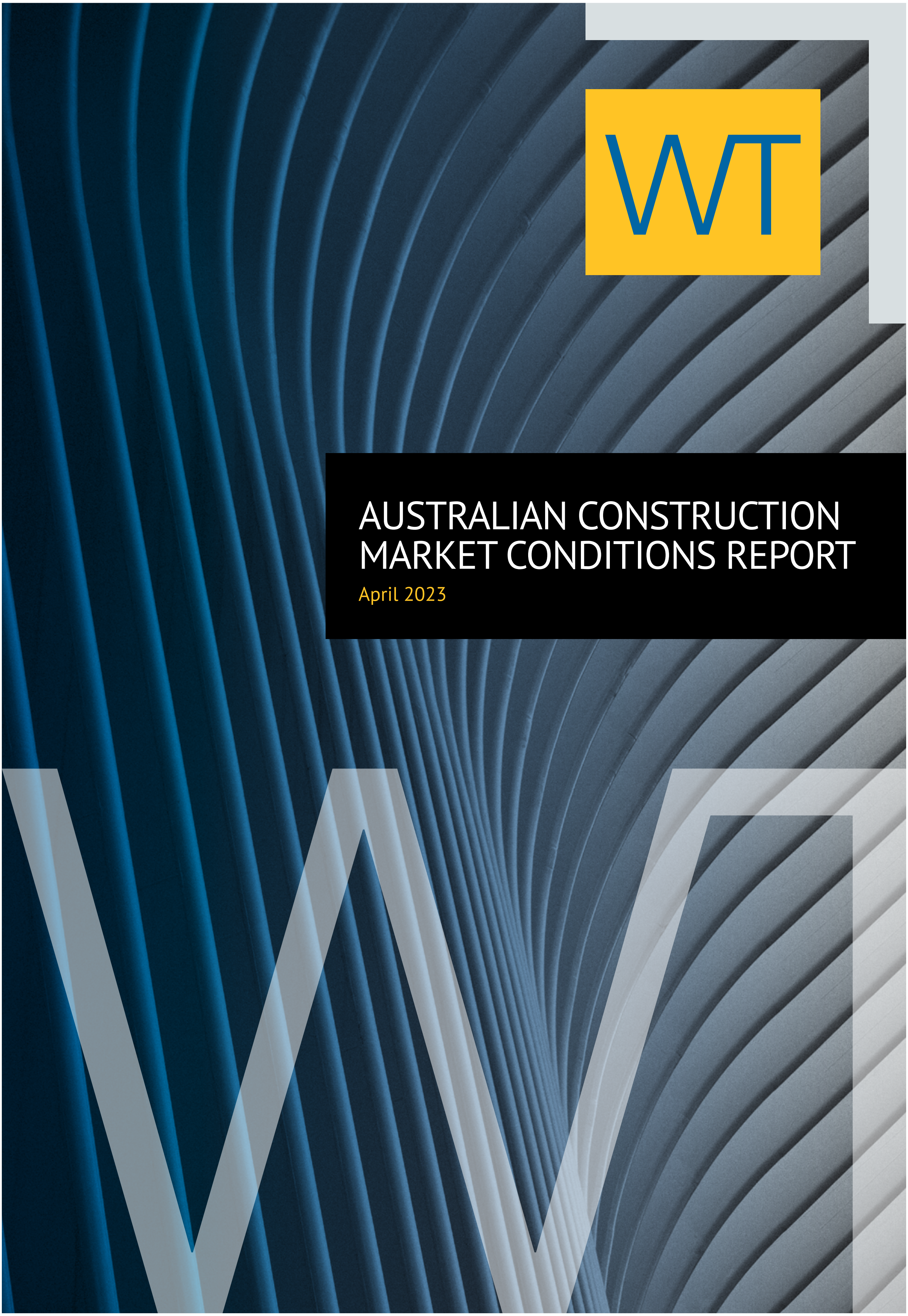

AUSTRALIAN CONSTRUCTION MARKET CONDITIONS REPORT

April 2023

INTRODUCTION

RECORD-HIGH CONSTRUCTION COST ESCALATION OF 2021 AND 2022 HAS STARTED TO EASE. BUT WHERE TO FROM HERE?

This pack investigates the drivers and outlook for cost escalation across key Australian markets.

WT VIEW ON BUILDING COST ESCALATION – NON-RESIDENTIAL & HIGH-RISE RESIDENTIAL

	2020	2021	2022	2023	2024	2025
SYDNEY	4.5%	6.0%	6.5%	4.0%	2.8%	3.5%
MELBOURNE	2.0%	3.0%	9.5%,	4.5%	2.5%	3.3%
BRISBANE	3.0%	3.8%	8.5%	3.5%	4.0%	5.0%
ADELAIDE	0.0%	15.0%	6.0%	4.3%	3.6%	4.8%
PERTH	4.0%	16.0%	11.0%	3.0%	2.0%	2.5%
HOBART	2.0%	10.2%	10.5%	4.5%	3.0%	5.8%
CANBERRA	2.5%	6.5%	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	MAKES ESCALATION SOMEWHAT WORSE
MATERIALS	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE
FUNDAMENTALS	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION SOMEWHAT WORSE
ENERGY	MAKES ESCALATION SOMEWHAT WORSE	MAKES ESCALATION MUCH WORSE
AUD	MAKES ESCALATION SOMEWHAT WORSE	HAS NO MAJOR IMPACT ON ESCALATION
FREIGHT	MAKES ESCALATION MUCH WORSE	IMPROVES ESCALATION SOMEWHAT
COST PASS-THROUGH	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE
PLANT & EQUIPMENT	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE
TOTAL	MAKES ESCALATION MUCH WORSE	MAKES ESCALATION SOMEWHAT WORSE

NOTE: Fundamentals refers to the impact on escalation strictly from a demand and supply perspective.

Cost Pass-Through refers to the broad environment for passing on higher costs. It captures cost pass-through from inputs shown above.

WT VIEW ON INFRASTRUCTURE COST ESCALATION

	2020	2021	2022	2023	2024	2025
SYDNEY	3.0%	4.5%	9.0%	7.0%	4.5%	4.0%
MELBOURNE	1.0%	3.5%	8.0%	5.0%	4.4%	4.7%
BRISBANE	0.5%	3.0%	8.5%	5.3%,	4.0%	4.8%
ADELAIDE	0.8%	3.3%	9.3%	4.3%	5.2%	5.0%
PERTH	0.7%	3.1%	8.6%	4.7%	3.6%	4.2%
HOBART	1.6%	2.5%	8.3%	8.5%	4.5%	4.0%
CANBERRA	1.3%	3.8%,	8.8%	3.8%	3.0%	3.7%

CONTRIBUTION TO ESCALATION BY BROAD INPUT – INFRASTRUCTURE

- IMPROVES ESCALATION SIGNIFICANTLY
- IMPROVES ESCALATION SOMEWHAT
- HAS NO MAJOR IMPACT ON ESCALATION
- MAKES ESCALATION SOMEWHAT WORSE
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NOTE: Fundamentals refers to the impact on escalation strictly from a demand and supply perspective.

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KEY POINTS TO ESCALATION OUTLOOK – BY STATE

Sydney

While the strong pipeline of Building and Infrastructure work should escape any budgetary impact if there's a recession, these risks cannot be ignored given the change of State Government.

This is especially so given projections of State debt moving to long-term highs as well as the current Government's preference for higher public sector wages and against asset recycling.

Melbourne

Key Melbourne drivers (population growth, tourism, overseas student numbers) seem set to return to pre-pandemic highs.

This should ensure a solid outlook, aided by a near-term bounce-back in overall activity and buttressed by major Building and Infra projects. While concerns about State debt level projections seem set to result in spending cuts in the May State Budget, escalation risks appear to be on the higher side (versus the forecasts as shown) for Melbourne.

Brisbane

An overdue ramp-up in building (population growth-led, Health, Olympics) will expose increasing capability (skills) and labour concerns.

With the 6% p.a. wage increases forecast by Qld Government for the major health build, these same wage increases may apply to the rest of the sector due to the increase in skilled labour demand.

Alternatively, there may be an influx of skilled trades from other states keeping a lid on cost pressures, similar to the mid-2000's ahead of the boom in infrastructure spend.

Adelaide

With major projects including the New Women's and Children's Hospital, the AUKUS submarine factory and major roads becoming possibly too much for the sector to cope with; we anticipate persistent elevated escalation risk towards the mid-late 2020s.

Perth

Recent concerns about sector capability and contractor insolvency could resurface if the pipeline strengthens. This appears likely if the State Government looks to leverage healthy finances and spend up leading up to or soon after the 2025 State Election. Should Mining/Oil & Gas proceed with major investment in projects it will impact escalation across building and infrastructure across the state by putting pressure on labour and materials.

Hobart

The proposed new AFL stadium will put further pressure on an already-stretched sector; with a solid construction outlook (to put a floor under escalation) even if the proposed stadium does not proceed.

Canberra

A robust Federal Government-led Building pipeline (including $1b National Security Office Precinct project) will ensure activity and escalation remain above historic norms. The Infrastructure spend is tied largely to Light Rail extensions; which suggests escalation will be volatile around these project phases.

KEY POINTS TO ESCALATION OUTLOOK

2023

- Escalation to ease, the pace of which will vary by input, by market and by sector.
- For Building, escalation of 4-4.5% is most likely, while Infrastructure is set to see 5-5.5% or higher. Infrastructure's stronger outlook will see higher cost pass-through than Building.

2024

- With an economic downturn/recession increasingly likely, this will begin to impact activity and escalation through 2024.
- This forecast will see escalation around 3% or lower in Building whereas Infrastructure should still see escalation above 4-4.5%.

2025

- While there is usually a close relationship between economic activity and construction, we believe this relationship will not be as strong as normal towards mid-decade.
- This should translate to more elevated construction in several sectors than would normally be the case, with escalation (assuming all else is equal) higher as a result.
- Given escalation can often jump during economic recovery (with projects beginning sooner than capacity can restart), we are set to see forecast escalation for both Building and Infrastructure back up over 4-4.5% in many markets in 2025.

Mid to Late 2020's

Two key trends in construction and escalation which we believe will persist towards 2030:

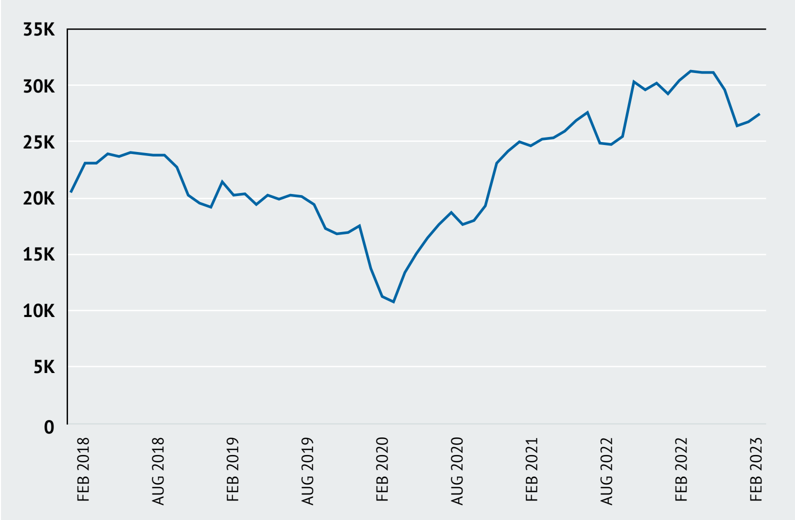
- We may experience periods of acute concern around skills shortages. This is especially so for trades aligned to more complex/digital projects. However, this also applies for Queensland and Western Australia, who typically don't benefit from transplanted workers and where capability concerns have been prolonged. It may also apply to specific trades for high-rise residential, given a likely sustained boost to activity around mid-decade.
- Infrastructure construction may be somewhat more elevated versus Building over the medium term due to the demand for a rapid energy transition, greater resilience (to natural disasters) and ongoing digital disruption. This is likely to see escalation follow, however with the degree of overlap between sectors set to increase, this would see Building escalation move higher over an extended time horizon.

ESCALATION COMPONENT ANALYSIS

LABOUR

JOB VACANCIES, BUILDING AND INFRASTRUCTURE TRADES: AUSTRALIA[1]

(Monthly data of last 3 months averaged)



Recent Trends: The peak of labour cost escalation is likely to be near if it hasn't already passed. The combination of easing demand and increasing supply (largely from the return of foreign workers) has seen metrics such as job vacancies flatten of late.

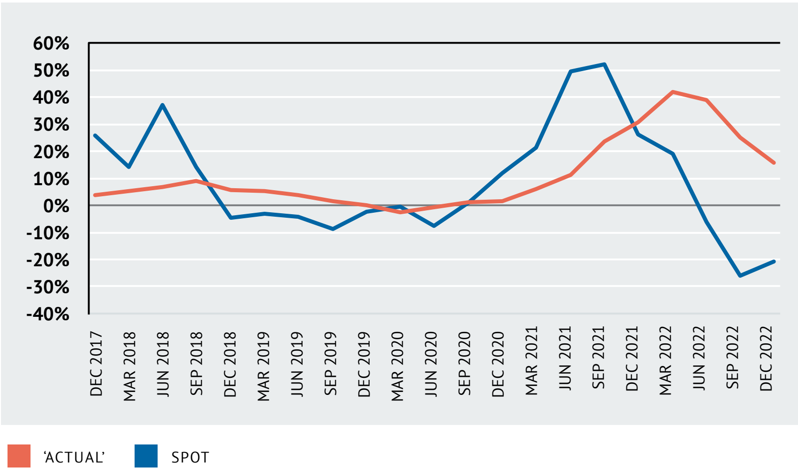
Looking Forward: While labour escalation is set to slow through 2023, this is expected to be far from uniform across cities and sectors. Sydney and Melbourne will continue to receive the bulk of newly arrived foreign workers, likely keeping a lid on pressures. In several other cities, including Brisbane, Adelaide and Hobart, tightness in some sectors may persist or even worsen (should major projects proceed as slated) in coming years.

By 2024, the increasing likelihood of economic weakness will start to impact construction activity with further general downward pressure on labour cost escalation expected. Towards mid-decade and beyond, medium to long term deficiencies in investment of capability combined with a likely outlook of elevated population growth figures will lead to ongoing periods of acute skills shortages.

MATERIALS

'ACTUAL' V. SPOT PRICES: STEEL, AUSTRALIA[2]

(Annual % change on quarterlies)



Recent Trends: For materials, the peak of escalation most likely took place in 2022. As supply chains have recovered, demand has moderated and supply has increased. These factors have put downward pressure on prices. The reopening of China has given prices some support, but they largely remain below 2021 and 2022 highs, especially so for materials such as (reinforcing) steel.

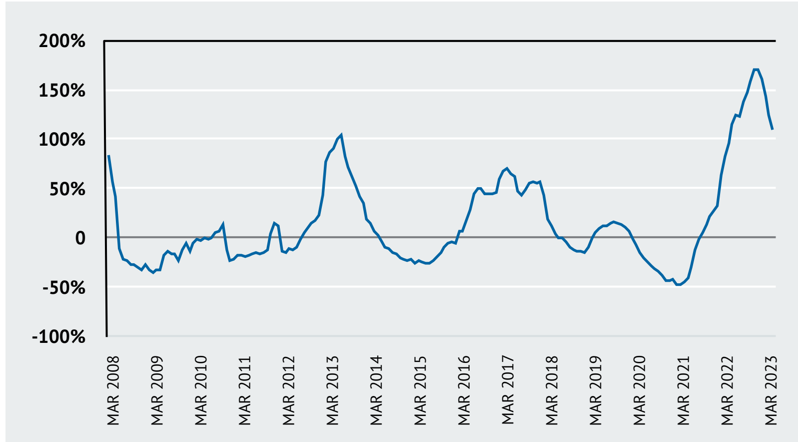
Looking Forward: The recent trends should, by and large, continue across the materials space through 2023 and into 2024. For locally produced and minimally traded materials (e.g. concrete and bricks), the combination of high energy prices and the need to still 'pass-through' previous higher costs could see escalation remain elevated.

For bulk tradables such as steel, demand (and China) will remain important. For oil-based products, geopolitics will be key, although patchy sector investment will mean new supply is limited. But for base/precious metals, such as copper, the emerging demand for electric vehicles and the energy transition will see a medium to long term shift in demand, price and escalation.

ENERGY

REGION REFERENCE PRICE (WHOLESALE) FOR NATIONAL ELECTRICITY MARKET[3]

(Annual % Change on Annual Averages)



Recent Trends: While the spike in (wholesale) prices seen in 2022 has now passed, energy prices will continue to increase or remain elevated for years to come.

Looking Forward: Energy will continue to impact escalation in two important ways:

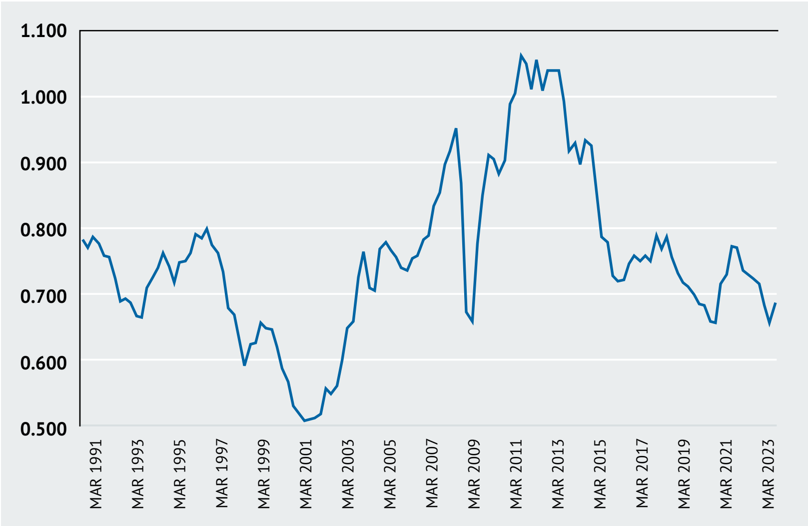
1. Via higher costs passed through from manufacturers (of building materials but also plant and equipment).
2. Where energy is a more direct input (e.g. diesel, bitumen – more so for Infrastructure projects).

Looking further forward, the transition to renewables and storage (batteries) will ultimately mean lower energy costs – but this transition will take many years. The nirvana of plentiful, low-cost energy, transmitted easily as required between states, will not be seen until at least the 2030s.

ESCALATION COMPONENT ANALYSIS CONT.

AUSTRALIAN DOLLAR

AUD/USD QUARTERLY AVERAGE[4]



Recent Trends: After somewhat dampening cost pressures by edging higher in 2021, the Australian Dollar's fall against the US Dollar has added to escalation over the last 12-18 months. More recently, however, the AUD's improved performance has contributed to signs of easing pressures.

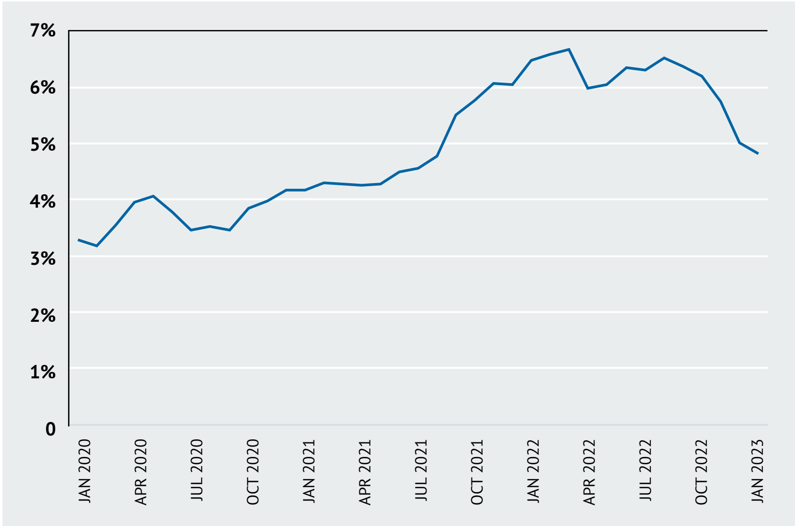
Looking Forward: Analysis of the two key medium-term drivers of the AUD – interest-rate differential to the US and commodity price outlook – suggest a higher chance of fluctuations in the exchange rate and possibly higher escalation on imports in coming years. This is largely based on the likelihood of an economic downturn in key markets through 2023 or 2024 (with associated lower demand for commodities).

Exchange rates can be out of kilter with fundamentals for extended periods, which suggests an increased chance of volatile exchange rate-led escalation outcomes heading towards mid-decade.

FREIGHT

FREIGHT COST AS % OF TOTAL IMPORTED GOODS COST, AUSTRALIA[5]

(Reported monthly)



Recent Trends: It is widely known that the COVID-led spike in freight costs has passed. What is less well-known, is the specific nature of the decline. The oft-cited spot freight market rate chart tells a spectacular but not entirely accurate story. This chart, which shows total freight cost (represented as % of total goods imported), confirms the decline however there is further to fall for freight costs this year as the last of the contracts have yet to roll over.

Looking Forward: Freight – especially shipping – operates on long lead times with respect to new ship investment. The spike in freight costs saw a boom in orders for new container ships – but the glut in shipping capacity has not really begun yet. As this ramps up through 2024 and beyond, shipping costs could continue to fall, well below what was seen in pre-COVID years.

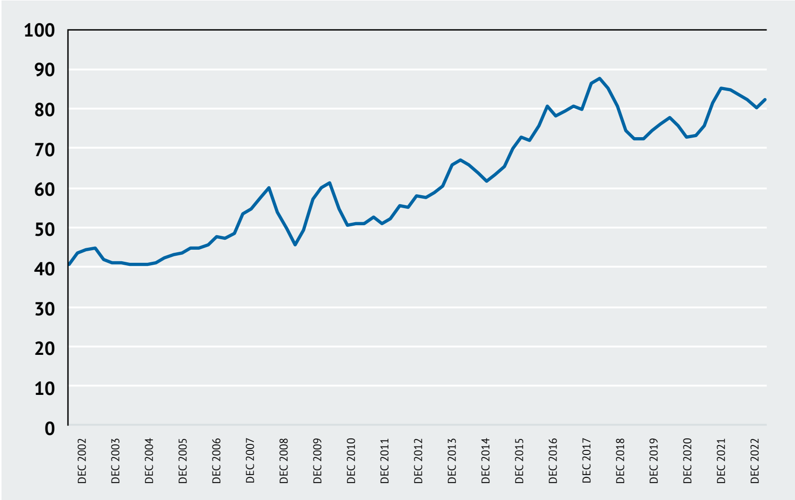
Melbourne Arts Precinct Transformation (MAPT), artist render concept for Public Realm

ESCALATION COMPONENT ANALYSIS CONT.

COST PASS-THROUGH

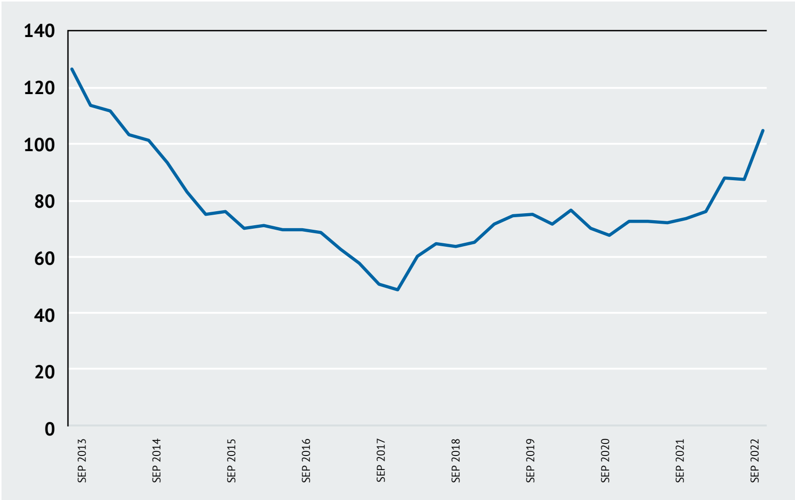
BUILDING APPROVALS (NON-RESIDENTIAL & HIGH-RISE RESIDENTIAL[6]

($ billion, inflation-adjusted, rolling annual total)



ENGINEERING CONSTRUCTION, VALUE OF WORK REMAINING ON PROJECTS UNDERWAY[7]

($ billion)



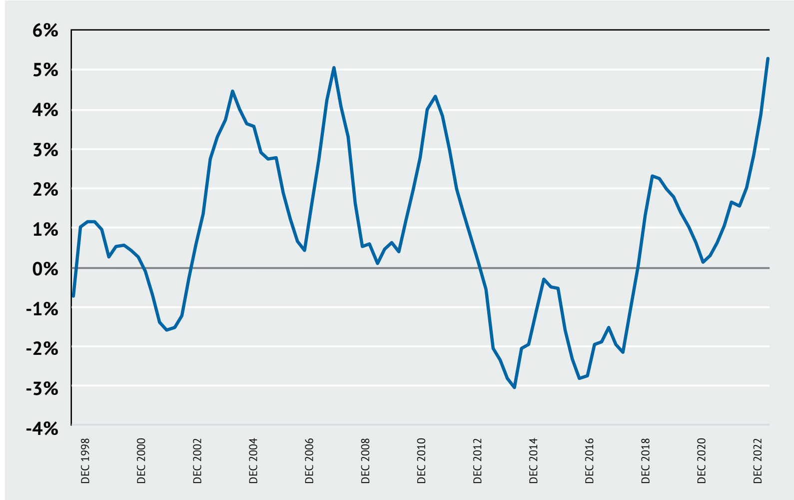
Recent Trends: We believe the pass-through of elevated costs contributed solidly to escalation in 2022, while it is not a directly observable contributor to escalation (at least, from a market data perspective). With the adjacent charts showing robust/improving activity in the Building and Infrastructure sectors respectively, this will provide the basis for further pass-through in 2023.

Looking Forward: With an economic downturn/recession expected by many, 2023 could well be seen as the last chance to claw back higher costs for some time, especially so on the Building side.

For Infrastructure, stronger levels of work remain, as noted with the still-strong medium-term pipeline (valued at $237b – in public infrastructure projects – by Infrastructure Australia in December for the next five years). Our view is that Infrastructure is set to be a stronger sector over the medium term (via energy transition and 'resilience') and is set to see higher cost pass-through. This is both in 2023 and subsequent years, perhaps becoming a more permanent feature of the sector.

PLANT & EQUIPMENT

PLANT & EQUIPMENT COST INDEX, ANNUAL % CHANGE [7]

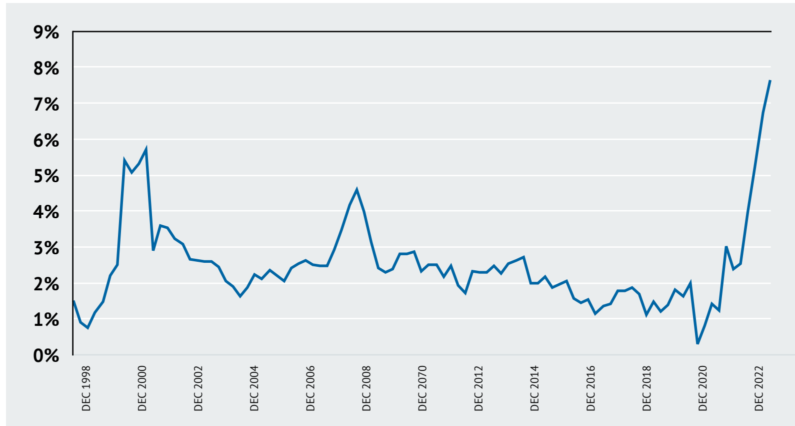


Recent Trends: Plant and Equipment has slipped under the radar somewhat when it comes to escalation culprits. Its escalation looks set to move higher in 2023, but it also will be impacted by other factors, such as higher energy prices and still-disrupted supply chains (in Europe).

Looking Forward: While the power price situation in Europe was not as dire through recent months as expected, this was partly the result of industrial shutdowns, which point to escalation being higher than would otherwise be the case. However, we expect the situation to improve from late 2023 with assistance from the AUD.

ECONOMIC OUTLOOK

ANNUAL % CHANGE IN CORE CONSUMER PRICE INDEX, AUSTRALIA[8]



Recent Trends: The RBA's campaign to target inflation has continued quite steadily of late. Talk that the current (SVB, Credit Suisse) crisis in the banking sector may see central banks (including the RBA) pull back on interest rate increases appears unlikely. While inflation has shown signs of peaking, it appears unlikely to fall back to within central banks' target ranges, at least in the near future. This could well see central banks continue to lift interest rates "until something else breaks".

ESCALATION COMPONENT ANALYSIS CONT.

ECONOMIC OUTLOOK (CONT.)

For the RBA the risks of ongoing interest rate increases are somewhat more identifiable than in most markets. Australia is in the upper echelon of countries with household (mortgage) debt as a % of income. Much has been said about the fixed interest rate cliff, or exploring how households are delaying falling off the cliff. These delays cannot continue indefinitely.

We maintain our view from the October report that the RBA will have to pull back on the interest rate increase campaign versus that of other countries' central banks. However, it may be too late to prevent increases already undertaken from resulting in an economic slowdown or recession.

Escalation Implications: There is a well-established relationship between economic growth and construction activity, more so in Building than Infrastructure. This relationship endures but we believe it is not as strong as it has been in the past.

This will reduce the impact of an economic slowdown or recession in 2023 or 2024 on construction activity, meaning higher escalation than would otherwise be expected. We still see 2024 as the near-term low for escalation in our forecasts, more so in Building, perhaps lingering into 2025.

An important caveat here: we expect the relationship between economic growth and construction activity to be weakened in coming years so as long as finance (i.e. borrowing costs, funding programmes, public mostly but also private) remain intact or are strengthened for projects and sectors in need.

For Building, there remains a strong pipeline of spending in key Social sectors in many states, including Health, Education and Defence. In Commercial sectors, Office construction has departed somewhat from fundamentals, it has taken on properties from Retail, where it is a more 'competitive' environment for new projects.

For high-rise Residential, activity is being weakened by the impact of previous high escalation as well as issues transitioning to a model of development based more on Build to Rent (versus Build to Sell). Once this transition is nearer to completion, this should see sustained stronger activity levels (especially so if elevated population growth persists).

For Infrastructure, sectors such as major Rail, Water, Electricity and Telecommunications are set to see continued strong levels of spending and/or have an increased need for major new spend. Most importantly, this outlook appears independent of broader economic conditions. This is a key reason why our Infrastructure escalation forecasts are higher than those in Building.

IMPLICATIONS AND RISKS

Implications

Labour (Trades):

- Securing key trades should generally become easier through 2023. However, for very specific/niche trades, or in strong sectors, any extra supply will be secured quickly.
- For Queensland and Western Australia, it may be wise to secure key trades more generally. Without significant inbound labour movement from interstate or overseas, additions to the project pipeline will come faster than help for prolonged capability concerns.

Materials (Residential):

- Escalation of materials used in Single Dwelling Residential should weaken as rate increases take hold. For high-rise Residential, resolution of current concerns (prior escalation, financing) could see construction move markedly higher, with escalation to follow.
- The importance of China remains crucial for steel, where various headwinds are brewing, including more scrap steel use. Watch China developments closely for steel implications.

Infrastructure:
Net Zero / Disruption / 'Resilience':

- Infrastructure build is set to increasingly see an elevated outlook versus Building. This is in large part due to the emergence and strengthening of megatrends such as the energy transition (push for 'Net Zero') and the rise of resilience amid increasing natural disasters.
- Furthermore, infrastructure is better placed to benefit from ongoing (digital) 'disruption', especially given ongoing support for major rail projects. This points to some degree of tightness in infrastructure sectors becoming a more constant feature. Watch China developments closely for steel implications.

Risks

Geopolitics / Onshoring:

- The geopolitical environment remains fragile. The risk of (further) international conflict in coming years cannot be ignored.
- Efforts have been made to untangle global supply chains to mitigate risk of geopolitical conflict via increasing onshoring or friend-shoring (bringing manufacturers home to a nearby friendly country). For Australia, this process appears unlikely to ever gain much momentum.

China:

- China's reopening has generated impetus but hardly the boom many expected. This is due to numerous economic issues, which mean the 'old' growth model no longer really works.
- Should a solution not be found, prolonged medium-term weakness in China may be the result. This could lead to sustained lower materials prices (for tradables), much less investment in sectors such as iron ore and fewer Chinese students in Australian universities.

'Big Australia':

- Elevated population growth has returned as a key feature of the Australian economy. The September quarter 2022 saw 418,500 people added, the strongest quarter since 2009.
- While more population is desired by Governments and business, the negative productivity impact of high population growth means higher escalation (all else equal). This often leads to further calls for greater population growth, leading to a vicious circle.

METHODOLOGY

CONSTRUCTION COST ESCALATION IN THIS PACK IS BASED UPON THE INPUT COST PERSPECTIVE, WHICH ALLOWS INPUT-LEVEL AND SECTOR-LEVEL ESCALATION TO BE COMPARED AND CONTRASTED.

While our view is based on a variety of sources (not the least of which is our market insight), the general approach in this pack is based on escalation from the input cost perspective. This aligns with the traditional QS approach to escalation but also allows rationalisation of bottom-up (i.e. input-level) and top-down (i.e. sector or economy level) escalation perspectives.

There is no single market-level data series which conceptually matches the above. However, data available by key inputs provides checks and balances on our overall view for key markets..

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

As our Construction Economist Damon is here to support the team and our clients in understanding economic conditions and their influence upon our projects. Damon has 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.

Damon also produces reports for our New Zealand, North America and India businesses, should these be helpful to you please contact your local WT office.

Footnote references

1 Jobs and Skills Australia
2 Australian Bureau of Statistics (ABS), London Metals Exchange
3 Australian Energy Market Operator
4 Reserve Bank of Australia
5 ABS
6 ABS
7 ABS
8 ABS

National Circuit, Canberra

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ADELAIDE
Sam Paddick
National Director
Level 1, 64 Hindmarsh Square
Adelaide SA 5000
T: +61 8 8274 4666

BRISBANE
Sam Darrington
Director Operations QLD
Level 13, 66 Eagle Street
Brisbane Qld 4000
T: +61 7 3839 8777

CAIRNS
Shaun Muddock
Associate Director
Level 1, 17 Aplin Street
Cairns Qld 4870
T: +61 7 4281 6900

CANBERRA
James Osenton
National Director
Level 10, 15 London Circuit
Canberra City ACT 2601
T: +61 2 6282 3733

GEELONG
Stuart Gillies
National Director
3/240 Pakington Street
Geelong West Vic 3218
T: +61 3 5201 8040

GOLD COAST
Sam Darrington
Director Operations QLD
Level 15, Corporate Centre One
2 Corporate Court
Corner Bundall Road & Slatyer Avenue
Bundall Qld 4217
T: +61 7 5591 9552

HOBART
Chris Hawkins
State Director
Level 2, 88 Bathurst Street
Hobart TAS 7000
T: +61 3 6234 5466

MELBOURNE
Tim Roberts
Executive Director
Level 4, Q2, 4 Riverside Quay
Southbank Vic 3006
T: +61 3 9867 3677

NEWCASTLE
Kyle Hutchinson
Associate
T: +61 2 9929 74227

PERTH
John O'Gorman
National Director
Level 23, Exchange Tower,
2 The Esplanade,
Perth WA 6000
T: +61 8 9202 1233

SYDNEY
Phil Anseline
Executive Director
Level 26, 45 Clarence Street
Sydney NSW 2000
T: +61 2 9929 7422

WESTERN SYDNEY
Simon Hensley
National Director
Suite 12, Level 1, 331 High Street
Penrith NSW 2750
T: +61 2 9929 7422

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