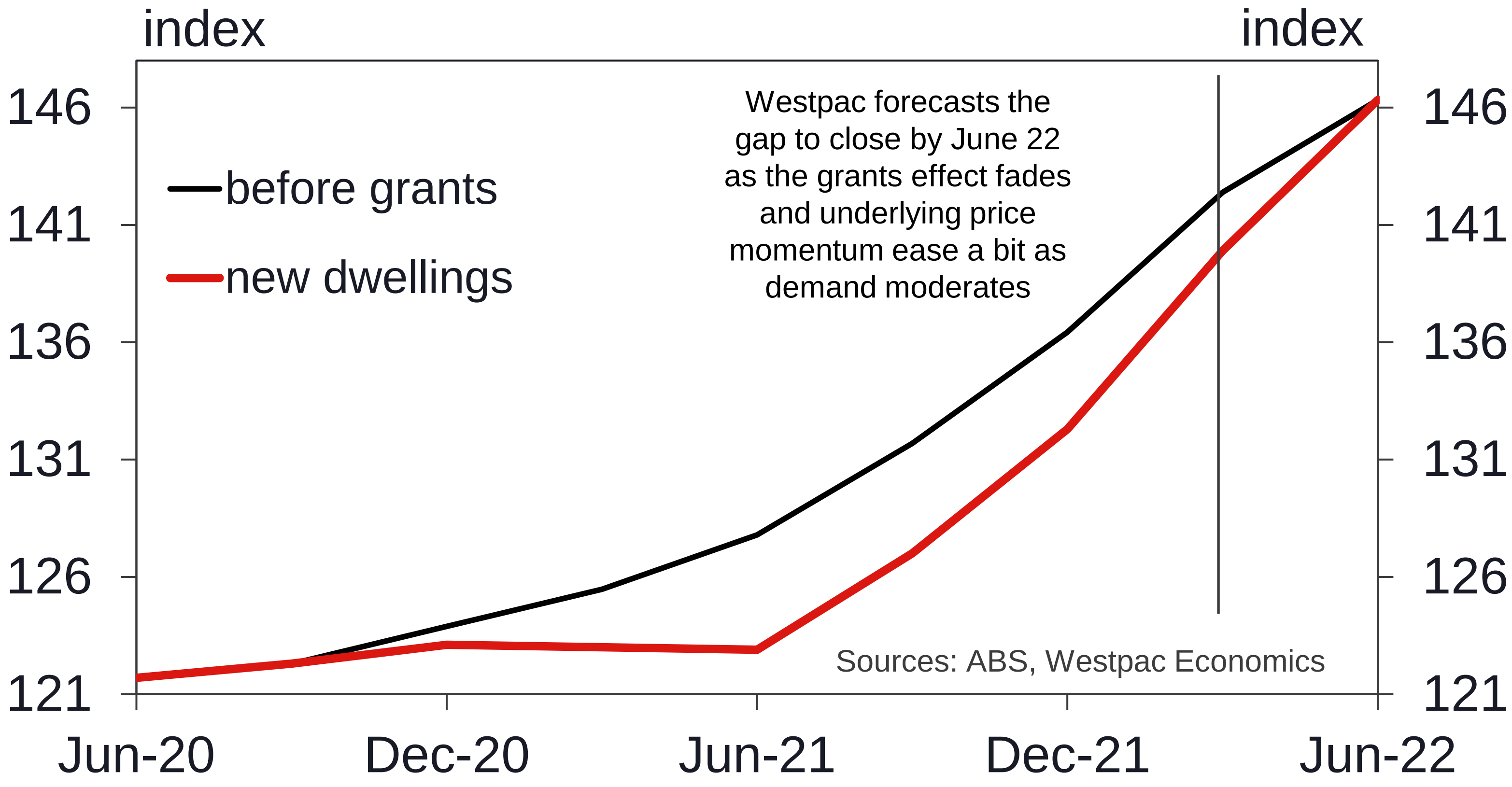
As housing grants effect fades dwelling prices jump higher



- Fewer grant payments this quarter from the Federal Government's HomeBuilder program contributed to the rise in dwelling prices.
- Dwelling prices excluding grants lifted 4.4% in March, following on from a 3.6% rise in December, a 3.0% rise in September and a 1.8% rise in June.
- Dwelling price inflation continues to accelerate even as the demand boost from the building grants is fading.
- This is a very robust update on the dwelling price inflation pointing to some upside risk for our forecast for the pressure on dwelling prices to ease from the June quarter.
- The 4.4% rise in dwellings ex grants suggests 1.3ppt of the 5.7% rise dwellings was due to less grants being use this quarter.

Expect grants to fade to zero in Q2

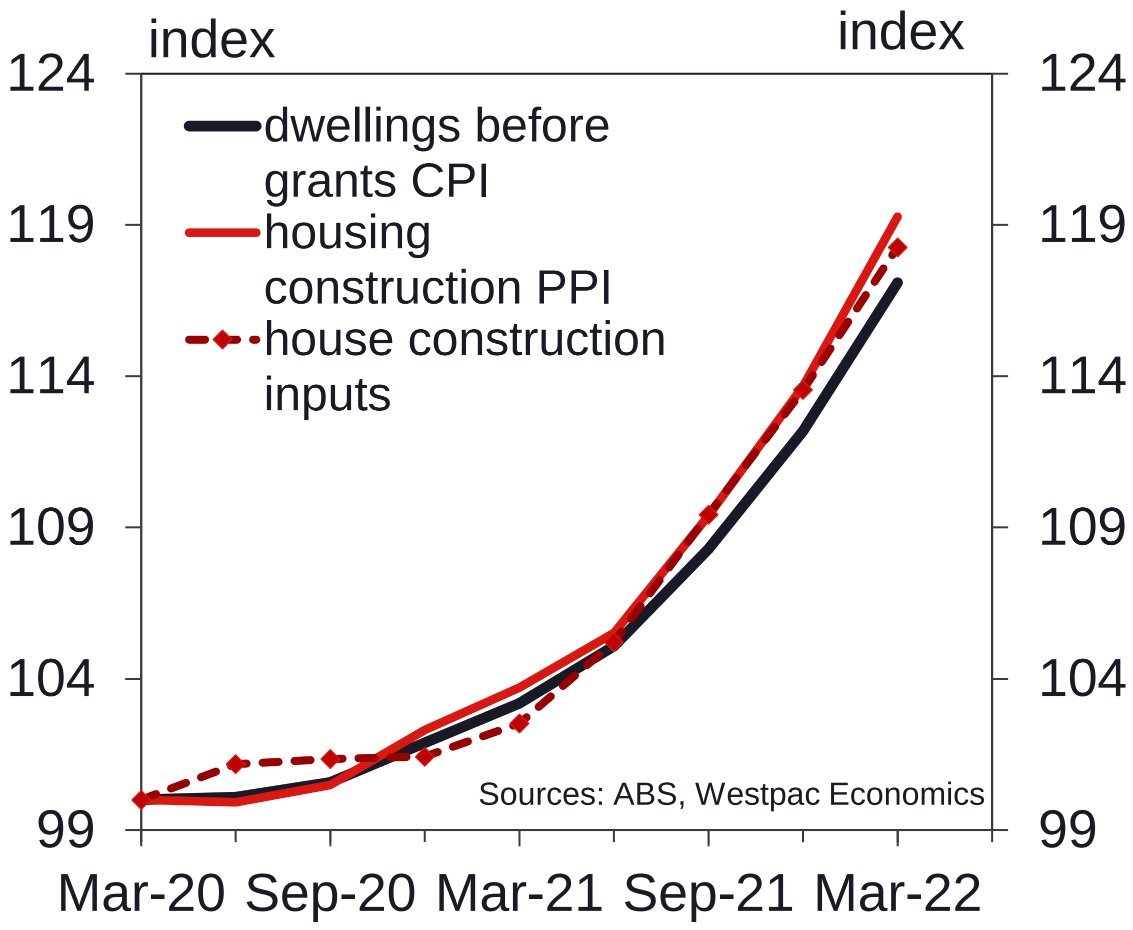
Clear risk underlying prices could rise faster than expected



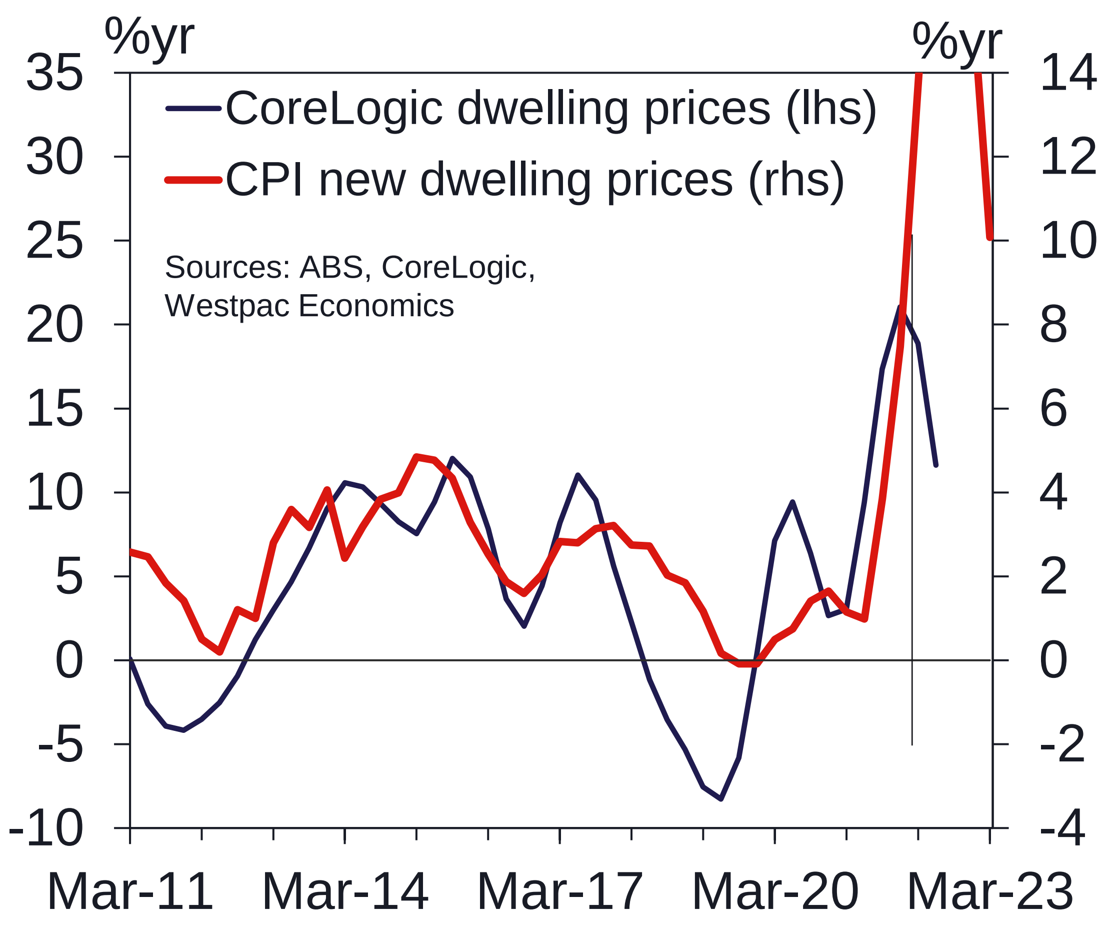
- That left a 1.8% gap between the level of dwelling prices before and after grants.
- We expect this gap to close in the next quarter so even before we see a rise dwelling prices before grants they are set to rise 1.8% in the June quarter.
- We expect the momentum in the underlying dwelling prices before grants to ease but there is a clear risk we will see another outsized print from dwellings in the June quarter.

Rising input costs keeps the pressure on dwelling prices

Cost inflation underpinning rise in dwellings

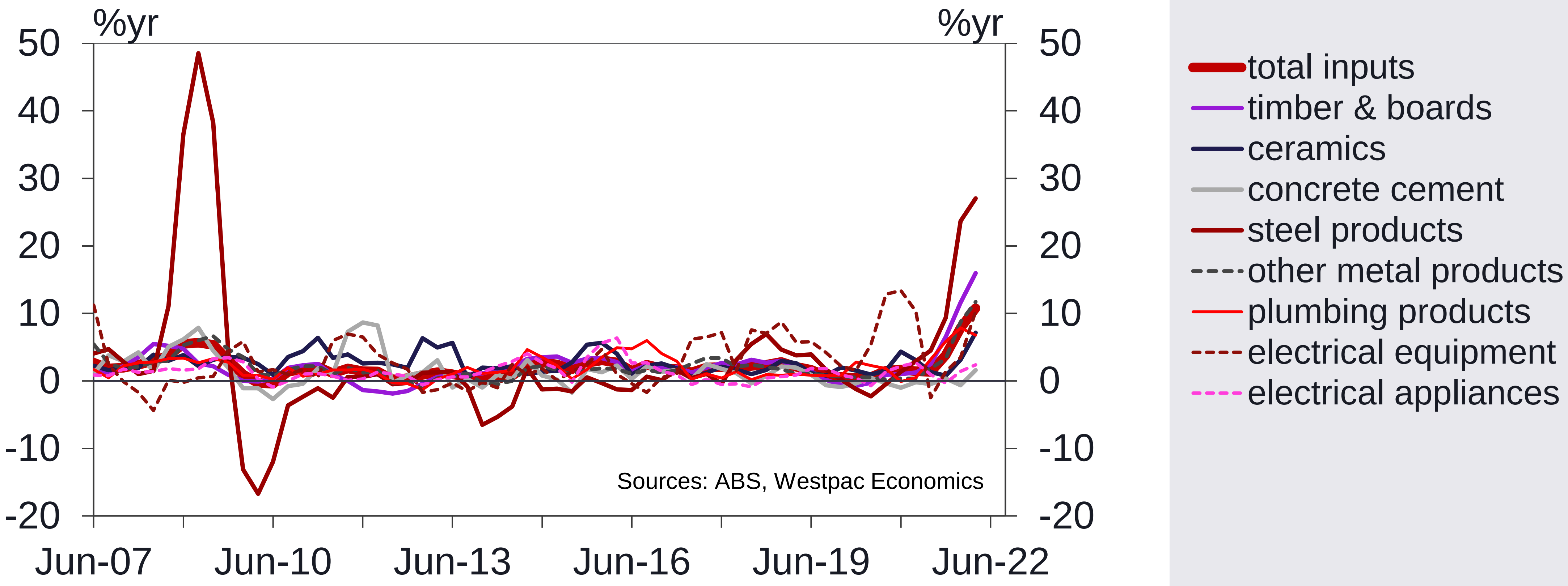


House vs CPI dwelling prices



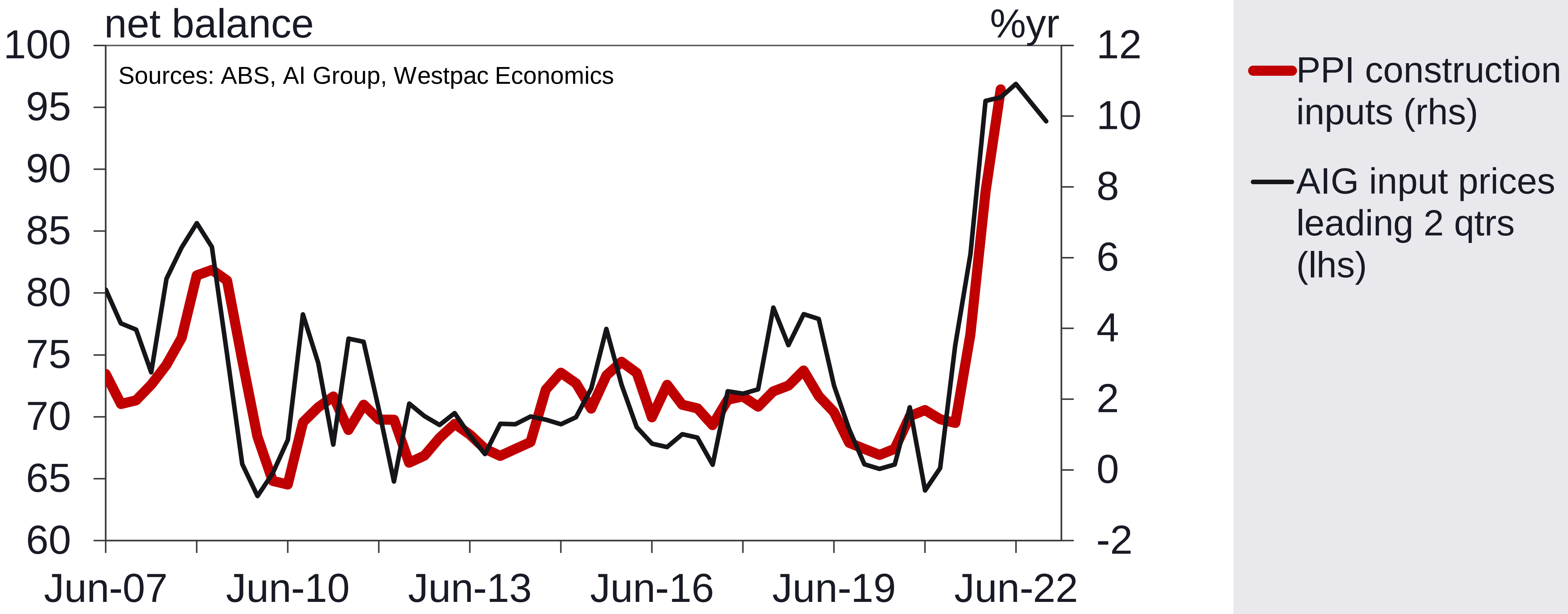
Dwelling construction inflation running hot

During the mining boom it was steel, this time it's widespread



Dwelling construction inflation peaking

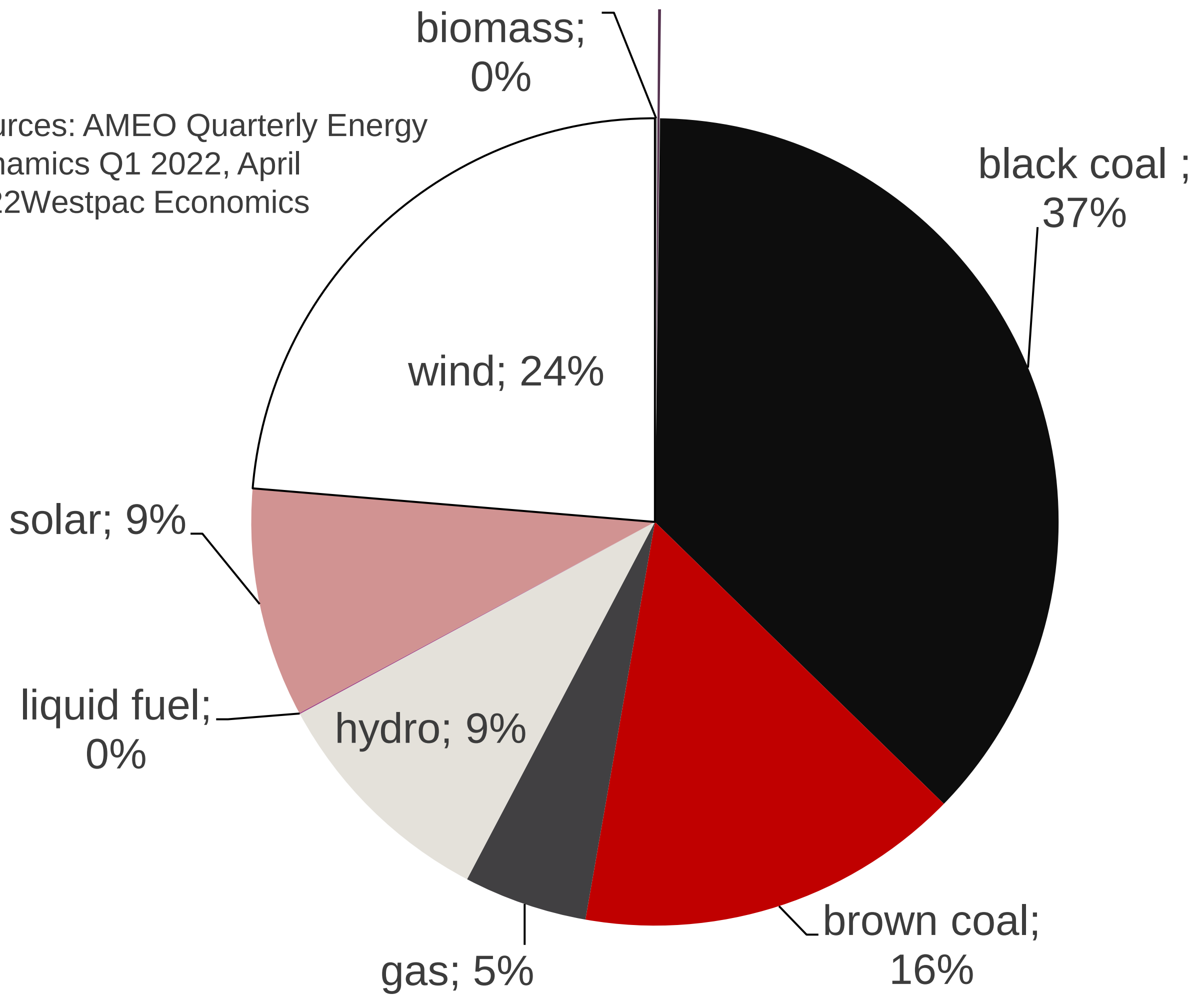
Business surveys suggest construction cost inflation may be peaking



Gas

Gas may only be 5% of generation but as the marginal producer, mostly used during peak requirements, it is the price setting fuel.

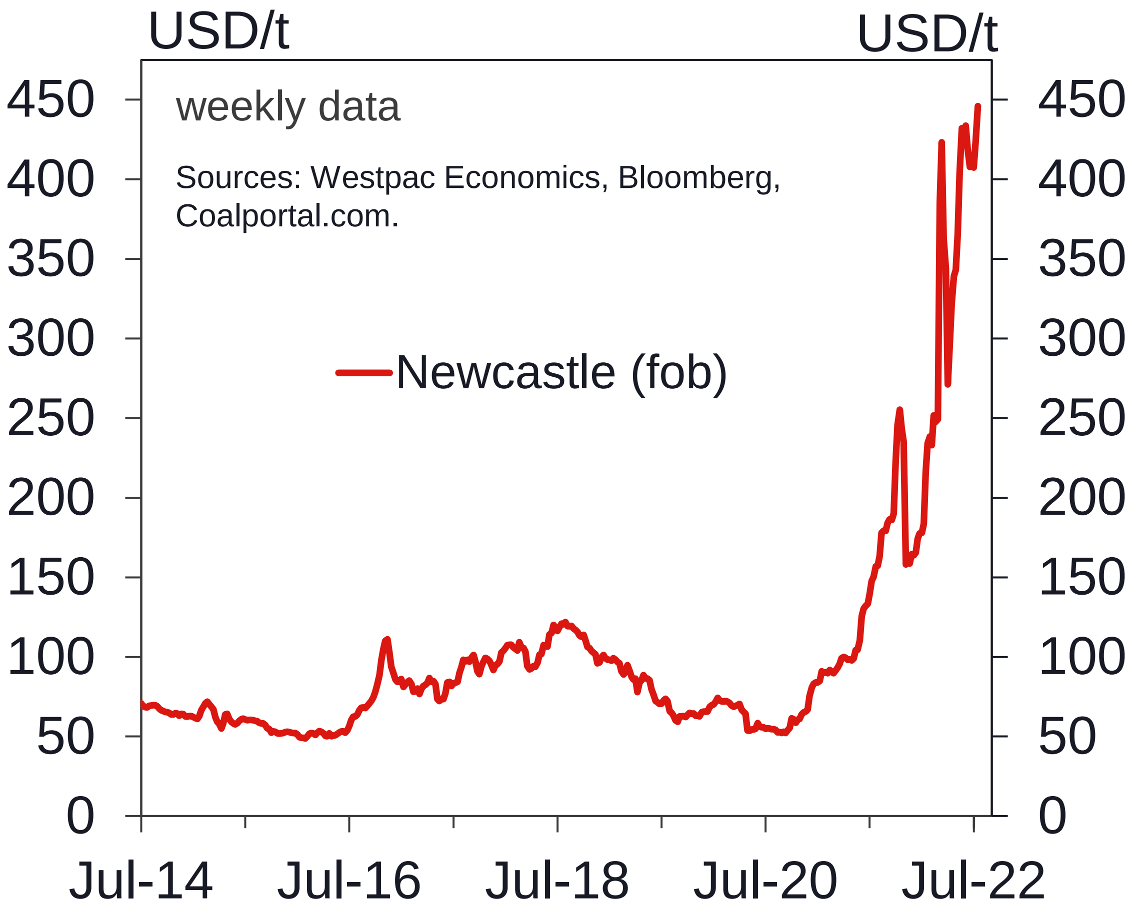
Fuel mix in Australian National Energy Market



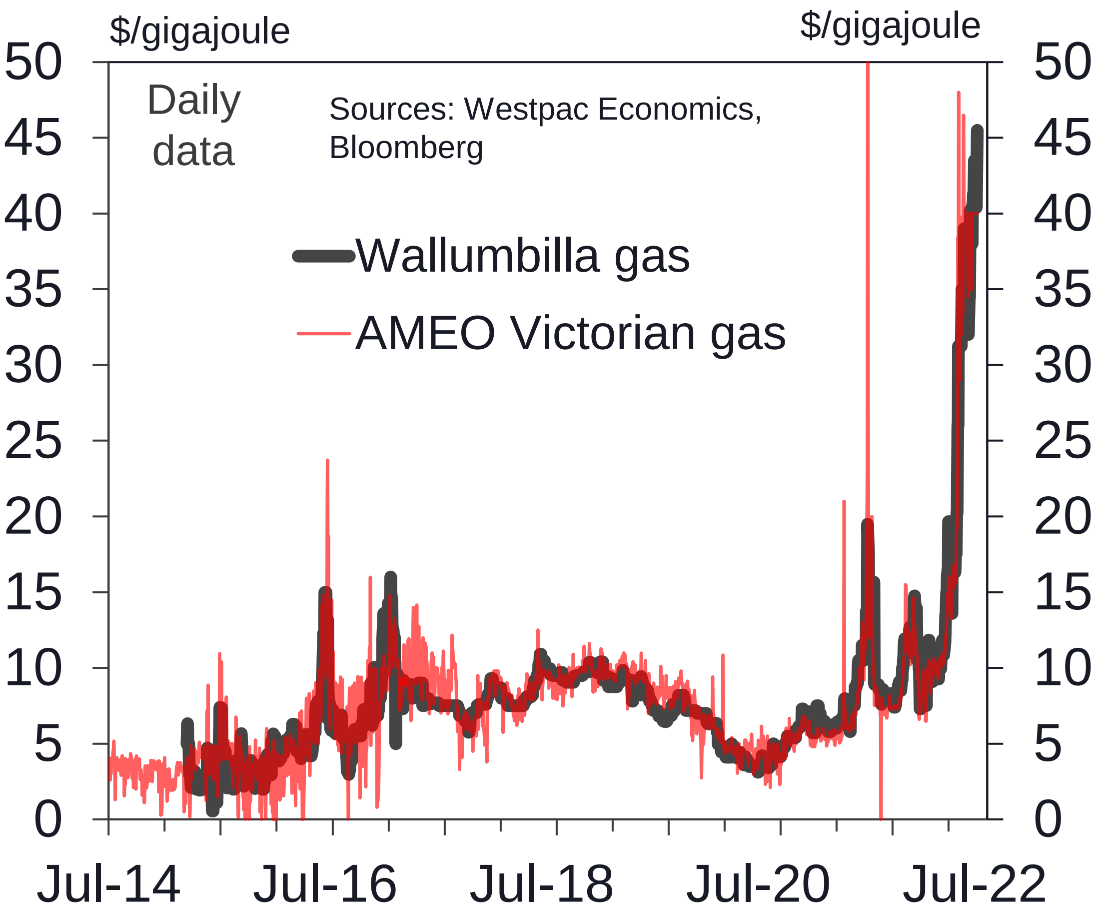
Sources: AMEO Quarterly Energy Dynamics Q1 2022, April 2022Westpac Economics

Fossil fuel prices surge higher with global disruptions

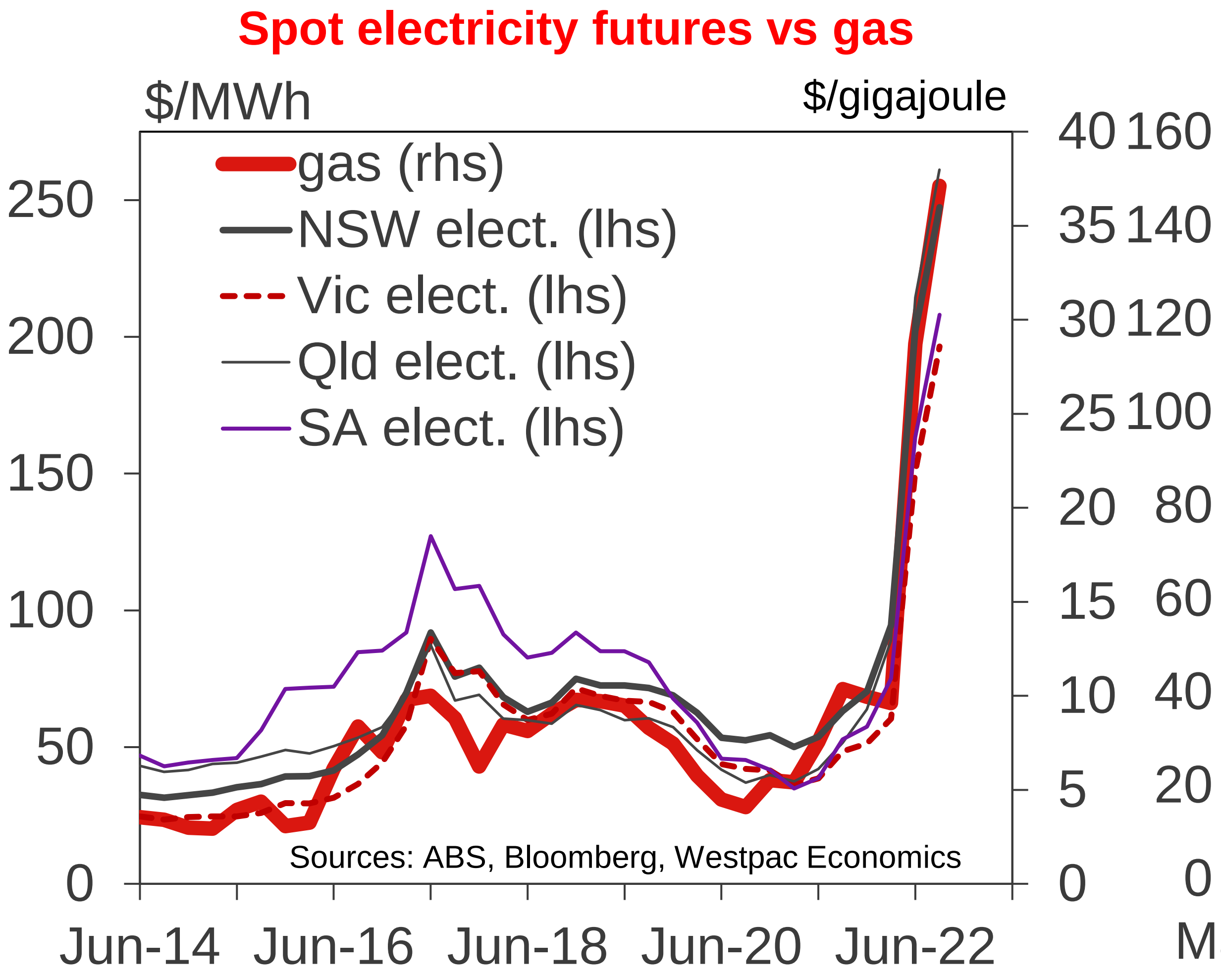
Thermal coal surges to record high

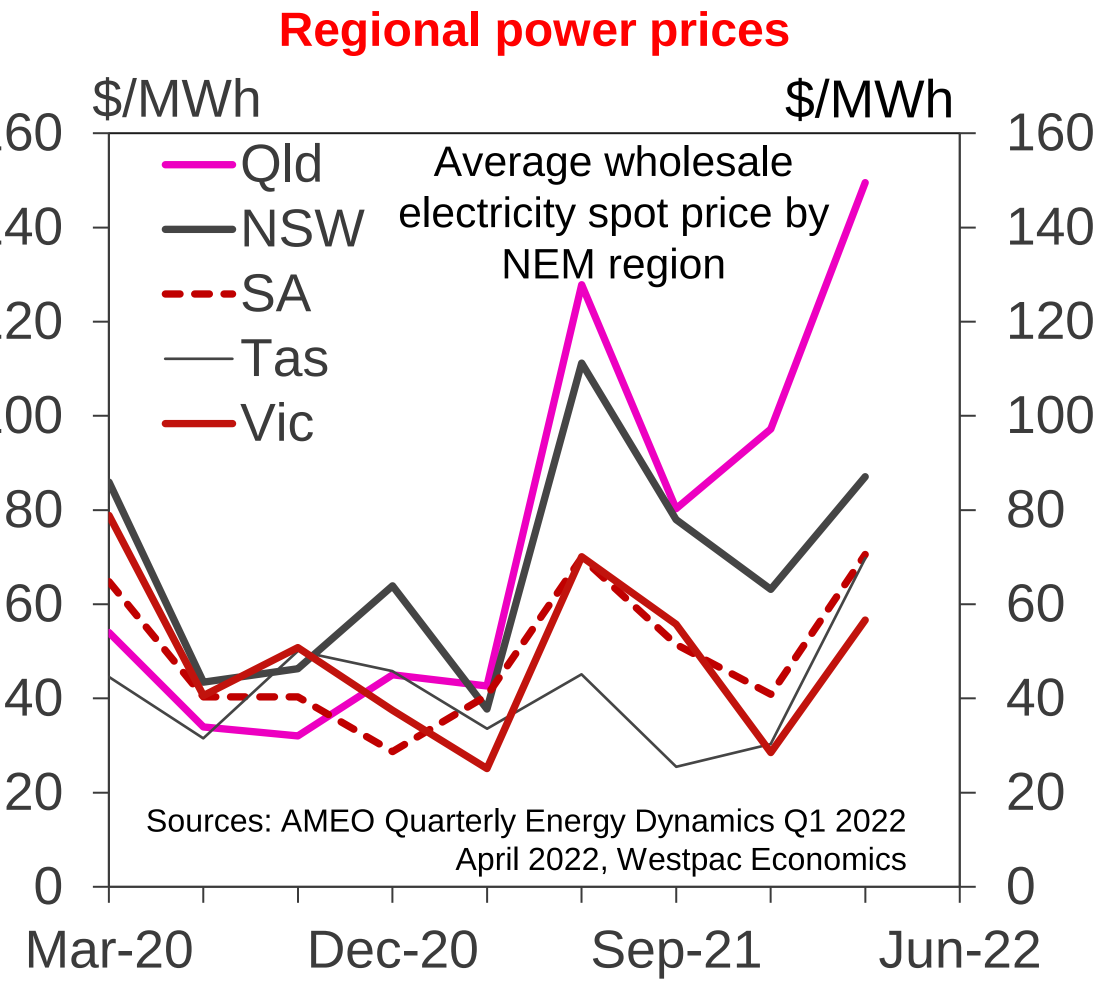


Gas prices surge with global demand



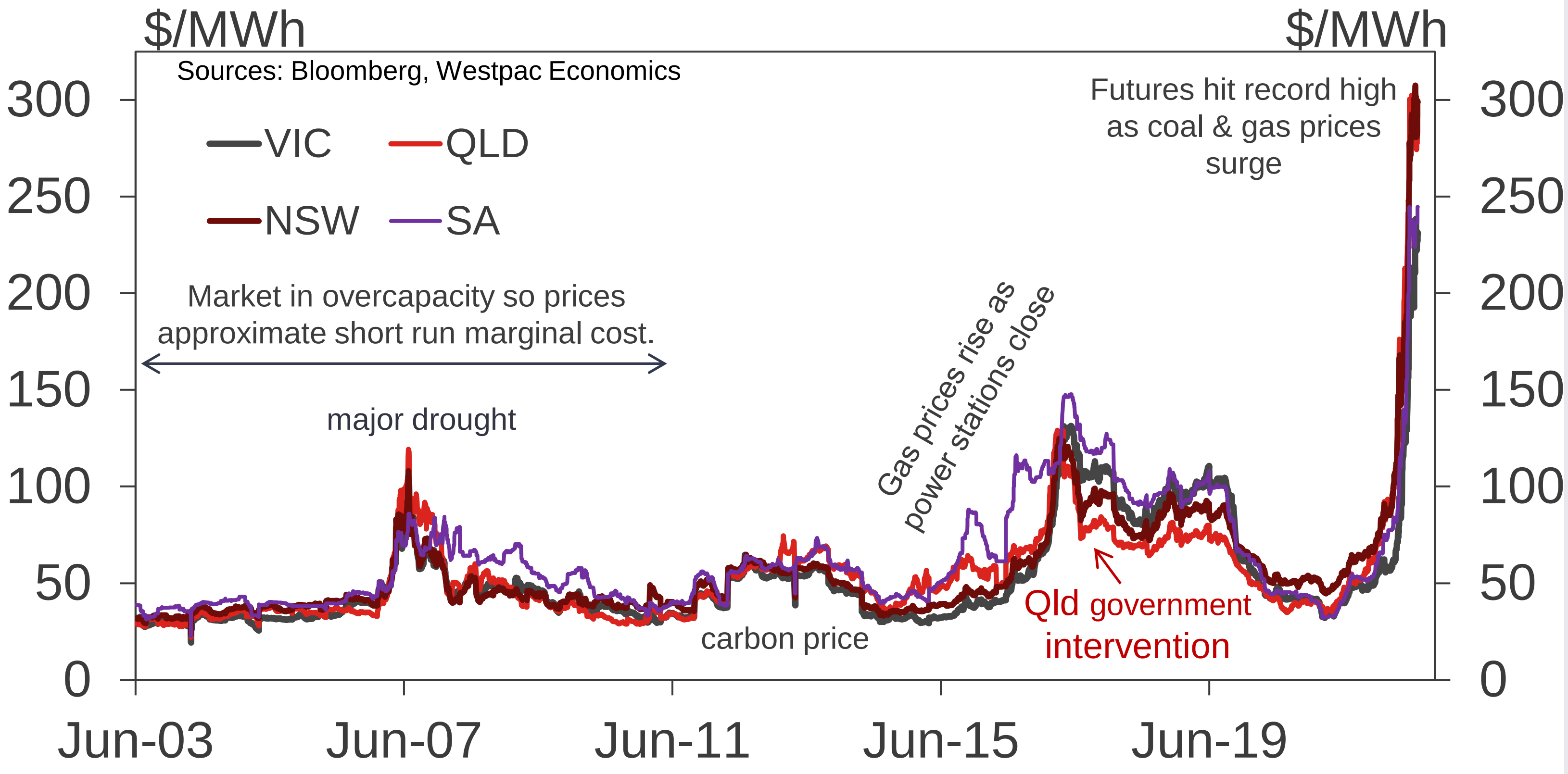
Gas sets marginal power prices but regional issues matter





History of Australian electricity prices

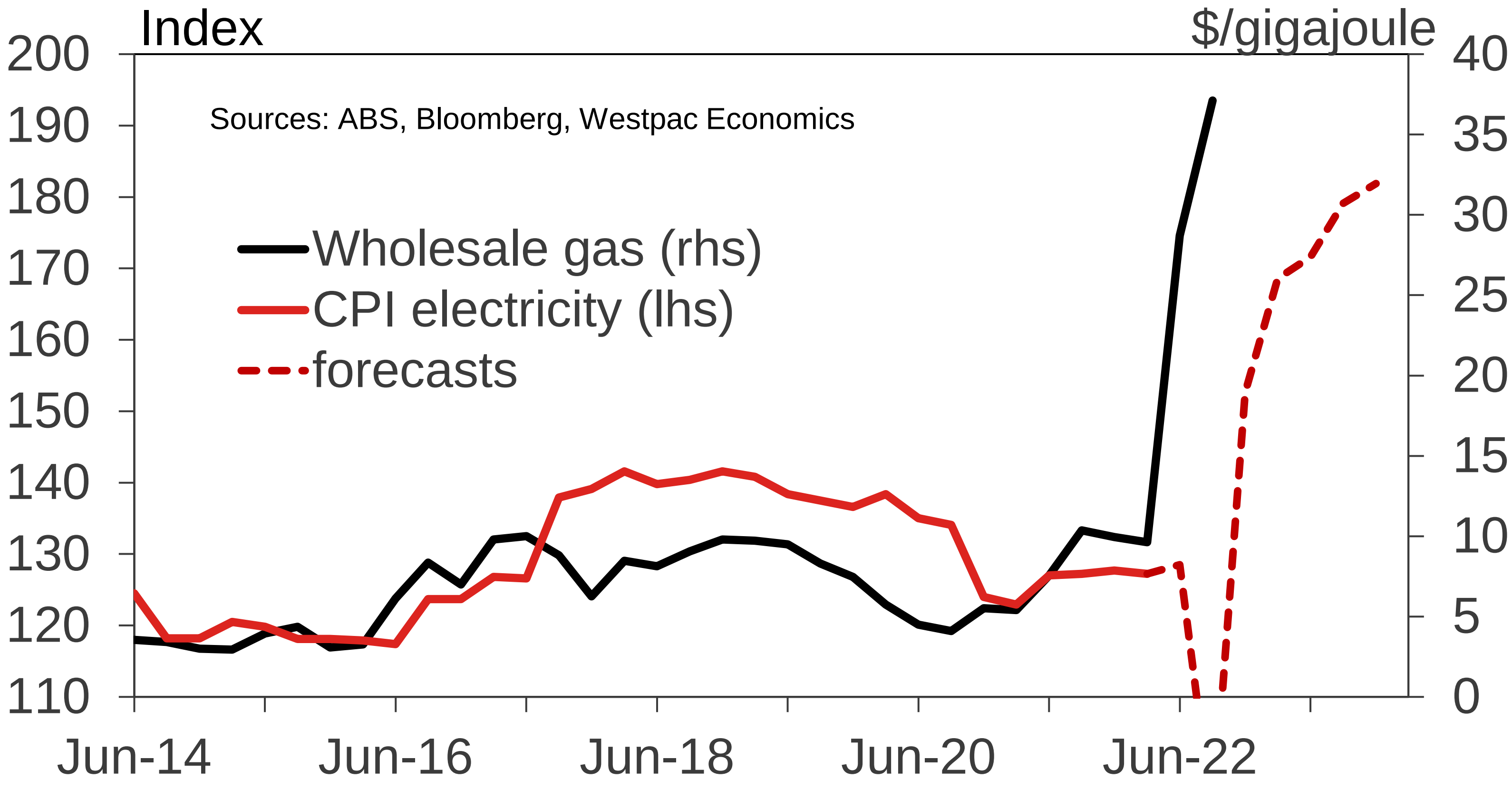
Electricity futures are volatile but 2022 is extreme



- Up to 2016, & outside of the introduction of the carbon tax, the electricity market was in over capacity & electricity prices approximated short run marginal cost of generation coal fired power plants.
- In 2016/2017 a number of older, marginal coal fired power plants were retired sooner than expected. Renewable power generation could not fill the gap with the shortages filled by gas fired generators. As such gas set the marginal price.
- Australian gas exports rapidly expanded drawing supplies from the local market forcing domestic prices into alignment with global prices. Global demand for LNG was very solid pushing prices higher.
- Qld was the first state to react forcing lift output (reducing prices) and was followed by a lift in generation from other states just as global gas price eased.
- From 2019 renewable energy increased production significantly and with a marginal cost of zero renewables supply power even when prices falls below the cost of production for thermal generators. Combined with falling gas prices electricity fell back to the short-run marginal cost. This new equilibrium lasted till the energy shock of 2022.

Rebates a temporary offset for power bills

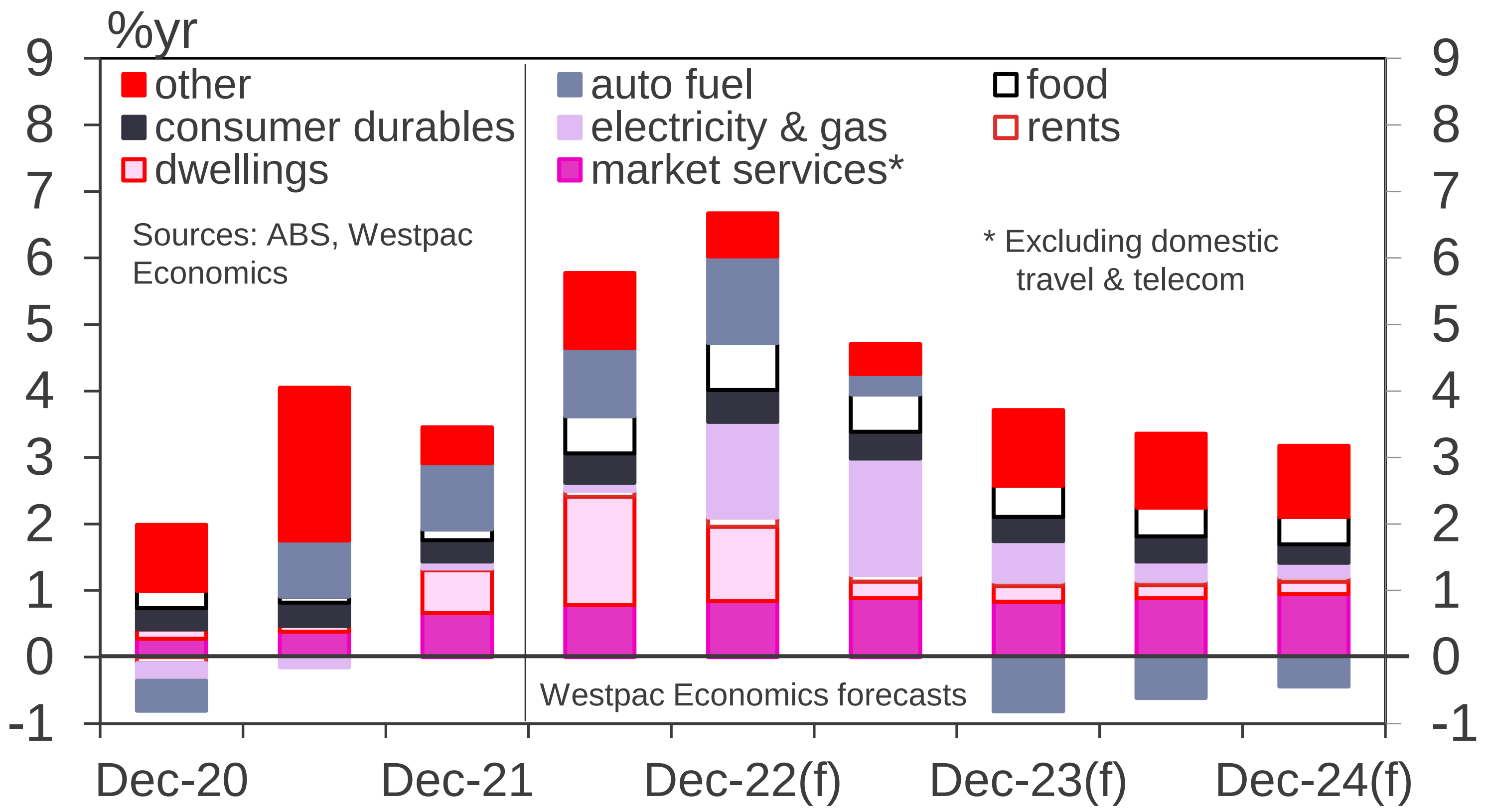
State energy rebates adds volatility & only delays inflation



- The Default Market Offers (DMO) have been lifted between 5% (in WA) and 14% (in NSW) with a clear risk that if wholesale electricity prices don't come down soon they will rise further.
- To offset this increase state government energy rebates have been announced with various terms and conditions for application. Western Australia has a $400 rebate, Victorian a $250 rebate while New South Wales and Queensland are offering $180 and $175 respectively.
- Power bills are going to be pushed (price rises) and pulled (rebates lowering prices paid) through the remainder of 2022. Electricity bills are set to fall 28% in Q3 (due to the rebates) lift 65% in Q4 then a 11% in Q1 2023.

Inflation turning more fundamental

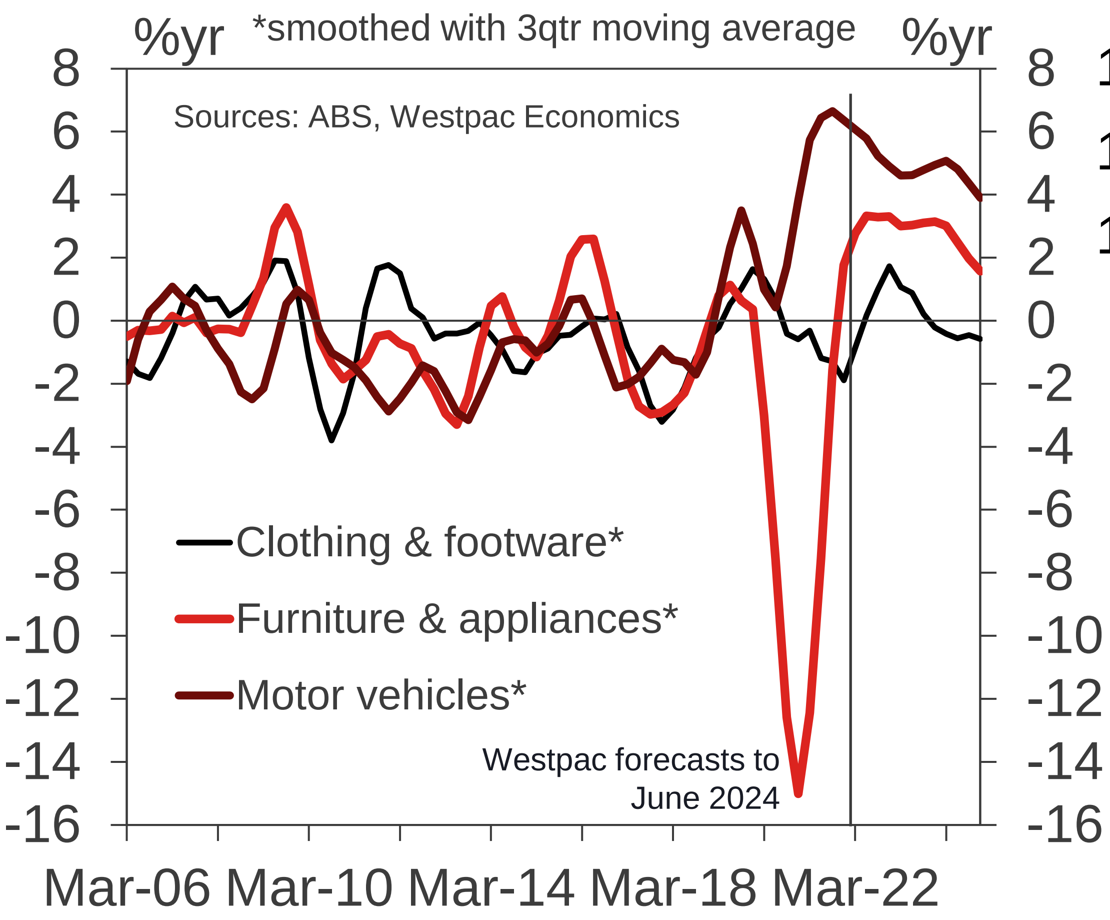
Dwellings fade, fuel turns negative as market services lift



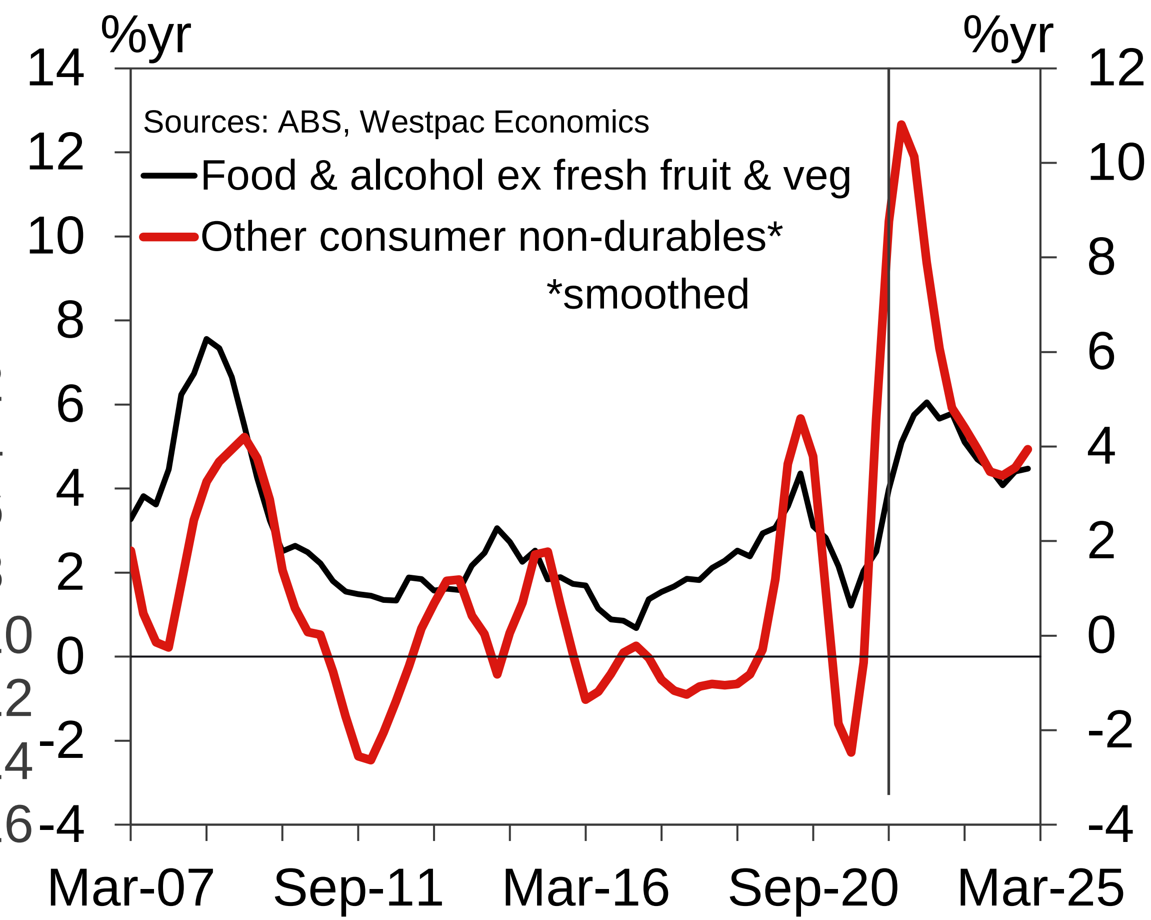
- We have adjusted dwelling price forecasts to account for a larger than expected rise in the underlying series before grants, ongoing cost pressure in construction plus a boost from the expiration of grants.
- For June we have a 4.6% rise in dwelling prices made up of 1.8ppt from the ending of the grants and 2.8% from underlying gains. There is some upside to risk from construction costs.
- The 22 cent reduction in the fuel excise in June, to be reversed in December as are the various state power offsets which will be a negative in Q3.
- Most importantly is the broadening inflationary pressures that are expected to continue through to the end of this year.
- Q1 1.4% rise in the trimmed mean should be the peak in the quarterly pace of core inflation to be followed by 1.0%qtr prints to year end with the annual pace peaking at 4.8%yr in September 2022.
- Headline CPI moderates to a still solid 1.5% rise in June, then 0.6% rise in September (due to power rebates) and a 2.2% rise in December
- The annual pace peaking at 6.6% before moderating to 3.0%yr by end 2023.

The Covid deflationary pulse has turned inflationary

Furniture is now inflationary

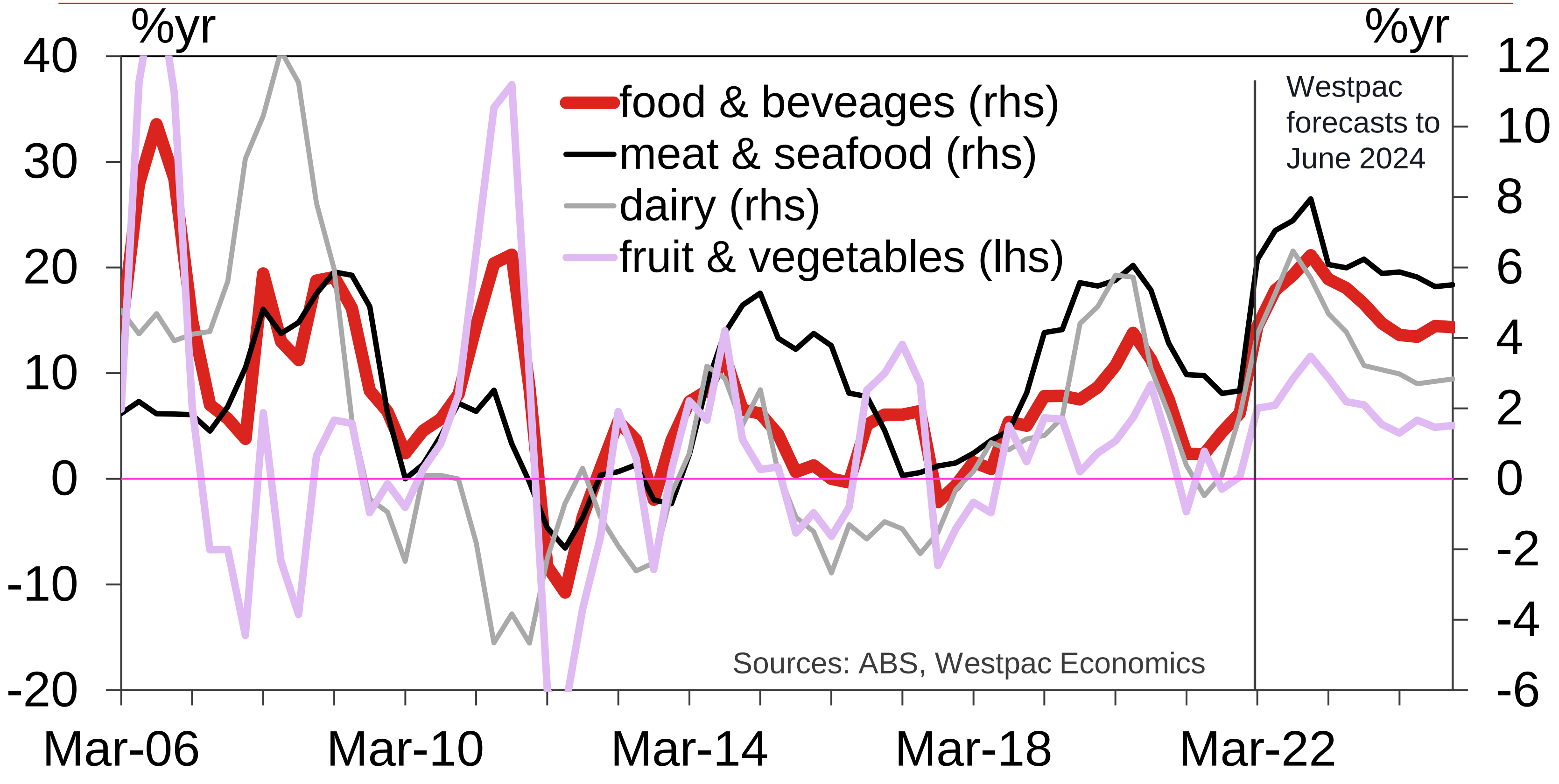


There is more than just food inflation



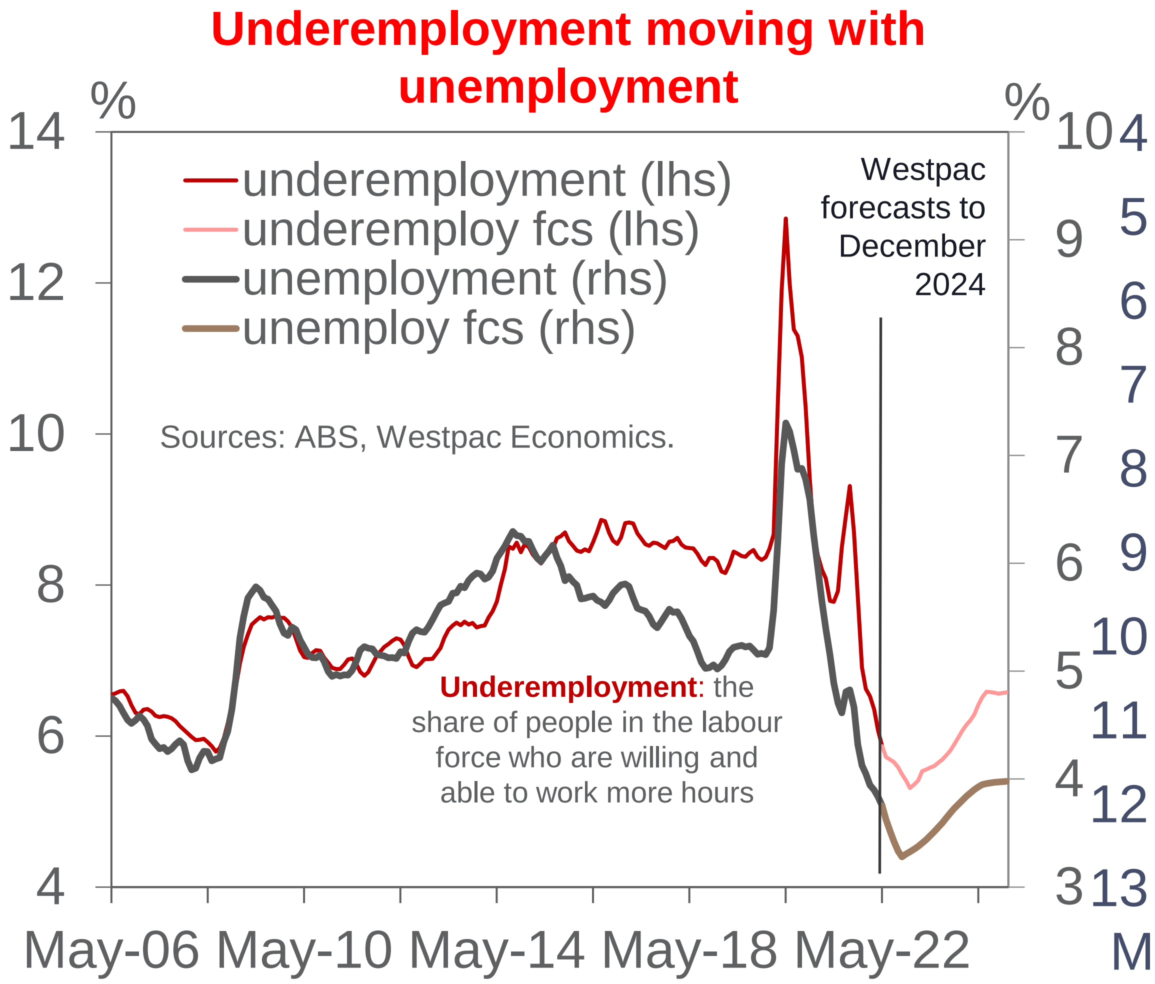
Food inflation to remain elevated

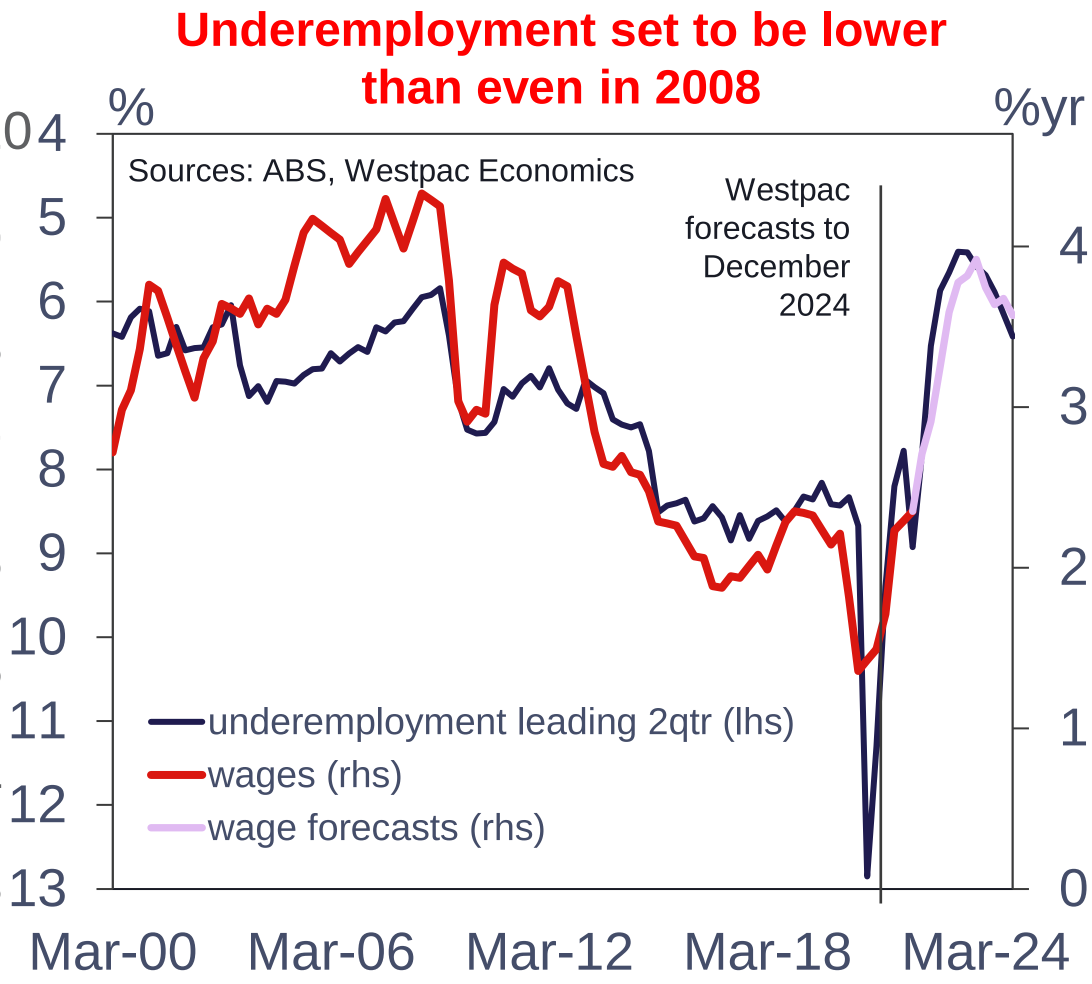
Food inflation to peak at end 2022 but remain elevated through 2023



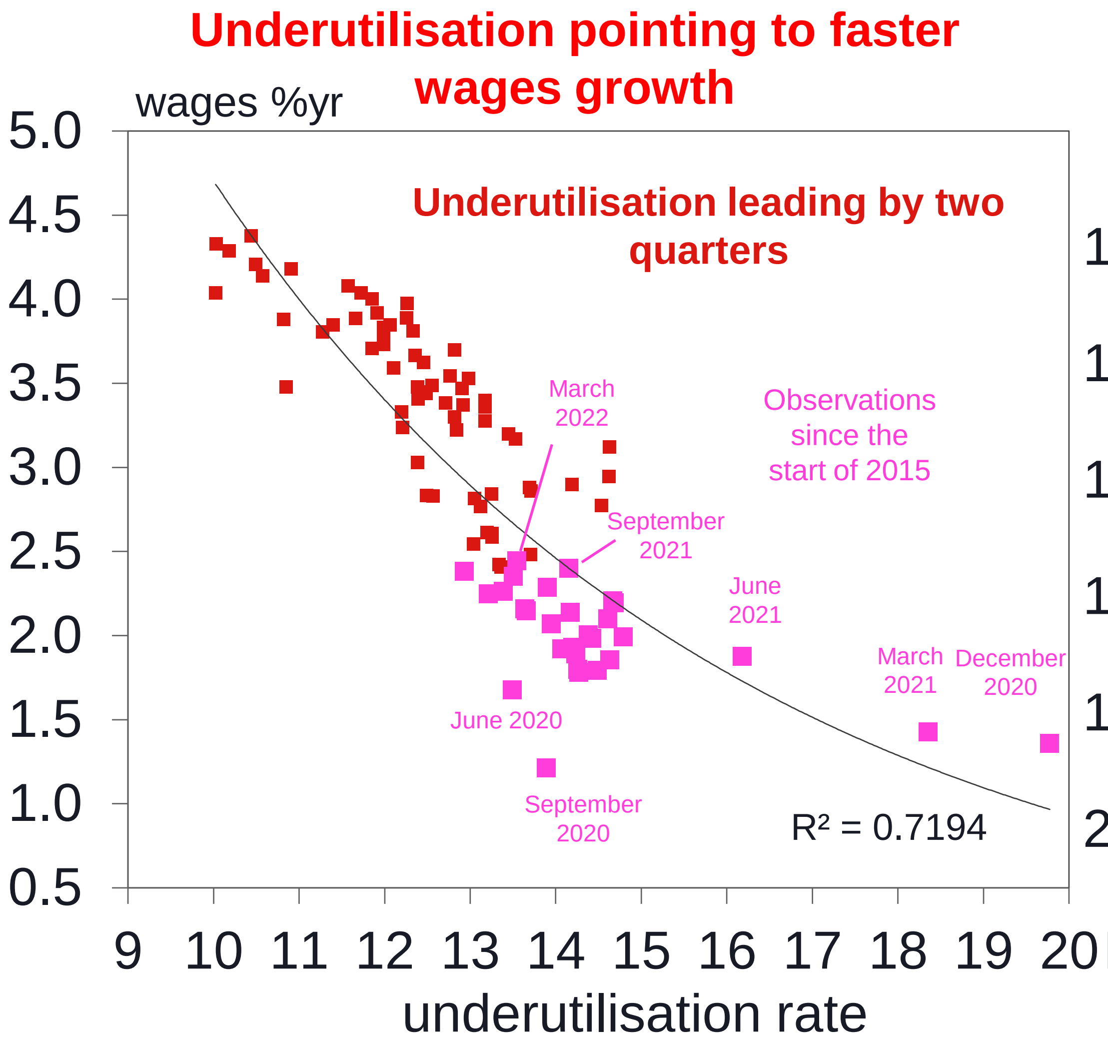
- Food price inflation to peak in late 2022 or even in early 2023.
- However, supply conditions are unlikely to move to an oversupplied situation any time soon due to ongoing transport disruptions, elevated input prices and labour shortages.
- An oversupplied situation is needed to generate a deflationary pulse to help correct extended price levels.
- Without this deflationary pulse, food price inflation is likely to remain elevated compared to recent history.

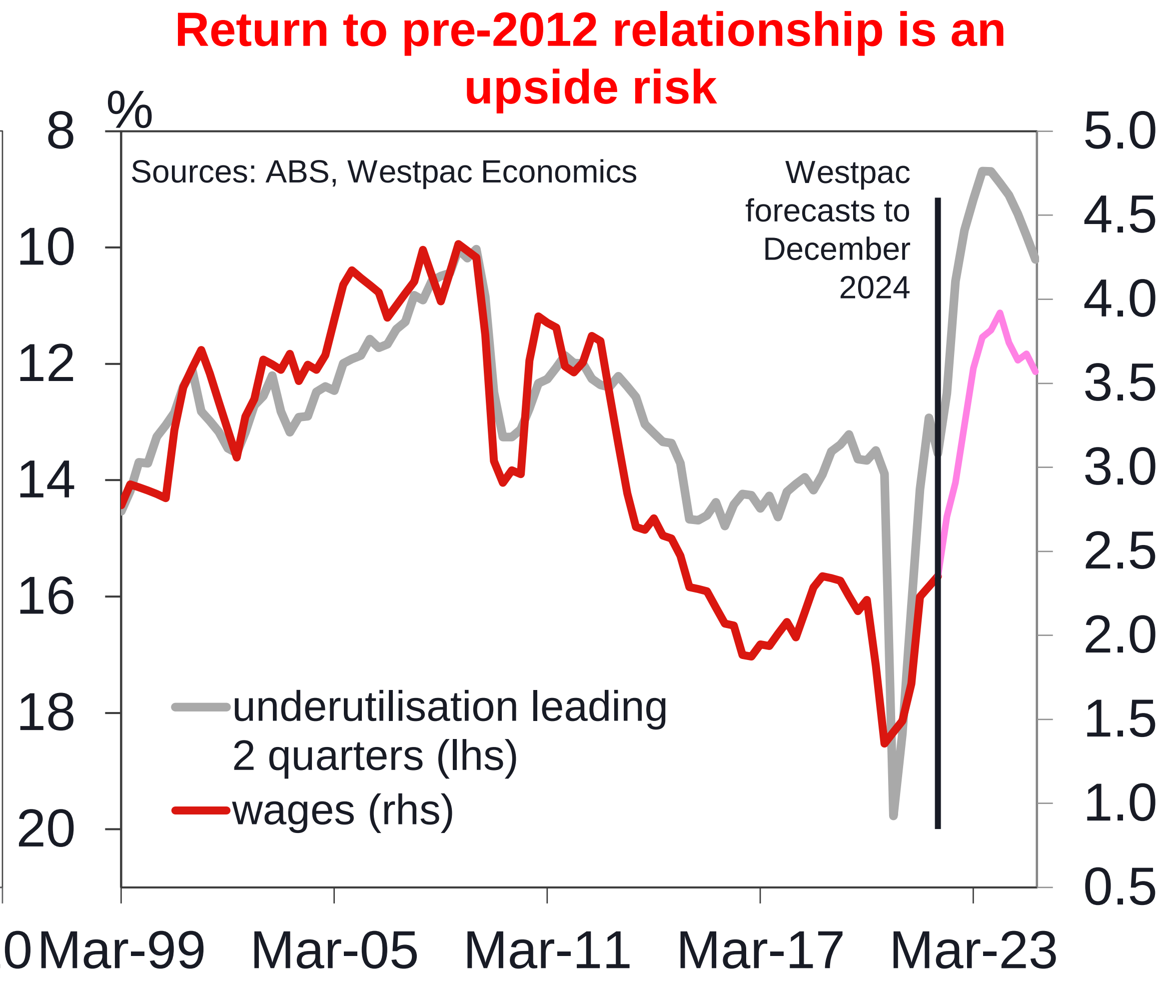
Unemployment to probe new monthly record low



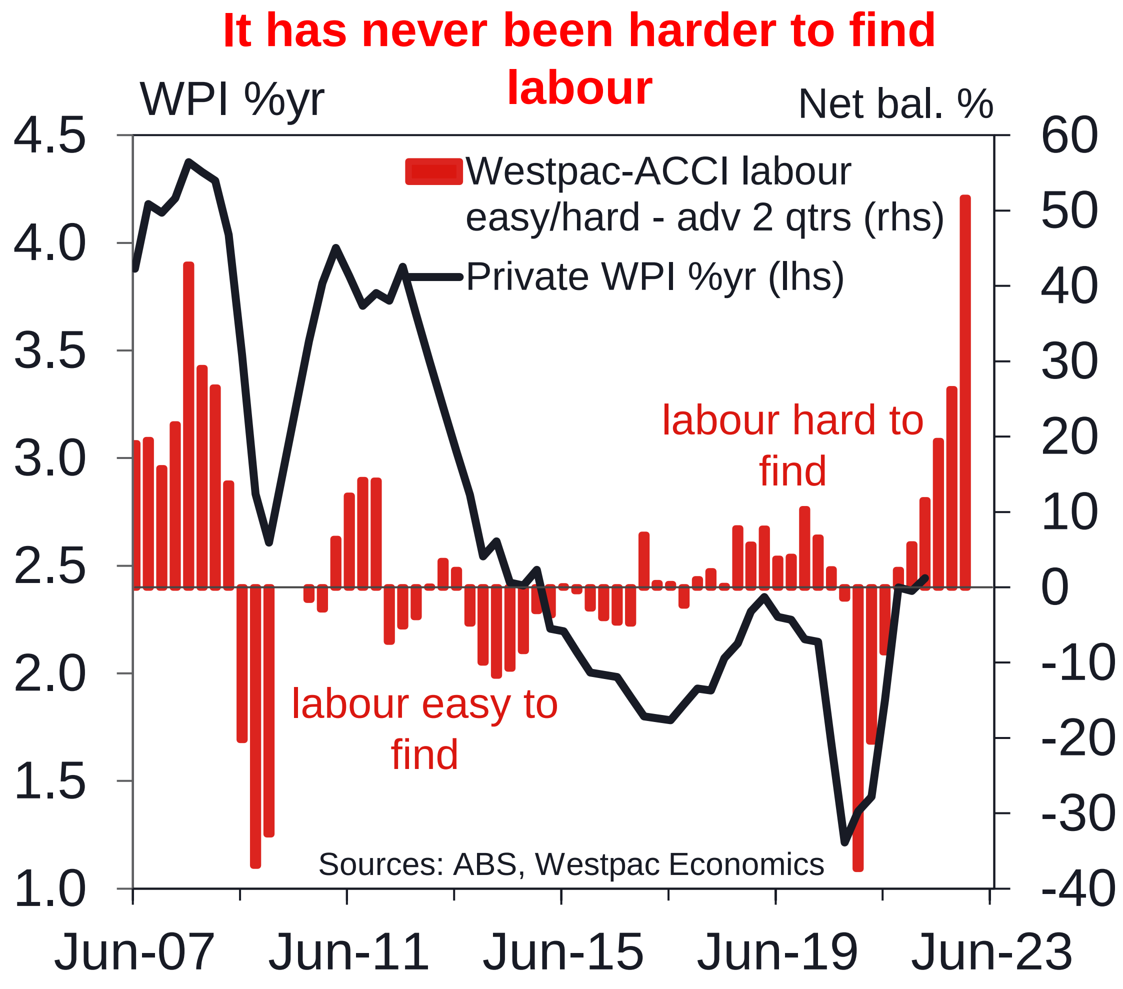


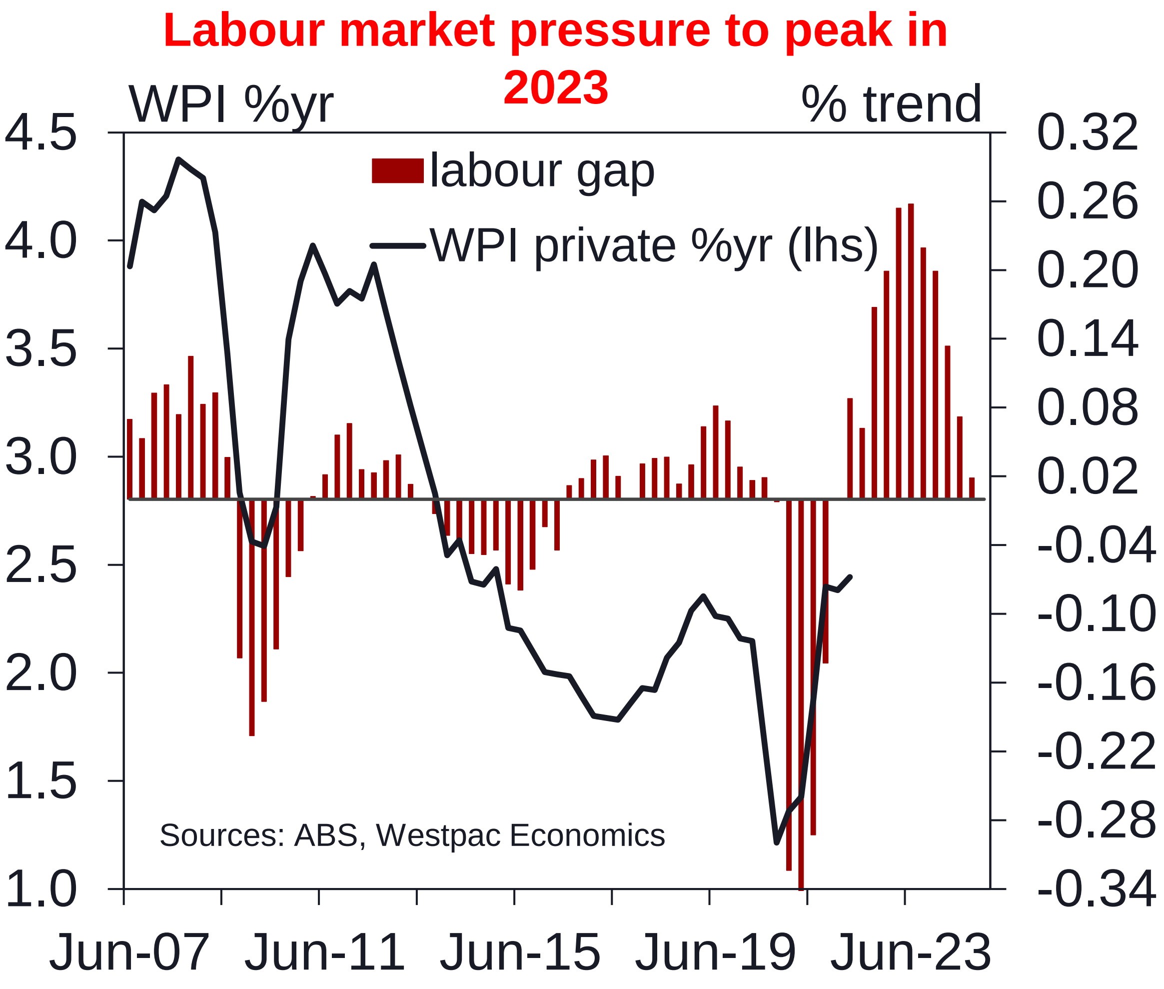
Underutilisation has more information for wages



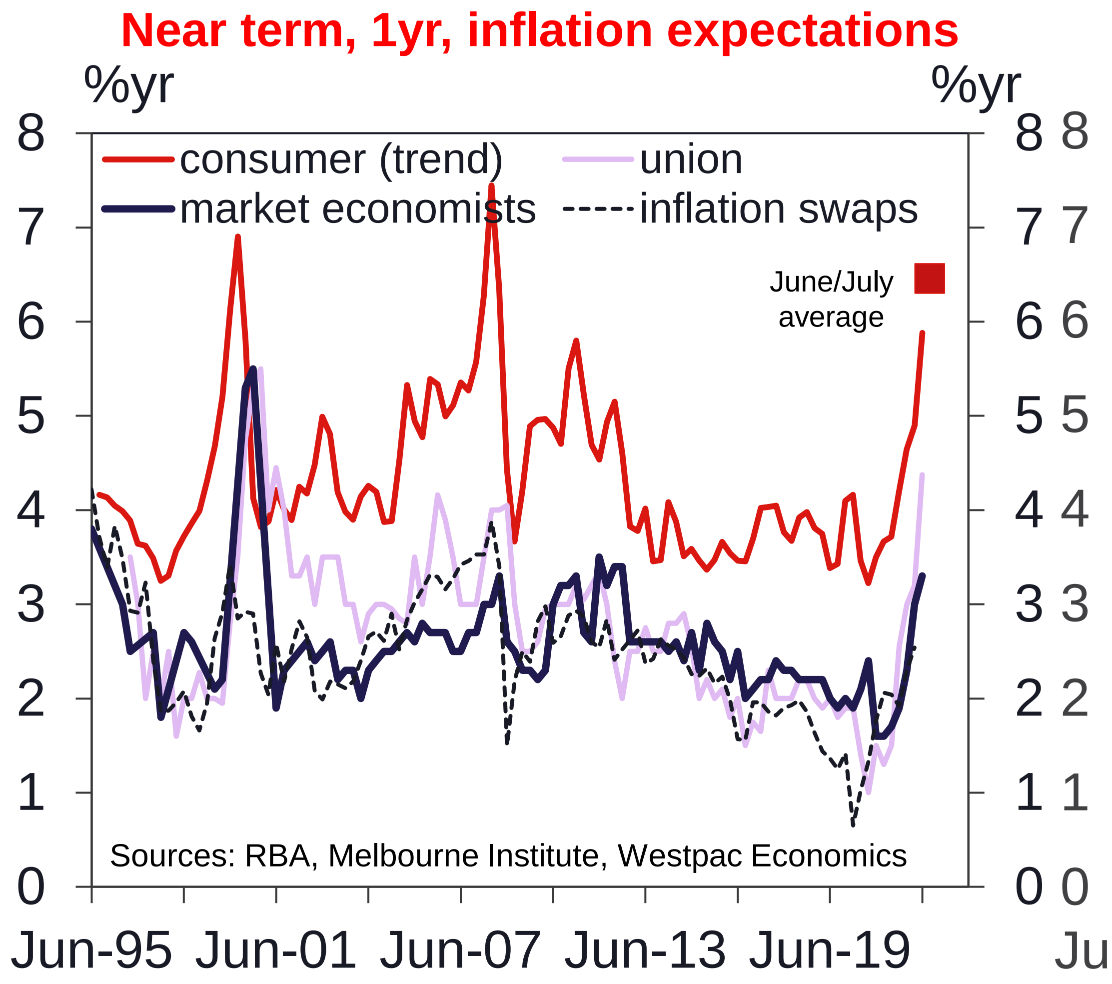


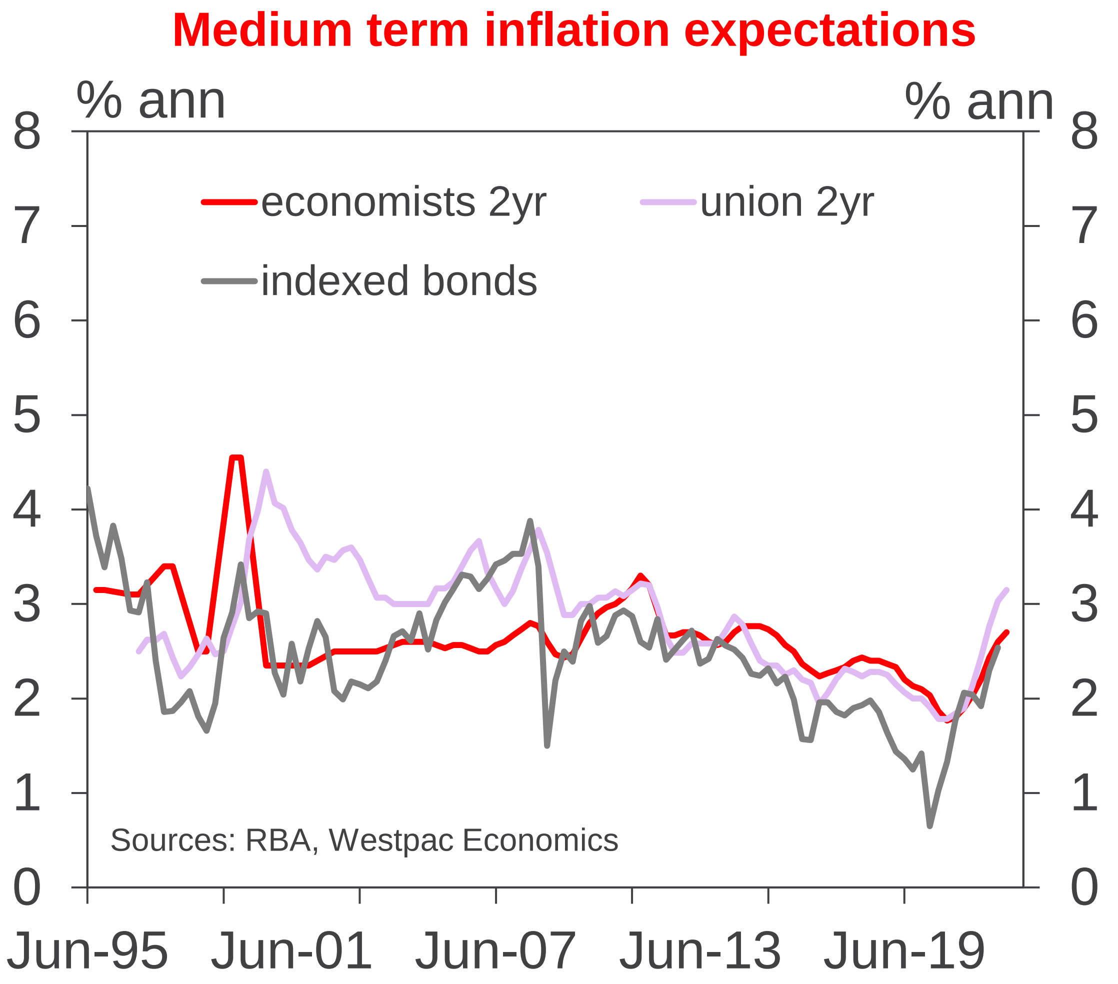
Labour market has never been tighter





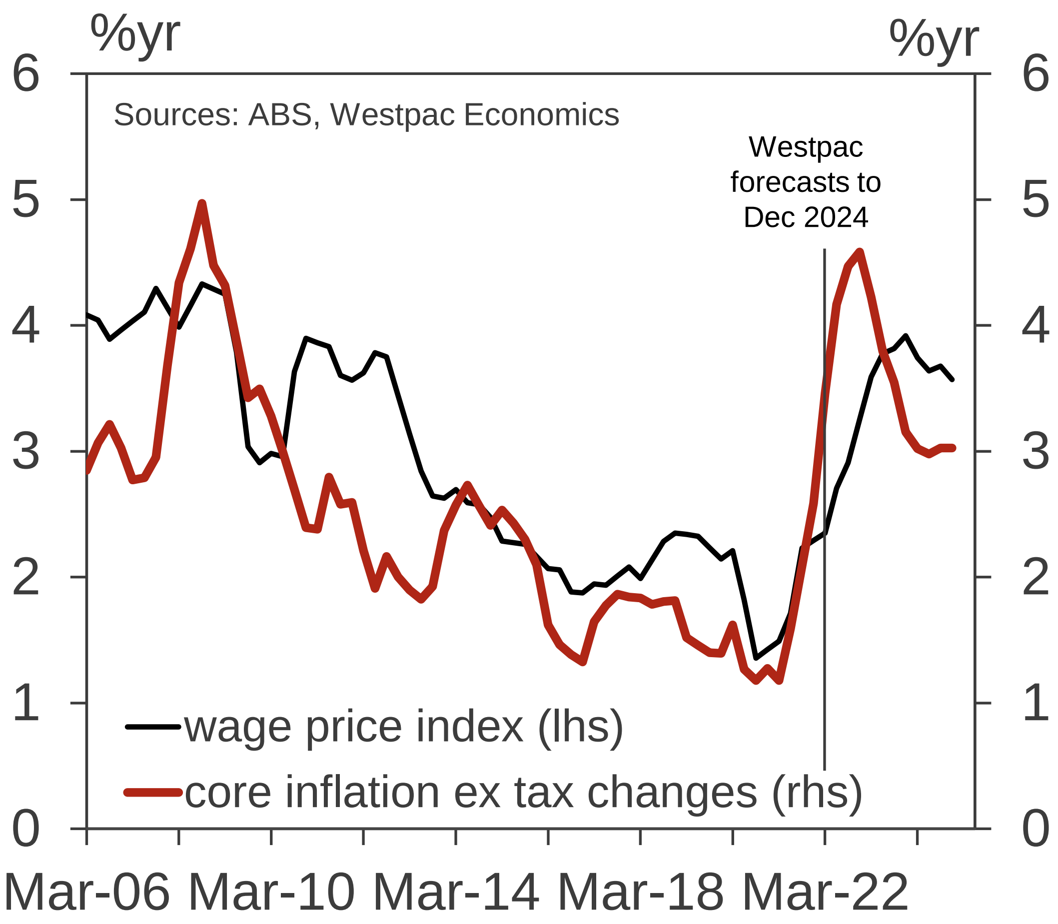
Near term expectations lift as medium term holds 2% to 3%



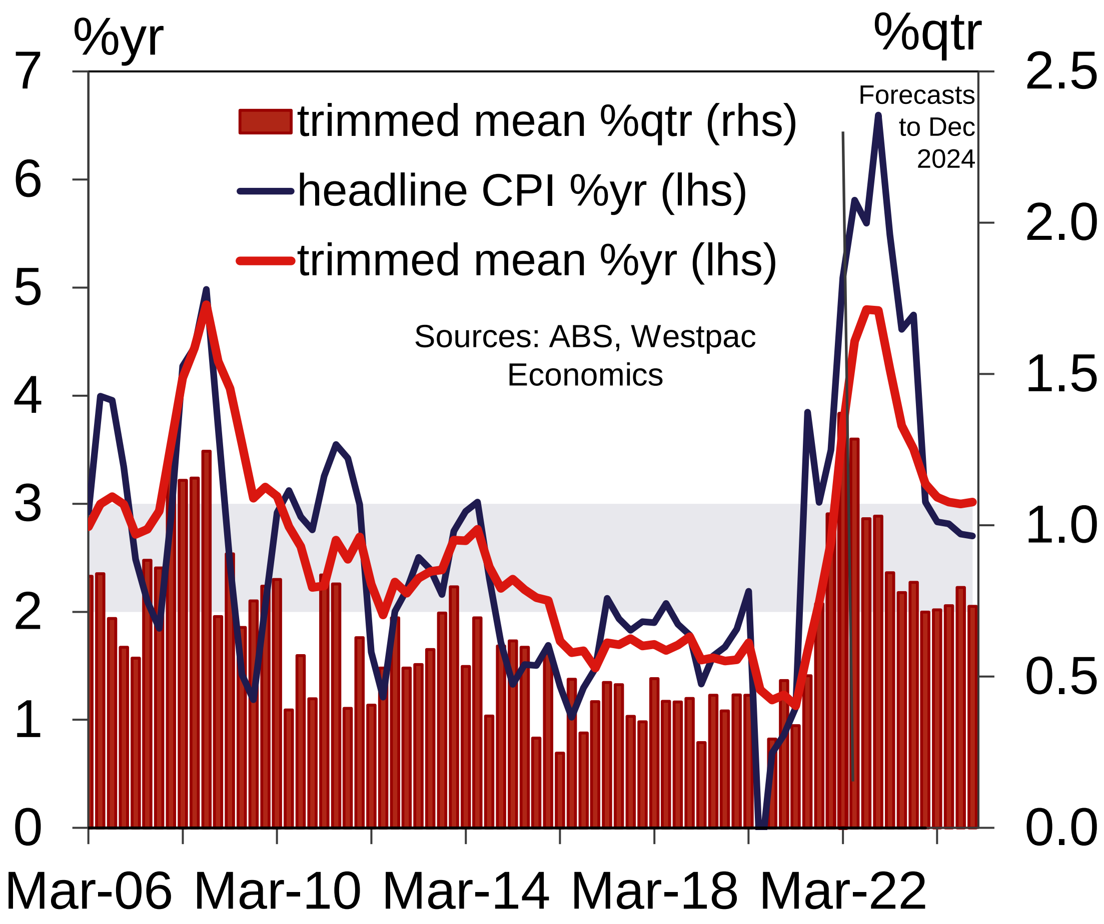


Core inflation to move higher as one-off effects fade

Core inflation to peak ahead of wages



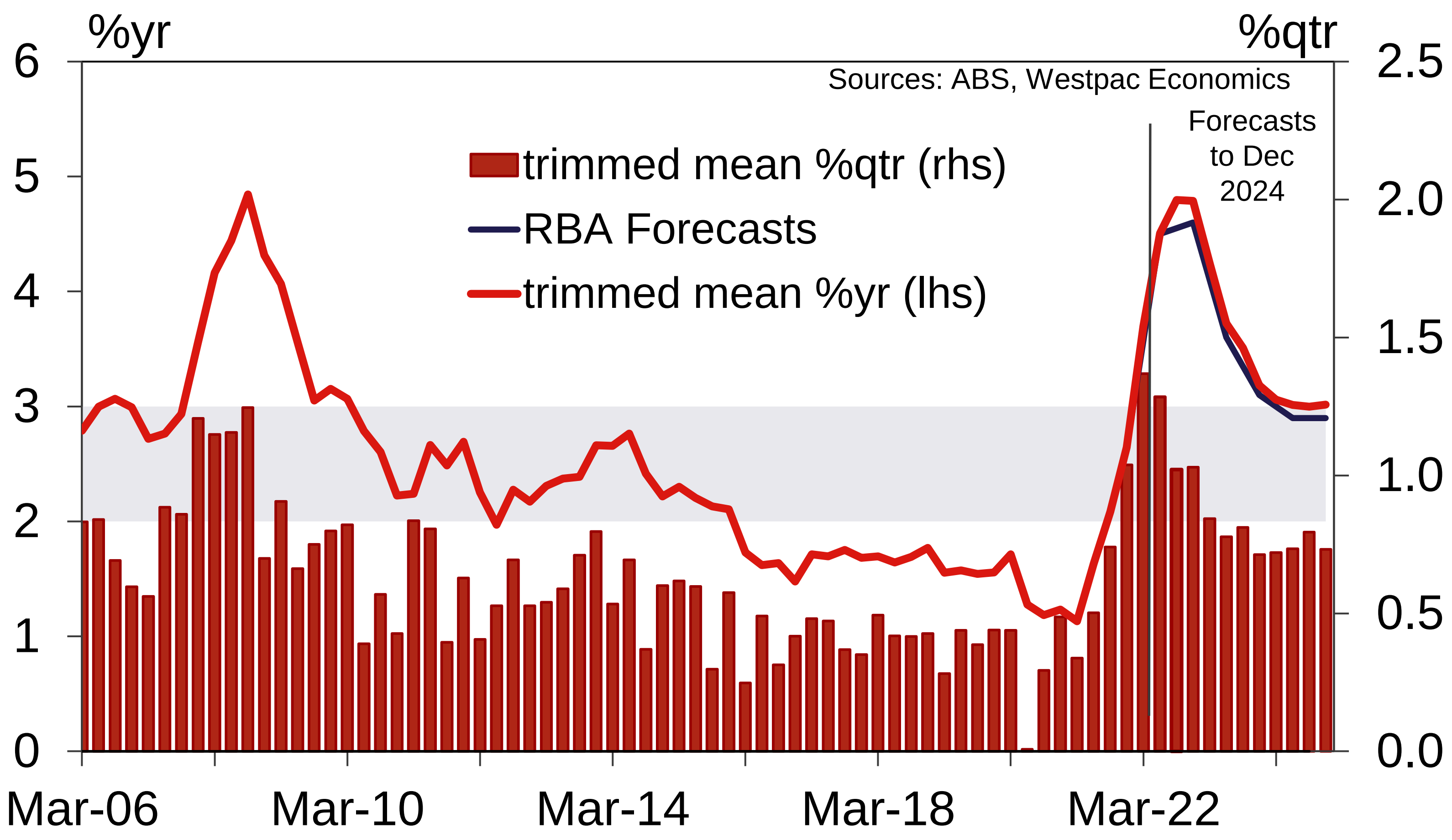
Headline & core inflation forecasts



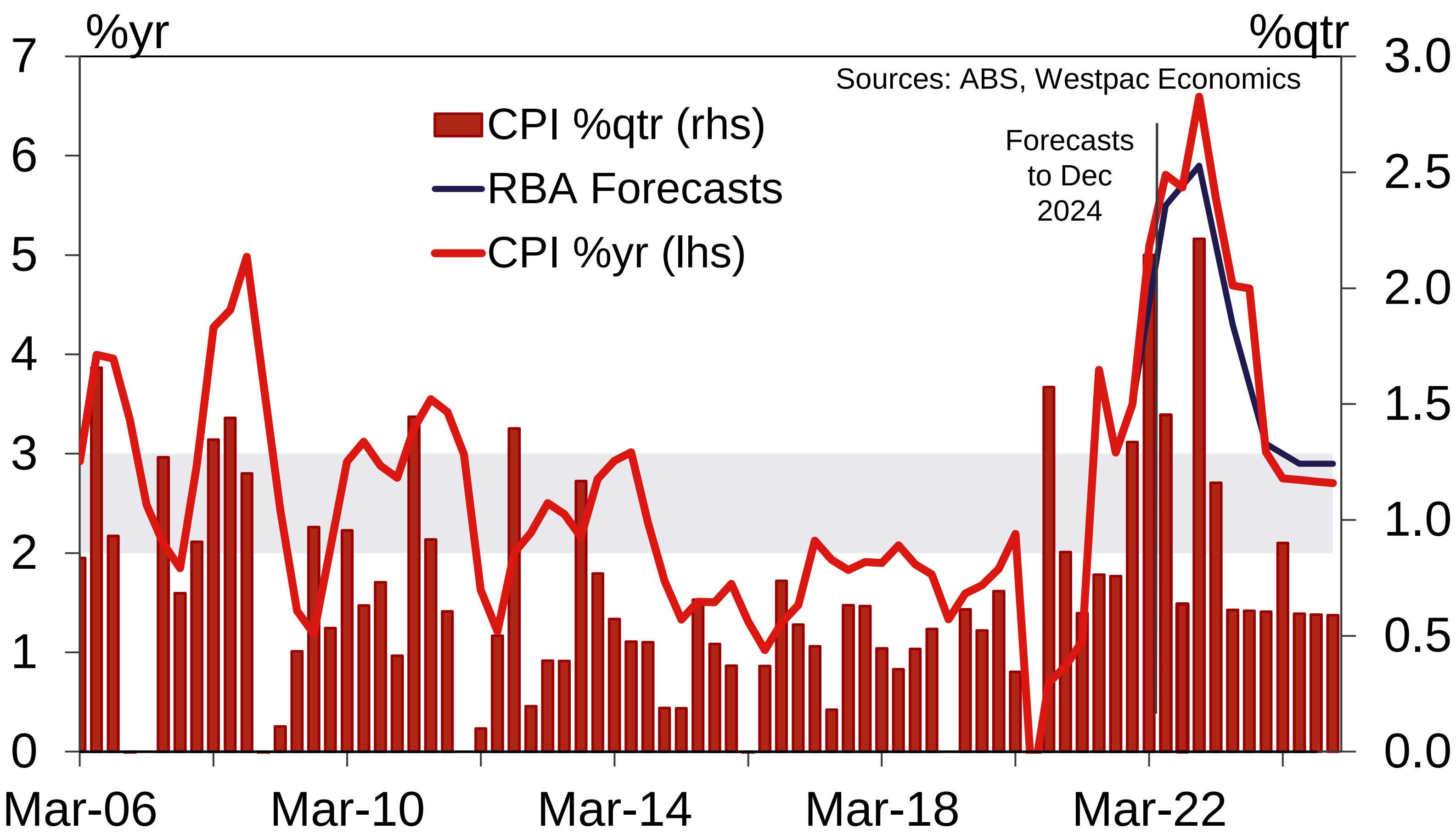
Peak

Core inflation to peak in late 2022 or early 2023

Westpac vs. RBA core inflation forecasts



Westpac vs. RBA CPI forecasts



Crude

The decline in crude oil prices is critical to the decline in headline inflation even though we don't expect a significant narrowing in refining costs.

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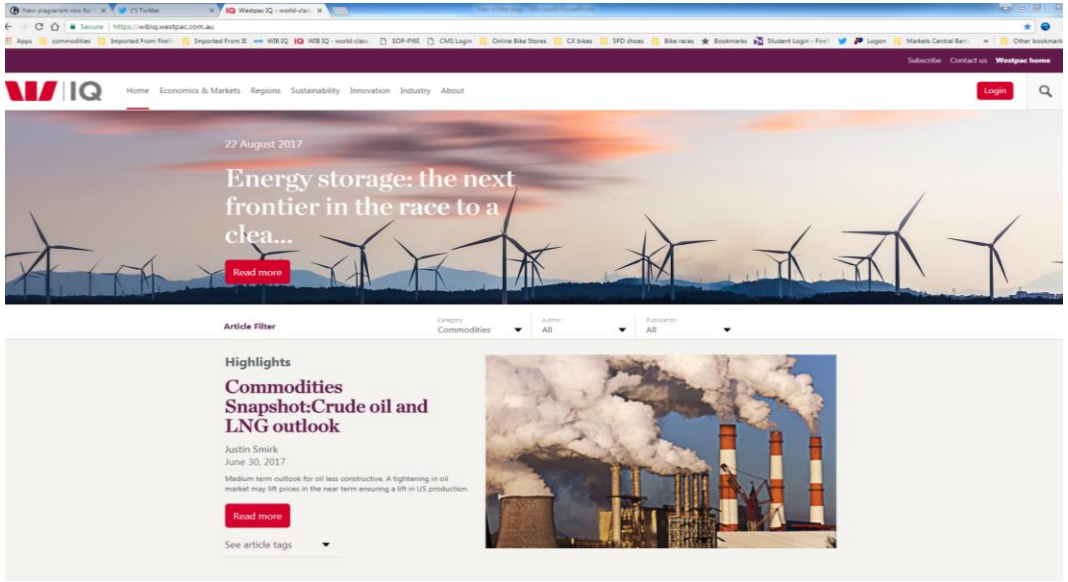

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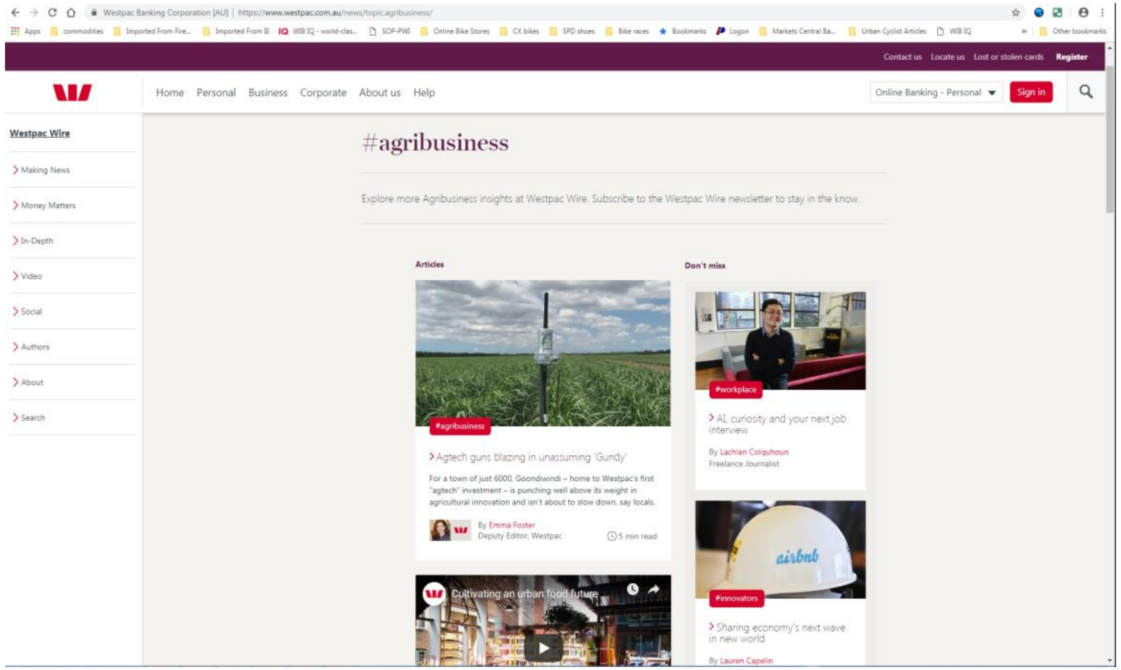

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