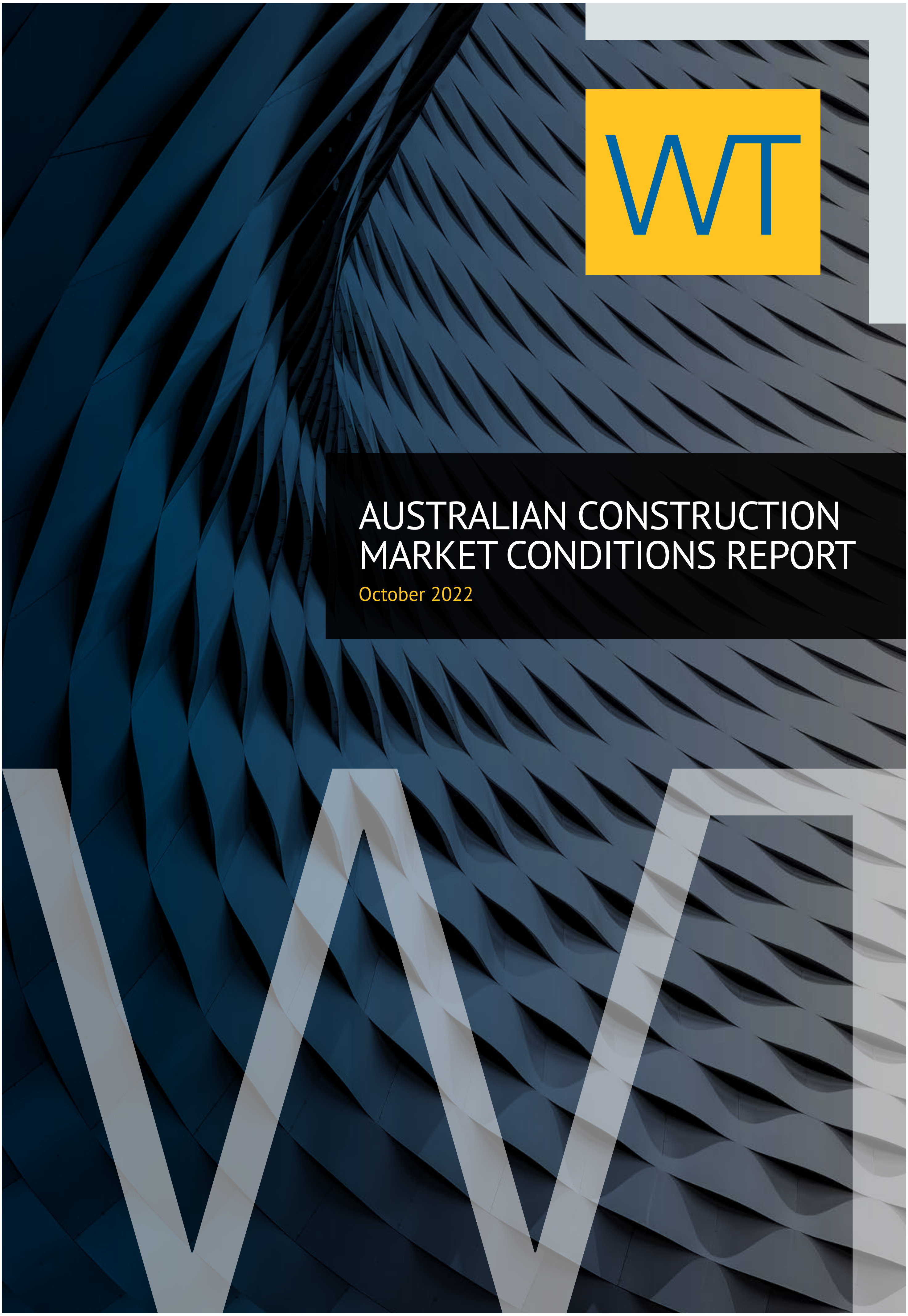

AUSTRALIAN CONSTRUCTION MARKET CONDITIONS REPORT

October 2022

INTRODUCTION

CONSTRUCTION COST ESCALATION IS AT MEDIUM TO LONG TERM HIGHS IN MOST MARKETS. HOW AND WHEN WILL IT REVERT TO MORE NORMAL LEVELS?

A few small episodes aside, construction cost escalation across Building and Infrastructure sectors was relatively muted since the Global Financial Crisis of 2008-09. It was certainly well below the levels seen through much of the 2000s in most states.

WT VIEW ON (MARKET) COST ESCALATION – BUILDING

	2022	2023	2024	2025
NSW (SYDNEY)	6.5%	4.0%	2.5%	3.5%
VICTORIA (MELBOURNE)	9.5%	4.0%	2.5%	3.3%
QUEENSLAND (BRISBANE)	8.5%	3.5%	2.5%	4.0%
SA (ADELAIDE)	6.0%	4.0%	2.5%	3.0%
WA (PERTH)	11.0%	4.8%	1.5%	2.5%
TASMANIA (HOBART)	10.0%	4.5%	2.0%	3.0%
ACT (CANBERRA)	10.0%	7.0%	4.0%	5.0%

CONTRIBUTION TO ESCALATION BY BROAD INPUT – BUILDING

- IMPROVES ESCALATION SIGNIFICANTLY
- IMPROVES ESCALATION SOMEWHAT
- HAS NO MAJOR IMPACT ON ESCALATION
- MAKES ESCALATION SOMEWHAT WORSE
- MAKES ESCALATION MUCH WORSE

	2022	2023
LABOUR	MAKES ESCALATION MUCH WORSE	HAS NO MAJOR IMPACT ON ESCALATION
MATERIALS	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE
Energy	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION MUCH WORSE
Freight	MAKES ESCALATION MUCH WORSE	HAS NO MAJOR IMPACT ON ESCALATION
AUD	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION SOMEWHAT WORSE
MARGINS	IMPROVES ESCALATION SIGNIFICANTLY	HAS NO MAJOR IMPACT ON ESCALATION
PLANT, EQUIPMENT	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION SOMEWHAT WORSE
TOTAL	MAKES ESCALATION MUCH WORSE	HAS NO MAJOR IMPACT ON ESCALATION

However, as the world emerged from the worst of the COVID-19 pandemic, escalation returned with a vengeance in 2021 and into 2022. This was via a 'perfect storm' of events, including:

- Construction-focused stimulus
- Disrupted supply chains (including those in freight and logistics)
- The effects of sector underinvestment over many years (if not decades)
- An ongoing hit to capability from limited immigration (not to mention persistent COVID-19 cases)
- A wide range of impacts from the Russia-Ukraine War

This short pack aims to quantify escalation in coming years, while identifying why these movements might take place.

WT VIEW ON (MARKET) COST ESCALATION – INFRASTRUCTURE

	2022	2023	2024	2025
NSW (SYDNEY)	8.0%	4.5%	4.0%	4.0%
VICTORIA (MELBOURNE)	8.5%	4.5%	4.0%	4.0%
QUEENSLAND (BRISBANE)	8.0%	4.0%	3.5%	4.5%
SA (ADELAIDE)	10.0%	3.0%	4.5%	4.0%
WA (PERTH)	10.0%	4.0%	2.5%	3.5%
TASMANIA (HOBART)	7.0%	5.5%	4.5%	3.0%
ACT (CANBERRA)	7.0%	3.5%	2.5%	3.5%

CONTRIBUTION TO ESCALATION BY BROAD INPUT – INFRASTRUCTURE

- IMPROVES ESCALATION SIGNIFICANTLY
- IMPROVES ESCALATION SOMEWHAT
- HAS NO MAJOR IMPACT ON ESCALATION
- MAKES ESCALATION SOMEWHAT WORSE
- MAKES ESCALATION MUCH WORSE

	2022	2023
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PLANT, EQUIPMENT	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION SOMEWHAT WORSE
TOTAL	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE

Materials escalation also includes the contribution/impact of 'fundamentals' (supply and demand) for each product/commodity.

1

KEY POINTS TO OUR ESCALATION OUTLOOK

2022 and 2023

- After long-term highs in 2022, escalation to ease in 2023
- The speed of this easing will depend on strength of demand impact and how fast capacity-building spend comes on stream
- Our view is that escalation of 3.5-5.0% (Building) and 3.0-5.5% (Infrastructure) can be expected in 2023 in most states but is unlikely to turn negative

2024

- Further softness expected via elevated risk of downturn and recession
- However, our view of a likely fall in $A, weaker supply (in response to economy) and trend towards greater EBA use should see floor of 2.0-4.0% (lower in Building)

2025 and to medium/long-term

- Sector and economy recovery should see escalation return to 3.0-4.0% in most states
- Infrastructure escalation set to be above Building, with climate spend (e.g. renewables, resilience, rebuilds) likely to be important

1 **Melbourne Square**, Victoria

ESCALATION COMPONENT ANALYSIS

LABOUR

CONSTRUCTION WAGES: AUSTRALIA[1]

(Annual % change on annual averages)

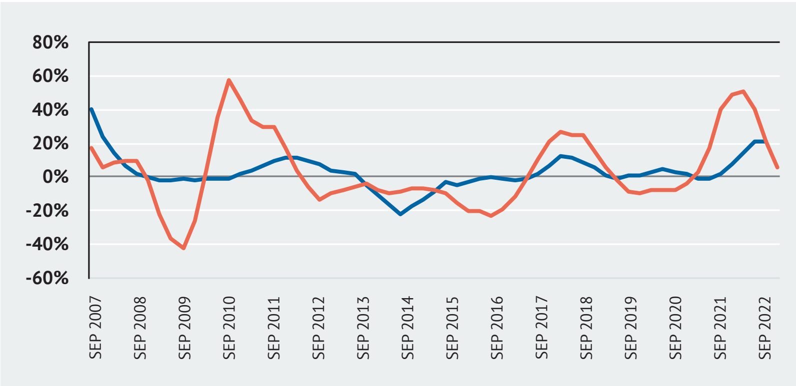
Lower supply (via less inbound population and higher outflows) and stronger demand (via stimulus) has seen labour markets tighten. Wages growth is at 2014 levels (via the strongest quarter since 2008) and job vacancies to employed ratio in some trades is at 15+ year highs.

Furthermore, the push for greater take-up of EBAs throughout Construction (even in lower level trades) should see escalation pressures increase. However, given EBA use (and union membership in Construction are at low levels, we don't expect this to happen quickly.

MATERIALS

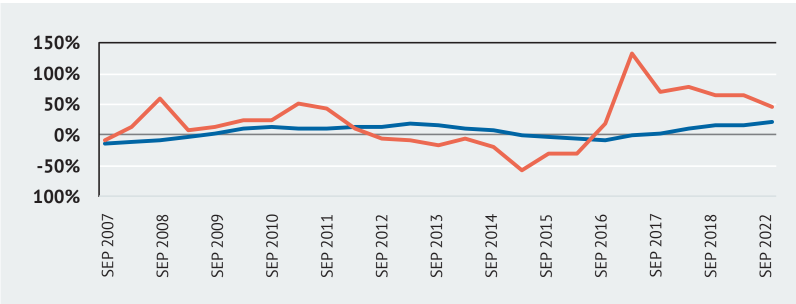
'ACTUAL' V. SPOT PRICES: COPPER[2]

(Annual % change on annual averages)



'ACTUAL' V. SPOT PRICES: OIL (PRODUCTS)[3]

(Annual % change on annual averages)



The key theme here is the speed at which changes in global/regional markets for key materials ('spot' markets) are passed through to 'actual' prices realised in construction.

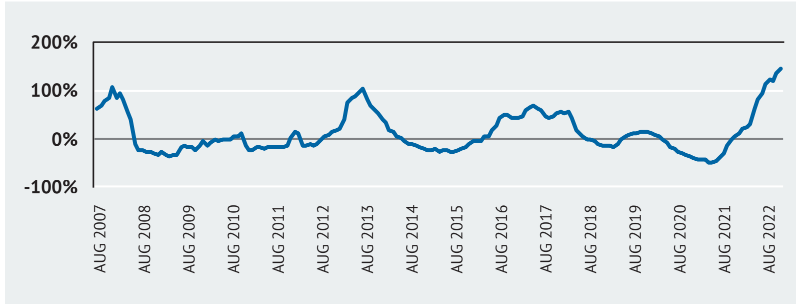
Looking at Copper and Oil (Bitumen), it can be seen that there is some delay to how fast changes in spot are seen in actuals (especially on the downside) but also that this speed has slowed in the current period of supply chain disruption. Hence, we expect increases or elevated prices for many key materials to persist into 2023.

ENERGY

AUSTRALIA (NEM) AVERAGE RRP[4]

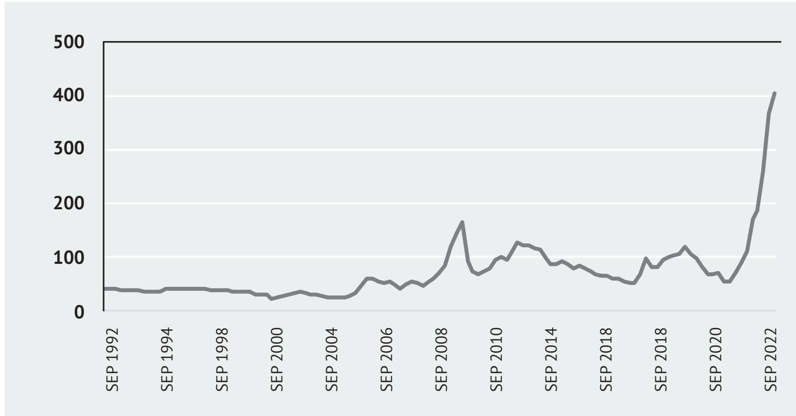
(Annual % change on annual average)

(NEM - National Electricity Market)



THERMAL COAL PRICE: QUARTERLY AVERAGE[5]

($US / tonne, Newcastle)



Energy markets were showing signs of a marked increase following COVID-led lows, in part due to many years of underinvestment. These trends accelerated upon Russia's invasion of Ukraine.

Australia's main source of electricity remains coal, whose price has shot up sharply on global markets. With similar seen for LNG, this saw wholesale electricity prices surge, which will see retail prices follow into 2023 and possibly beyond. This is a key reason why we do not expect escalation to turn suddenly negative in 2023.

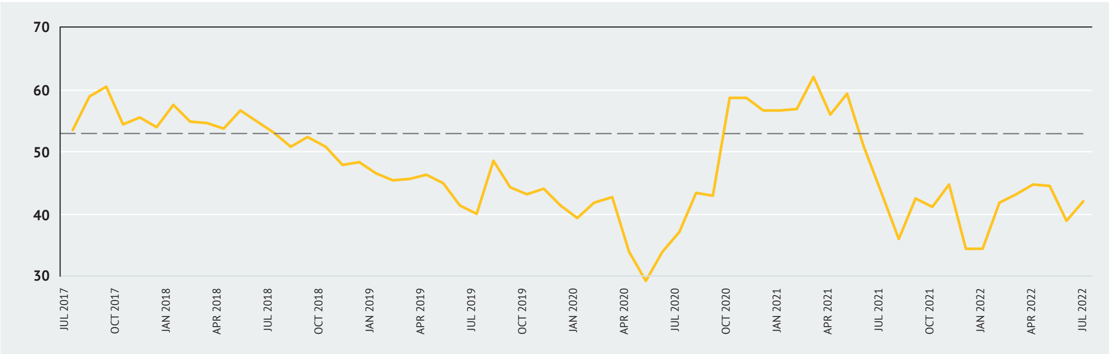
Energy is a more important input for Infrastructure. It is a distinct input (via bitumen, diesel) as opposed to only facilitating manufacture of inputs (e.g. bricks) for Building.

ESCALATION COMPONENT ANALYSIS CONT.

FREIGHT[7]

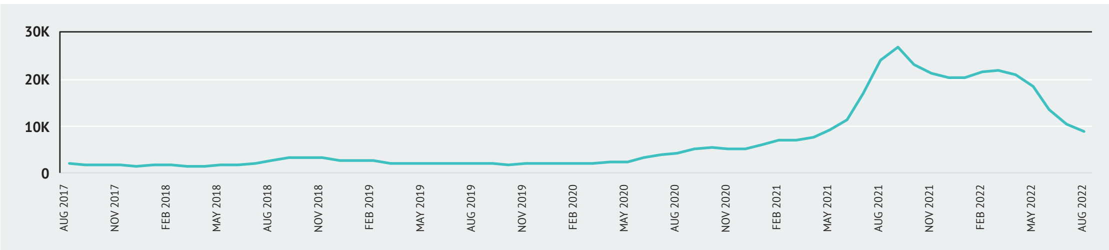
AUSTRALIA - CONSTRUCTION : SUPPLIER DELIVERIES[6]

Diffusion: >50 = more deliveries, <50 = less (delays)
Source: AI Group Performance of Construction Index



Perhaps the main manifestation of supply chain disruption has been on freight networks. The soaring cost of shipping transport is a key, but far from the only, reason why the supplier delivery metric has performed so poorly by and large since the pandemic started.

CHINA-US WEST COAST SHIPPING COSTS
Monthly averages, $A proxy for China-Australia shipping



The key question here is: how (and how long) until disrupted freight markets will return to pre-COVID norms? The trend suggests this may eventuate perhaps as soon as late 2022, however the stubborn persistence of China's zero-COVID policy (not to mention new strains of the pandemic generally) could well see disrupted goods and services demand and hence freight costs not returning to 2019 levels for some time yet.

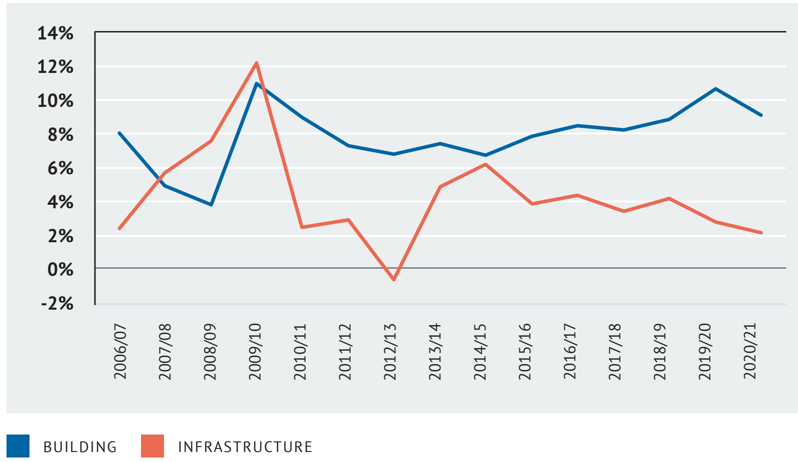
AUD

It is generally considered that the value of the Australian Dollar (AUD) versus key overseas peers is dependent upon: interest rates (and especially how differences in interest rates are expected to track) and key commodity prices (e.g., iron ore, LNG, coal).

Australia has seen interest rates rise largely in step with other major countries since earlier in 2022, however, the sizeable cohort of the mortgage belt believed to be unable to cope with much higher borrowing costs may see the Reserve Bank of Australia start to slow the pace of future rate increases. All else equal, this could put downward pressure on the AUD. Key commodity prices remain elevated, especially in the energy space, but expectations of weaker demand ahead may see markets expect these prices start to fall, which could also weaken the AUD through 2023.

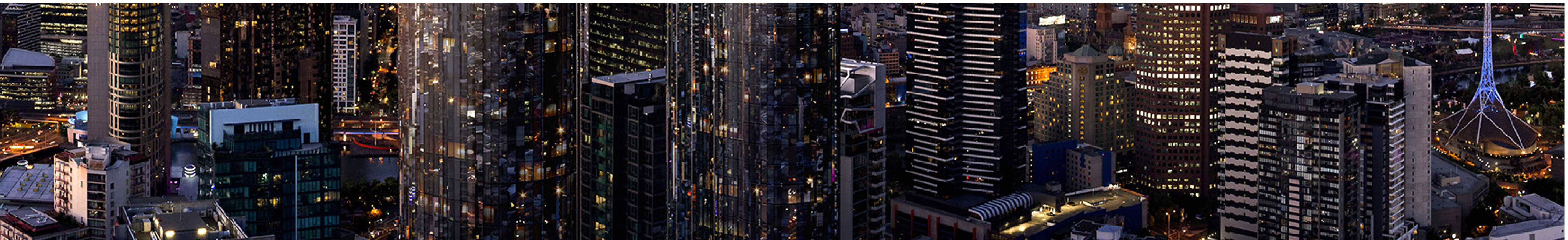
MARGINS

PBT MARGIN ON SECTOR REVENUE[8]



While it is likely that margins took a hit of late, largely via increased construction cost pressures, it is most likely that these impacted those in the Infrastructure (Civil) space more so than in Building sectors.

A key manifestation of this is insolvency levels, which are starting to see the worst fears realised and levels returning to pre-COVID marks (with perhaps (much) more to come, if cost pressures do not ease markedly).



ESCALATION COMPONENT ANALYSIS CONT.

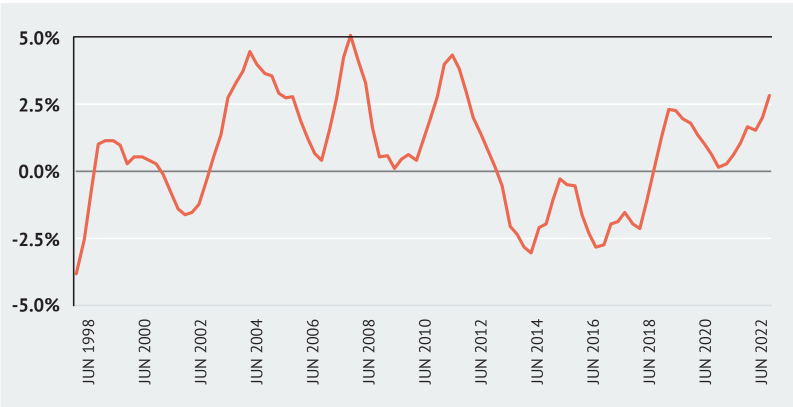
MARGINS (CONT.)

CONSTRUCTION INSOLVENCIES: AUSTRALIA - QUARTERLY[9]

This suggests a strong and increasing need for alternate procurement methods in order to more evenly share risk of higher costs: this may be an area where Government involvement is required, as the ongoing loss of sector capability via insolvencies could, on its own, put pressure on escalation.

PLANT, EQUIPMENT

PLANT/EQUIPMENT – ANNUAL ESCALATION[10]



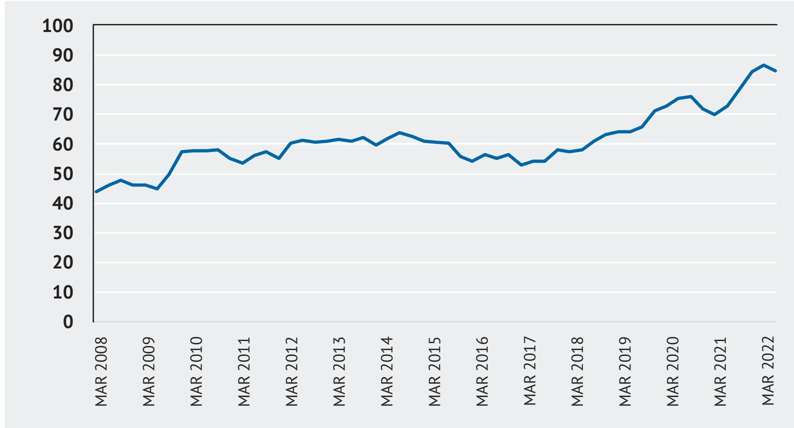
While not a component which usually sees strong escalation, a combination of supply chain disruption and increased demand has seen the best measure of escalation on plant and equipment related to construction (in Australian Bureau of Statistics data) hit a ten-year high in the most recent data.

With energy costs in Europe likely to move significantly higher next year and downward pressure on the AUD expected, this could see escalation here remain elevated for some time yet.

SUPPORTING DATA

NON-RESIDENTIAL: VALUE UNDER CONSTRUCTION[11]

($b, inflation-adjusted)



INFRASTRUCTURE: WORK YET TO BE DONE

(Years, if recent rate of work continues)

These charts are not specific contributors to escalation per se, but both have an elevated level of construction activity currently happening – this is most likely putting increased pressure on the sector and contributing somewhat to the current situation.

Specifically, in Non-Residential construction, the current level of (inflation-adjusted) activity underway hit a record high in December 2021. More importantly, this record high was 15.0% above the previous peak (while activity as measured by commencements (the standard measure) was only 9.0% above the previous peak in 2021).

For Infrastructure, the number of years of work yet to be done in the market (based on current rates) hit an 8.5 year high in March. However, compared to this previous high, the current level of activity (over the last year) was about 25.0% lower, again pointing to the impact of disrupted supply chains and higher construction costs.

SUMMARY POINTS, IMPLICATIONS AND RISKS

WHAT DOES THIS OUTLOOK MEAN AND WHAT SHOULD YOU MONITOR GOING FORWARD?

SUMMARY

- Escalation has hit long-term highs in 2022 but is set to ease, most likely quickly, into 2023
- A combination of increasing demand concerns, both economy-wide and within construction (as more projects are being put on hold), and new investments to repair supply chains and build capacity coming on stream will be pivotal
- This should see Building escalation fall back to 3.5-5.0% and Infrastructure escalation at 3.0-5.5% in 2023 in most states
- Further softness is expected in 2024 via elevated risk of downturn/recession. However, the expected negative AUD impact plus supply weakening in response to the economy (and the likely trend of more EBA use) should put a floor under escalation of 2.0-4.0%
- By 2025, likely recovery should see escalation return to long-term averages of 3.0-4.0% in most states, with Infrastructure above Building via more climate-related spend.

Allianz Stadium, Sydney

IMPLICATIONS AND RISKS

- Measures to mitigate risks of soaring costs (due to supply chain disruption):
  - With greater use of these measures during the pandemic, such as hedging or procuring more reliable supply, especially by Tier 1 contractors, the trade-off inherent in deciding on these measures suggests any looming fall in escalation could be missed
  - The extent to which these measures were undertaken by the sector will likely only be fully revealed by the pace of falling escalation versus that seen in key input prices
- Prolonged Chinese economic weakness:
  - The risk of the Chinese economy entering an extended period of weakness, as ongoing financial crises in their property sector and broader economic (and demographic) malaise intersect, has increased of late
  - This suggests a chance of a year or more of market conditions with low/negative escalation, especially for materials where the loss of Chinese demand would see much lower costs
  - As producers adjust supply, escalation would likely begin to revert but with the potential for a sharp increase if there is sustained demand growth whilst supply remains weak
- Major Projects (with very long lead times):
  - The trend towards mega and increasingly complex projects, especially in Transport but also some Non-Residential and Renewables areas, could see the possibility of stronger escalation being anticipated by the market for up to a few years
  - To the extent mega and/or complex projects can be reliably timed to proceed, this points to a greater role for understanding current market conditions and major project pipeline in evaluating escalation
  - This may even be seen in Brisbane, Perth or even Adelaide especially where a mega project cansignificantly impact a sector's ability to deliver
- Infrastructure activity elevated into medium-term:
  - Its status as a go-to sector for economic stimulus, combined with an ever-increasing need to invest in resilience across many sectors, could support construction activity in Infrastructure well into the 2020's
  - Federal stimulus is typically focused on Transport. However, the need to address resilience (climate change-linked) concerns could see Water, Renewables, Transmission and Telco get a much higher share
  - This suggests greater cost pressures above those in Building) in the medium to longer term, more so among key trades, especially where changing demands means the creation of new trades)
- Climate change/volatility:
  - Should the trend of increasingly volatile climactic conditions/disasters continue, this may see escalation pressures persist for some years yet.
  - These pressures could manifest via stubbornly high energy prices, recurring post-disaster rebuilds, the need for increased spend on resilience across many (mostly Infra) sectors or some combination of the above.

METHODOLOGY

CONSTRUCTION COST ESCALATION IN THIS PACK IS BASED UPON THAT REPORTED BY THE AUSTRALIAN BUREAU OF STATISTICS (ABS), PRODUCER PRICE INDEX SERIES.

While our view is based on a variety of sources (not the least of which is WT market insight), our approach here largely aligns with the ABS' Output Cost approach i.e., where escalation (change in construction costs) is shown as construction takes place.

The main benefit of this is that it includes any contribution to escalation o utside of those seen from the Input Cost or Tender Price Index approaches. This can often be Margins (highlighting excessive bidding at low or zero margins) but also abnormally high project variations, a phase of complex projects or where materials have been procured (to a considerable extent) at a discount.

Points to note:

- All escalation shown is on a calendar year basis and is the % change between the full-year average vs. the previous year's full-year average.
- Escalation contribution by input is on a general, Australia-wide basis, while state-by-state figures are general across sub-sectors, project types and values. For more information on escalation relative to your project or sub-sector, please discuss with your usual contact or call your local WT office.
- In addition, escalation contribution by input assumes no other major drivers of escalation (e.g., large productivity increases, significant regulation changes re: approvals ('red tape')).

CONSTRUCTION ECONOMIST DAMON ROAST

Damon Roast
Construction Economist

Damon joined our team in June 2022 as Construction Economist to support the team and our clients in understanding economic conditions and their influence upon our projects. Damon joined us with a wealth of experience both in the local construction market and various global markets.

Damon provides research and analysis to help inform both our Market Reports and frequent reporting to our internal team and board. He is also available to assist our clients on research required for specific project opportunities.

Footnote references

1 ABS Wage Price Index
2 ABS Producer Price Index (Inputs), London Metals Exchange
3 ABS PPI (Inputs), Vicroads
4 Australian Energy Market Operator
5 Intercontinental Exchange
6 AI Group
7 Freightos, Reserve Bank of Australia
8 ABS (Australian Industry report)
9 Australian Securities and Investments Commission
10 ABS PPI
11 ABS Non-Residential, Engineering Construction Activity

Atlassian, New South Wales

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