Wage Price Index Forecasts

Australian Energy Regulator

14 September 2022

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Introduction

Background and scope of engagement:

In accordance with its responsibilities under the NER and the NGR, the AER must make revenue determinations for NSPs and access arrangement decisions for gas NSPs. The AER assesses proposed forecast operational and capital expenditure from providers over a regulatory period with the price of labour being a component and assesses the reasonableness of the proposals based on independent forecasts.

The AER commissioned KPMG to forecast the price of labour in the electricity, gas, water and waste services (utilities) industry through FY 2028 for the national economy, New South Wales, Victoria and South Australia. The key deliverables of this report are to:

- Provide annual WPI forecasts for:
  - Australia
  - New South Wales
  - Victoria
  - South Australia
- Analyse the key influences on the forecast changes to the WPI by discussing drivers of change, including enterprise bargaining trends and an overview of the economic outlook, which covers:
  - Australia wide economic outlook for all industries and utilities.
  - Relevant state economic outlook for all industries and utilities.
  - Outlook for wages in both Australia and the relevant states.
- Describe the methodology used to forecast the WPI and price growth changes with particular attention to the assumptions made and the data sources used.
- Provide detail on how legislated changes to the superannuation guarantee affect the forecast for the price of labour.
- As agreed with the AER, all forecasts are as-of 11th August 2022, which predates the release of the June quarter 2022 WPI series. As a result, the reported figures for FY21/22 are estimates based on three quarters of actual data and a one quarter projection. Forecasts for FY2022/23 onwards are all projections.

Contents

Glossary

AAWI	Average Annual Wage Increase	RBA	Reserve Bank of Australia
ABS	Australian Bureau of Statistics	SFD	State Final Demand
AER	Australian Energy Regulator	WPI	Wage Price Index
CPI	Consumer Price Index	NSP	National Service Providers
EBA	Enterprise Bargaining Agreement		
FY	Fiscal Year		
GDP	Gross Domestic Product		
GSP	Gross State Product		
GVA	Gross Value Added		
NER	National Energy Rules		
NGR	National Gas Rules		

Executive Summary

Australia's recovery from the COVID-19 pandemic has been robust, with the economy bouncing back after the Delta lockdowns. The economy is projected to grow by 4.0% in 2022, comfortably above its long run trend. Australia's experience is not unique, with economies around the world experiencing rapid rebounds after lockdowns ease; fiscal and monetary stimulus has been a key driver of this.

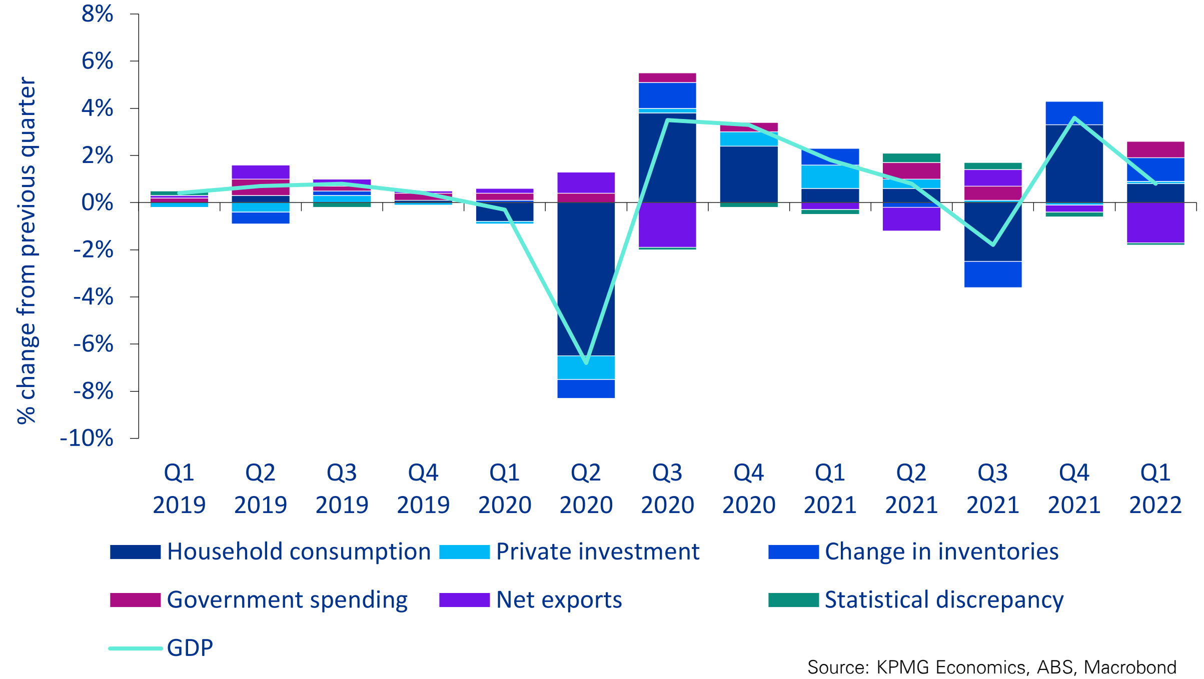
The rapid recovery in demand has outstripped many country's productive capacity, generating inflationary pressures; in Australia these have materialised in the wages of many highly skilled workers (particularly in the IT and construction sectors). It has also been a key driver of global inflationary pressures across a range of consumer products, such as furniture, clothing, electronics, vehicles and other consumer durables.

Demand-driven inflationary pressures have been enhanced by a number of supply side shocks to the world economy. Global manufacturing supply chains continue to be buffeted by lockdowns in China, and while shipping costs are now falling back they are still significantly higher than pre-pandemic levels. And the war in Ukraine has sent shockwaves through global commodity markets and further disrupted manufacturing supply chains in Europe. Domestic pressures have also contributed to a lesser extent with higher than average rainfall across the east-coast delaying construction activities and higher employee absenteeism caused by the Omicron outbreak.

As a result, inflation in Australia is the highest it has been since the early 1990s, at 6.1% in the June quarter 2022. In response to current conditions, the RBA has implemented a cumulative 2.25 percent points in rate rises between May and September 2022.

The strength of the economic recovery has led to Australia's labour market tightening significantly, with the unemployment rate falling to a multi-decade low of 3.4% in July 2022. As a result, wages growth (as measured in the Wage Price Index, which strips out changes in the quantity and composition of the workforce) accelerated to it's fastest pace in a decade in the June quarter.

Quarterly GDP growth by component



Source: KPMG Economics, ABS, Macrobond

Medium and long-term economic outlook

Moving through 2023 and into 2024, interest rate rises by the RBA and fiscal tightening, through the rolling off of emergency support payments and a winding down of COVID-related expenditure, are expected to dampen momentum in the economy and ease domestic price pressures. Concurrently, global inflationary pressures are also expected to ease as commodity market and global supply chains further normalise. As a result, inflationary pressures are expected to fall back, to 2.7% in FY24, before holding steady at the mid-point of the RBA's 2-3% target band in the long run.

Executive Summary

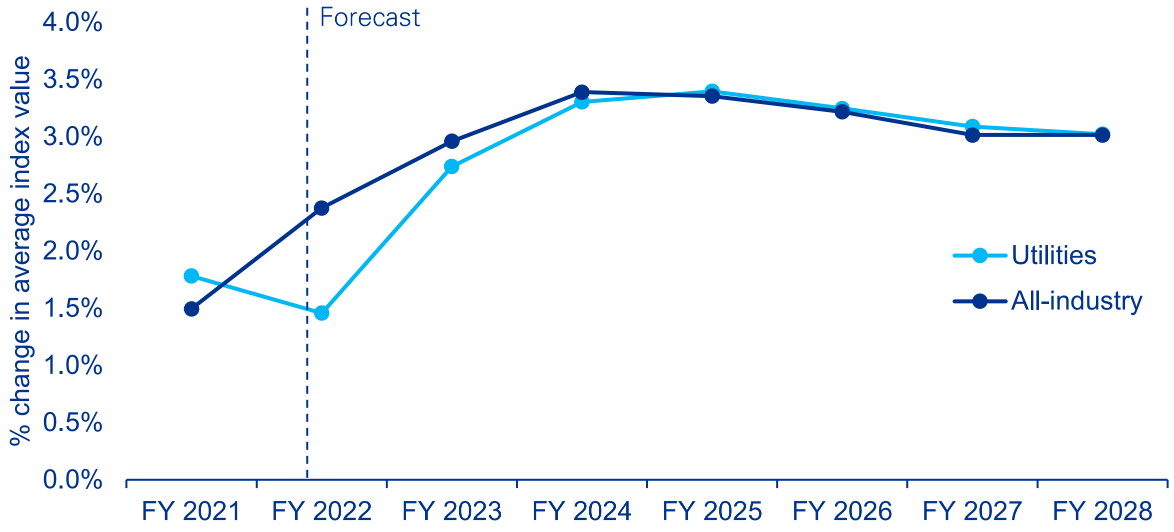
Sustained strong demand domestically and tight labour market conditions pushed the pace of growth in the national all-industry WPI to 2.6% y/y in Q2 2022. The current shortages of workers and stiff competition in the labour market is further highlighted by the WPI which includes bonuses, where growth accelerated to 3.1% in the same period; employers have been utilising bonuses to attract and retain staff.

Notwithstanding a moderation in the pace of growth, sustained tightness in the labour market and high inflation are projected to be key drivers of wages growth in the near term. The nature of wage setting in Australia, through a combination of government-mandated rates, multi-year enterprise bargaining agreements and private negotiations means we expect wages growth to peak in late 2023/early 2024, later than the peak in growth momentum. From here, the pace of growth is expected to ease in line with the economy moving back towards its underlying trend growth trajectory, this in turn will take inflation back towards the RBA's 2-3% target band.

Notwithstanding the acceleration in wages growth, real wages are currently falling, with price inflation outstripping increases in earnings. KPMG expects this to continue throughout FY23, but with global inflationary pressures expected to fall back significantly in calendar year 2023, this position will reverse over FY24. In the long run, real wages growth (as measured in the WPI) is expected to hold broadly steady at 0.5% pa.

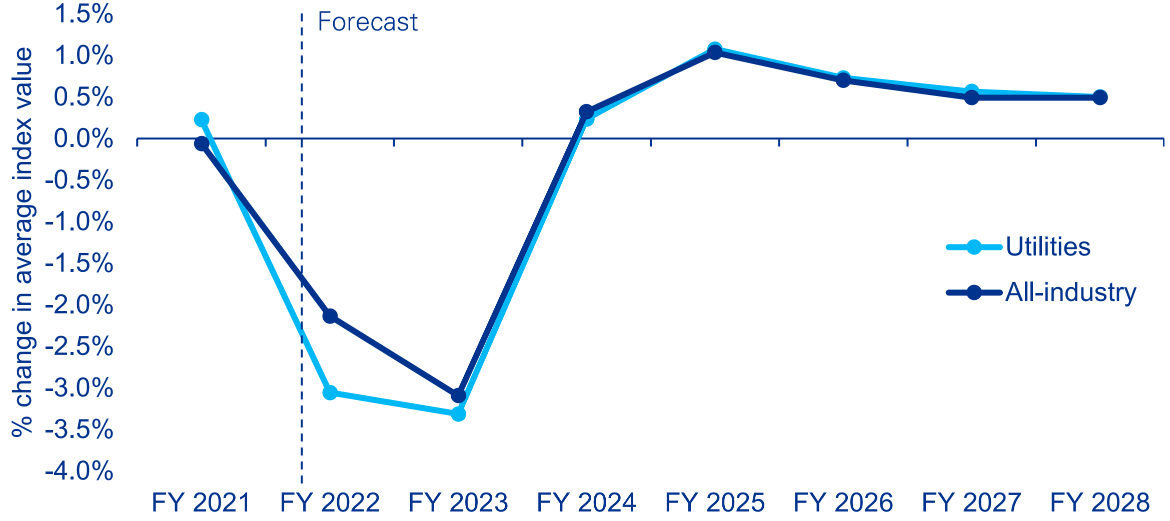
The pace of average wages growth in the utilities sector declined through FY22, with enterprise agreements signed through the pandemic generally recording slower wages growth relative to pre-pandemic levels. As a result of the economic recovery, high demand for labour and a heightened inflation environment, current negotiations have shifted wages growth to a higher level, which will materialise in the WPI from FY23 onwards. As in the all-industries series, the pace of growth is expected to peak cyclically in FY24, before falling back to an underlying long run trend of c.3% pa.

National nominal WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

National real WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Executive Summary

The impact of the pandemic was not uniform across the states and territories. While New South Wales and Victoria were significantly impacted by pandemic restrictions, South Australia carried a lower disease burden and was not subject to the same public health orders. While Omicron outbreaks slowed State Final Demand (SFD) growth in 2021, the combination of fiscal and monetary stimulus has resulted in all states out-performing their historical trends this year. On a financial year basis, NSW and Victoria saw an acceleration in growth in FY22, driven by their recoveries from COVID. In contrast, South Australia's economy significantly out-performed in FY21, growing 3.9%, and momentum has weakened through FY22, with the easy wins from re-opening exhausted.

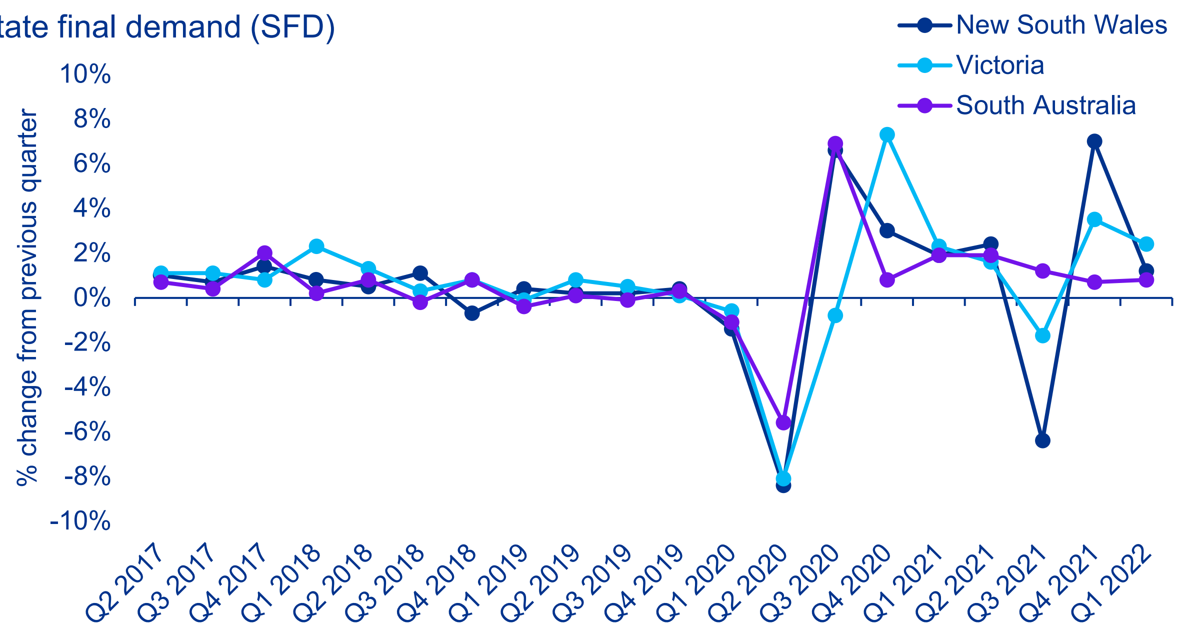
Inflation has accelerated across the board, with Adelaide experiencing the highest inflation rate of the three capitals in the June quarter, at 6.4% higher than the national average (6.1%). Melbourne recorded an inflation rate equivalent to the national average, with Sydney below this (at 5.3%). The primary drivers of increasing inflation across the cities are automotive fuel, dwelling construction costs and rents, food prices, and international spillovers into the local price of consumer durables.

New South Wales

Similar to the experience in other states, NSW's labour market is operating at close to full employment. The state's unemployment rate declined faster than the national average in FY22 and is at a record low of 3.3% in July 2022. Overall, this suggests there is limited capacity in the state's economy to further increase employment, and although growth momentum is easing, upward pressure on wages is expected to remain in the near term. Thus, the state is projected to see an acceleration in wage growth through to FY24.

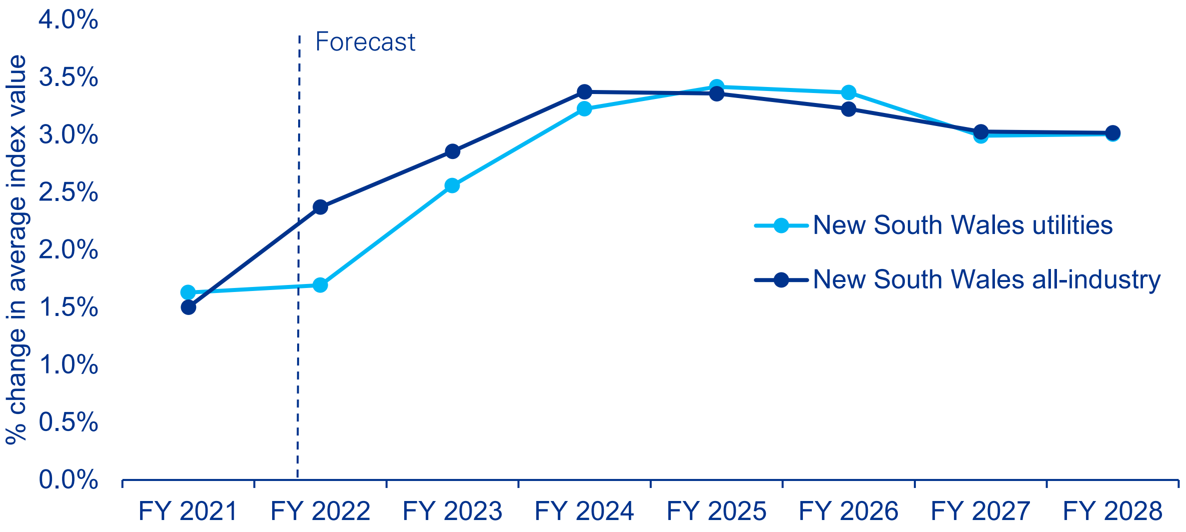
The utilities industry slightly outperformed the all-industry WPI in FY21. However, the gap has been declining, similar to the national utilities WPI, and over FY22 wages growth in the utilities sector lagged the all-industries average. Given current labour market conditions, new EBAs will likely be approved with higher wage growth rates, with growth in the NSW utility industry WPI expected to match the all-industry WPI growth by FY24.

State final demand (SFD)



Source: ABS

New South Wales' nominal WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Executive Summary

Victoria

Although Victoria's economy experienced the most substantial lockdowns and disruption through the pandemic, the economy has rebounded strongly and largely closed the gap with the rest of the country. Broadly speaking, the state is experiencing similar economic forces to New South Wales. A combination of high inflationary pressure and a historically low unemployment rate is expected to drive an acceleration in wage growth in the short to medium term.

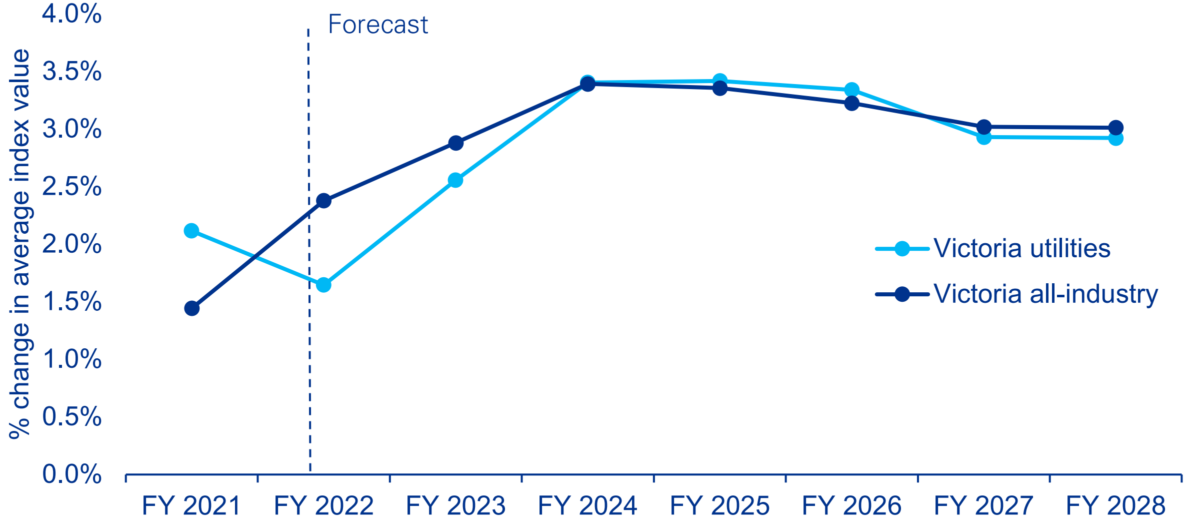
Real wages are expected to follow a similar path to other states for both the all-industry WPI and utilities WPI, with a decline in FY22 and FY23 before returning to positive growth rates from FY24 onwards, as inflation returns to the RBA target band.

South Australia

Wage growth in South Australia was slightly weaker than the national average in FY22, partly driven by the unemployment rate being slightly above (0.4 percentage points) than the Australia figure. But similar to other jurisdictions, increases in award wages and higher inflationary pressures are expected to drive an acceleration in wages growth in FY23. In the long run wages growth is expected to track back to 3%, reflecting price inflation and productivity gains.

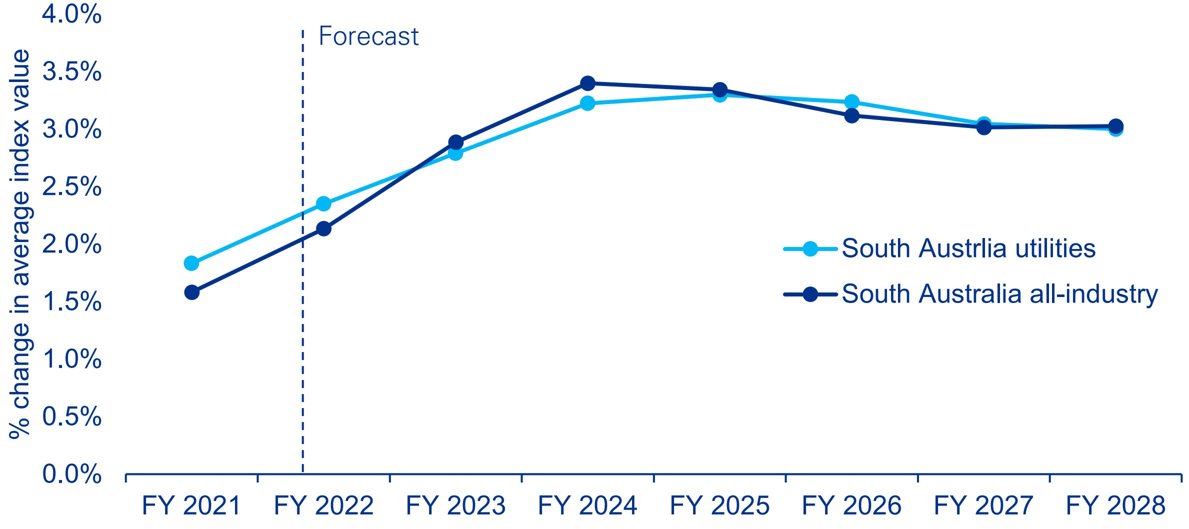
Utility industry wage growth outperformed the all-industry in FY21 and is expected to continue to outperform all-industry WPI through FY22, albeit with the gap narrowing, unlike New South Wales and Victoria. From FY23, utilities industry wage growth is expected to be similar to the all-industry, slightly lagging behind due to the time it takes for multi-year EBAs to reset.

Victoria's nominal WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

South Australia's nominal WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Executive Summary

Nominal wage forecasts, % average change from previous financial year

	2021	2022	2023	2024	2025	2026	2027	2028
National all-industry WPI	1.5%	2.4%	3.0%	3.4%	3.4%	3.2%	3.0%	3.0%
National utilities WPI	1.8%	1.5%	2.7%	3.3%	3.4%	3.2%	3.1%	3.0%
NSW all-industry WPI	1.5%	2.4%	2.9%	3.4%	3.4%	3.2%	3.0%	3.0%
NSW utilties WPI	1.6%	1.7%	2.6%	3.2%	3.4%	3.4%	3.0%	3.0%
Victoria all-industry WPI	1.4%	2.4%	2.9%	3.4%	3.4%	3.2%	3.0%	3.0%
Victoria utilties WPI	2.1%	1.6%	2.6%	3.4%	3.4%	3.3%	2.9%	2.9%
SA all-industry WPI	1.6%	2.1%	2.9%	3.4%	3.3%	3.1%	3.0%	3.0%
SA utilties WPI	1.8%	2.4%	2.8%	3.2%	3.3%	3.2%	3.0%	3.0%

Source: KPMG Economics, ABS

Real wage forecasts, % average change from previous financial year

	2021	2022	2023	2024	2025	2026	2027	2028
National all-industry WPI	-0.1%	-2.1%	-3.1%	0.3%	1.0%	0.7%	0.5%	0.5%
National utilities WPI	0.2%	-3.1%	-3.3%	0.2%	1.1%	0.7%	0.6%	0.5%
NSW all-industry WPI	-0.1%	-2.1%	-3.2%	0.3%	1.0%	0.7%	0.5%	0.5%
NSW utilties WPI	0.1%	-2.8%	-3.5%	0.2%	1.1%	0.9%	0.5%	0.5%
Victoria all-industry WPI	-0.1%	-2.1%	-3.2%	0.3%	1.0%	0.7%	0.5%	0.5%
Victoria utilties WPI	0.6%	-2.9%	-3.5%	0.3%	1.1%	0.8%	0.4%	0.4%
SA all-industry WPI	0.0%	-2.4%	-3.2%	0.3%	1.0%	0.6%	0.5%	0.5%
SA utilties WPI	0.3%	-2.2%	-3.3%	0.2%	1.0%	0.7%	0.5%	0.5%

Source: KPMG Economics, ABS

Executive Summary

Key macroeconomic indicators, financial year

	2021	2022	2023	2024	2025	2026	2027	2028
GDP (% change)	1.6%	3.8%	3.1%	1.7%	2.7%	2.6%	2.6%	2.6%
Total Employment (% change)	6.5%	3%	0.8%	1.5%	1.3%	1.2%	1.1%	1.1%
Unemployment Rate	6.3%	4.3%	4.1%	4.1%	4%	4.1%	4.1%	4.2%
CPI (% change)	1.6%	4.5%	6.1%	3.1%	2.3%	2.5%	2.5%	2.5%

All % change series defined as change in annual sum (GDP) or average (employment and CPI) over the previous year

Source: KPMG Economics, ABS,

01

National economic outlook

Overview

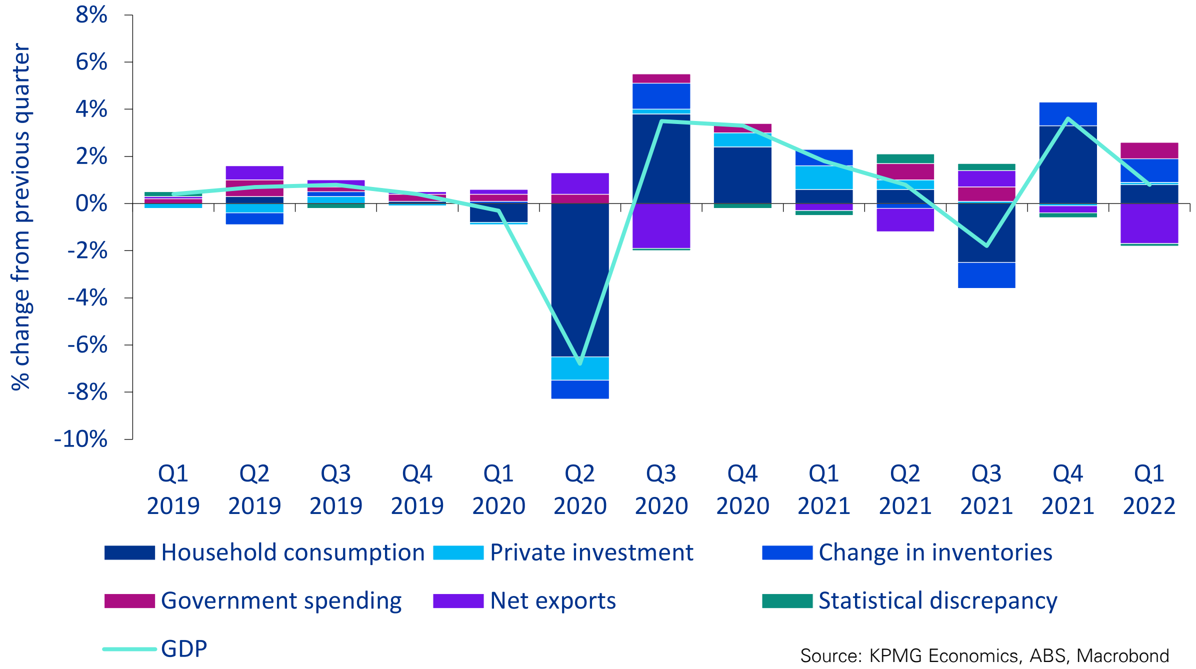
With vaccination rate targets achieved across states and lockdowns easing, GDP started to rebound in Q4 2021 and this has continued through H2 2022. Monetary and fiscal stimulus has driven strong growth in demand, with the economy's supply capacity struggling to keep up – private sector capacity utilisation rose to a record high 86.7% in July. The economy expanded by 0.9% in the June quarter 2022, with GDP now 5.5% higher than it was pre-COVID. The high frequency data for the start of Q3 has become patchier – retail turnover rose a robust 1.3% m/m but employment slipped back in July. Overall, while there are signs of momentum easing it remains positive going into the second half of 2022.

Looking ahead, a combination of starting from a low baseline due to lockdown disruptions last year and a strong start to 2022 are expected to drive a 4.0% increase in GDP this year. But the labour market, survey and monthly spending data suggests that momentum has peaked. While a slowdown was inevitable after the easy wins from re-opening were exhausted, the economy is also facing headwinds from elevated inflationary pressures, interest rate rises, fiscal tightening (as COVID-related supports and spending winds down) and the more challenging external environment. As a result, we expect growth to fall below 2% in FY2023/24, before lifting as the economy returns to its long run trajectory.

The uncertain global environment means the risks around the forecasts are heighted. A sharper downturn could materialise if inflation is stickier than anticipated and/or the shocks to the global economy do not dissipate as quickly as expected – in this case, the RBA would be forced to raise the cash rate more aggressively, which increases the risk of a recession.

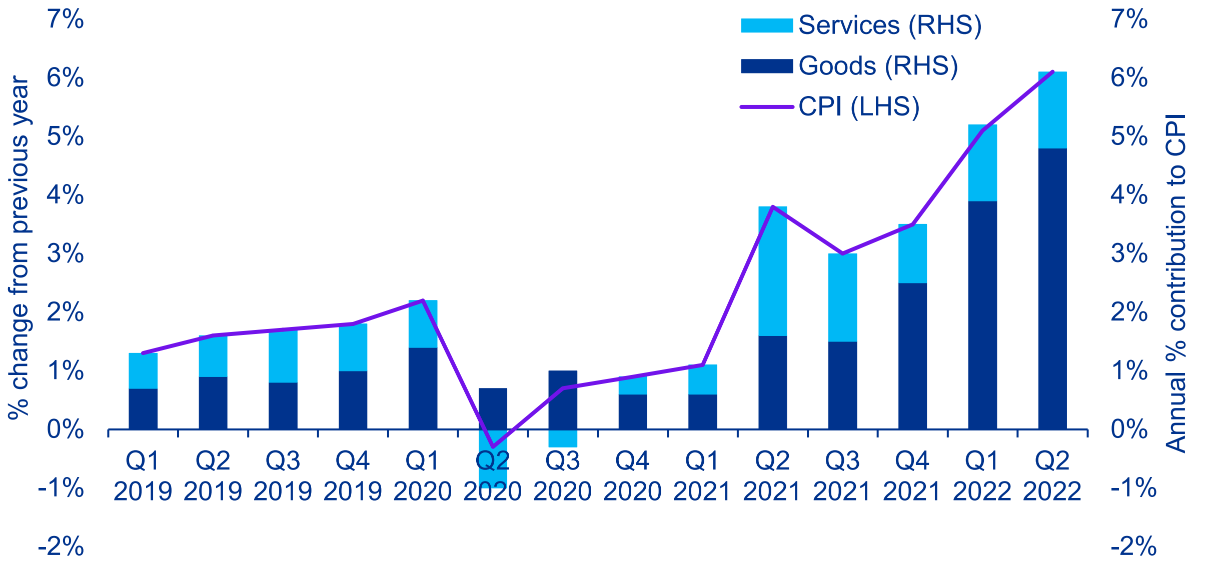
Inflation in Australia is the highest it has been since the early 1990s, rising to 6.1% in the June quarter 2022. Given the global shocks that have hit the economy since the start of the year, price increases have been faster than economists were generally anticipating in late 2021. Looking ahead, current levels for food and fuel prices, continued disruption in global supply chains and the emergence of domestic inflation pressures are expected to take inflation above 7% by the end of 2022. While this is high in absolute terms, Australia is a relative outperformer, with countries in Europe in particular experiencing far higher rates of inflation.

Quarterly GDP growth by component



Source: KPMG Economics, ABS, Macrobond

Quarterly contributions to CPI



Source: KPMG Economics, ABS

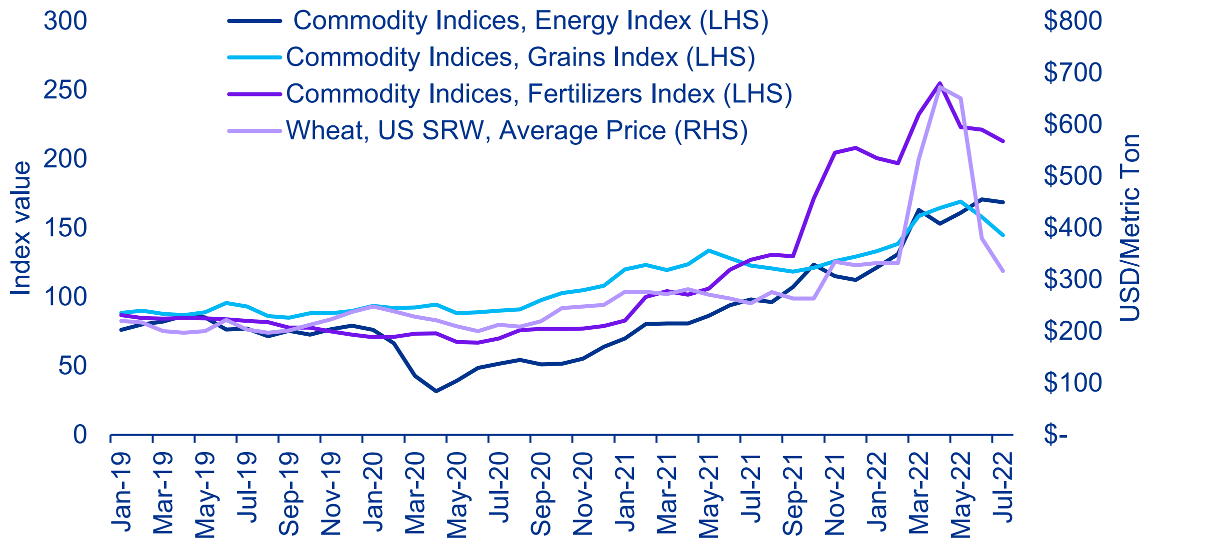
Overview (con't)

Moving into 2023, inflationary pressures are expected to ease markedly. Global commodity prices have peaked, with many falling back over the last two months as concerns about supply ease and growth in global demand moderates. The pace of increases in local food prices is also expected to slow (and for fresh produce turn negative), as flood-impacted regions recover and return to full capacity. The moderation in global commodity prices is projected to fully materialise in early 2023. For example, fuel prices have already fallen back, although this will unwind when the fuel duty cut is reversed. Meanwhile, despite China's ongoing challenges with COVID lockdowns, global supply chain disruptions are expected to ease, although it will take time for prices and shipping times to fully normalise.

In response to the shifting inflation dynamics, the Reserve Bank of Australia have implemented a sequence of interest rate rises, with a cumulative 2.25 percent points in hikes announced between May and September 2022. With inflationary pressures broadening through the economy we expect the RBA to continue tightening policy, to take the cash rate to a peak of c.3% by early 2023. Higher interest rates and inflation are putting pressure on household disposable income, and are expected to put a damper on discretionary consumer spending as households prioritise spending on essentials. The increase in interest rates has also precipitated a correction in the housing market, with prices now declining in most capital cities; a reduction in borrowing capacity for buyers is forcing a decline in prices, particularly in Sydney where affordability is most stretched.

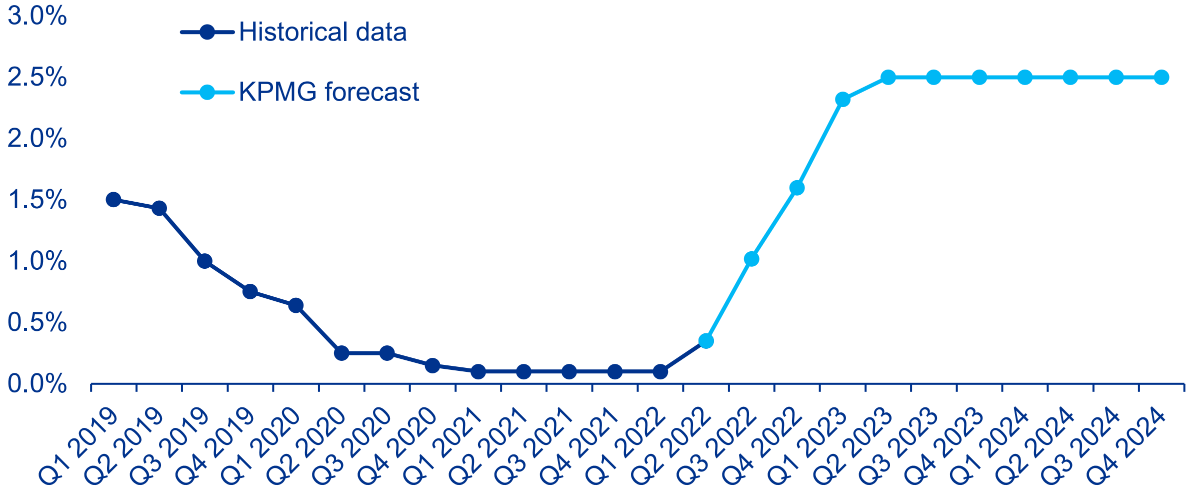
In addition to dampening activity in the established housing market, the increase in interest rates is flowing into new residential construction, with the volume of dwelling approvals falling back sharply since the start of the year; this trend is being reinforced by the rolling off of the HomeBuilder stimulus program, which underpinned an acceleration in approvals in 2020 and the first half of 2021. This trend will put a drag on residential construction activity in the medium term, but activity is also likely to remain soft in the near term, with a number of contractors struggling with sharply rising costs set against fixed price contracts. As a result, we expect residential construction activity to hold steady at best, despite a solid pipeline of work to get through.

World energy and agricultural product prices



Source: KPMG Economics, Macrobond

Cash rate target forecast, Australia



Source: KPMG Economics, ABS

Overview (con't)

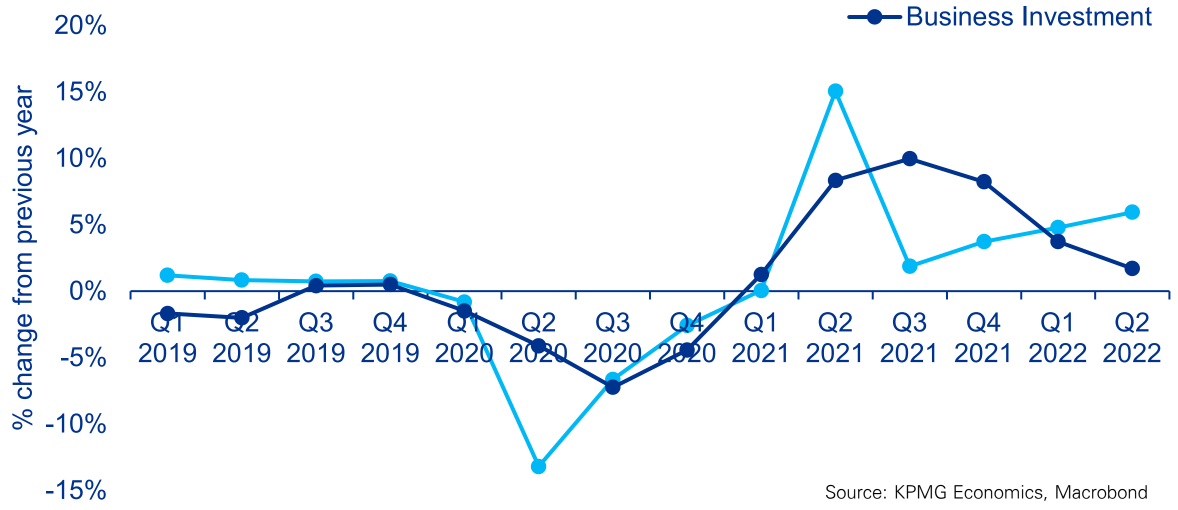
The worsening outlook for the economy is likely to put a drag on business capital expenditure, with some projects put on hold as firms re-assess the environment. But the fundamentals remain solid, with many businesses accumulating significant amounts of cash through the pandemic and the government's temporary lifting of the cap in the Instant Asset Tax Write-Off in place until June 2023. As a result, the latest capital expenditure surveys suggest that while momentum in business investment eased in Q2, with volumes declining 0.8% on the quarter, spending will lift in FY23 compared to FY22. After contracting 4.3% in 2020, capital expenditure rebounded 6.6% in 2021, and is expected to grow by around 2.7% in 2022.

Good exports recovered sharply in the June quarter, following declines in Q1 2022 mostly due weather and Covid-19 disruptions. Rural exports have also picked up in recent months, highlighting increasing global demand and strong production.

Australia's service exports have started to rebound following the reopening of international borders, but they remain well below the pre-pandemic levels. Demand is being weighed down by challenges in the international environment; slower global growth momentum, continued disruption from COVID, and high fuel costs. Nevertheless, given the low level of demand in 2021, revenue growth in 2022 is set to be very robust.

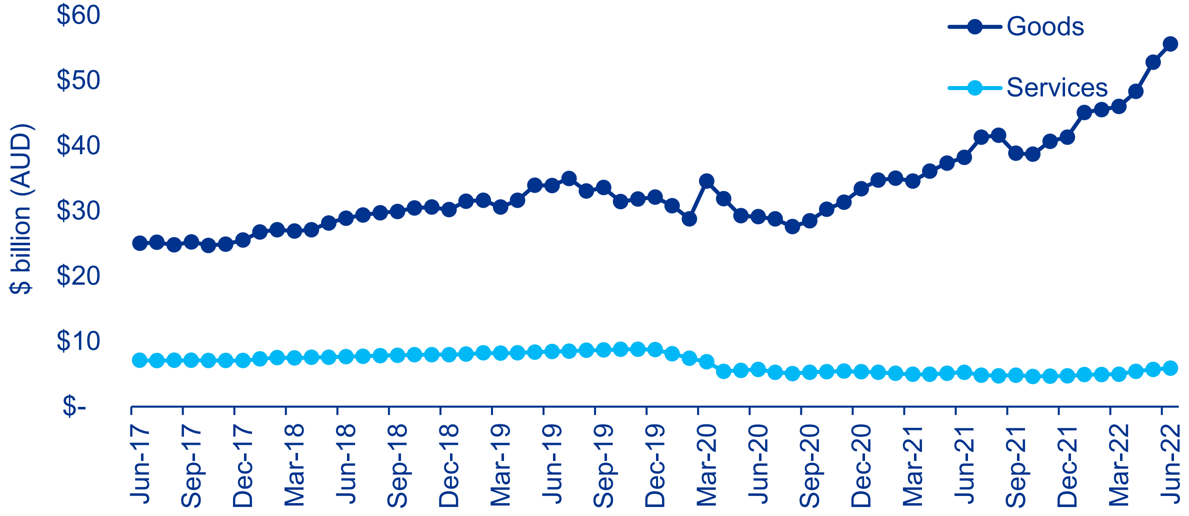
The slowdown in China's economy has generated significant spillovers through the Asia region. The downturn has added disruptions to global supply chains, but there are signs that businesses are adapting with manufacturing output less impacted than in earlier episodes. With lockdowns still in place in many cities, domestic demand momentum remains subdued; for Australia this is a key handbrake on the recovery in international tourists and students. Looking ahead, conditions are expected to improve as the authorities continue to balance controlling COVID with stimulating the economy through looser fiscal and monetary policy. This should provide further relief to supply chain disruptions globally, and provide a boost to external demand for Australian exports.

Consumption and business investment forecasts



Source: KPMG Economics, Macrobond

Australia's exports, goods and services



Source: KPMG Economics, Macrobond

Medium term and long term outlook of economy

After the current cycle has played through, the economy is projected to return to its long run, underlying trend pace of growth, of c.2.7% pa – over time business cycles will continue to evolve, but the long run path will act as an anchor. This pathway is fundamentally determined by Australia's supply side capacity, which is driven by growth in labour productivity, the physical capital stock and productivity improvements. Labour supply will be determined by population trends and the participation rate, the physical capital stock is determined by investment trends, and productivity is driven by several factors such as workforce education and skills, technology, the institutional environment and links with other economies.

Going forward, growth in supply side potential is expected to slow, largely due to the ageing population, with increased participation in the labour force by women and older workers only partially offsetting the demographic trend.

In line with recent experience, productivity growth is expected to remain low relative to its long historical average. The easy wins from current technologies have been exhausted, and the pace of globalisation has slowed in recent years. Business investment has also disappointed, with its share of GDP trending down. If the current pace of technological progress is maintained, the pace of annual growth will decline to below 2 percent by 2040. However, the Australian economy is expected outperform other advanced countries, largely as a result of more favourable demographics.

The Australian economy has been more resilient against the Covid-19 outbreak when compared to other OECD countries. Omicron had a limited impact on output and employment, with both back above pandemic levels; beyond the impact of the border closure, there are few signs of COVID having a permanent impact on labour supply and productivity. However, new Covid-19 variants continue to pose downside risk to the economy.

Australia's supply side fundamentals

	Labour supply growth	Investment	Average # years of education in labour force	WB institution quality	R&D spending
	% avg last decade	*% of GDP; 2019*	*Years*	*Percentile ranking*	*% of GDP; avg last decade*
Australia	1.6%	22.7%	14.0	90.7	2%
OECD average	0.7%	22.9%	13.4	78.1	1.8%

Source: KPMG Economics

Labour market

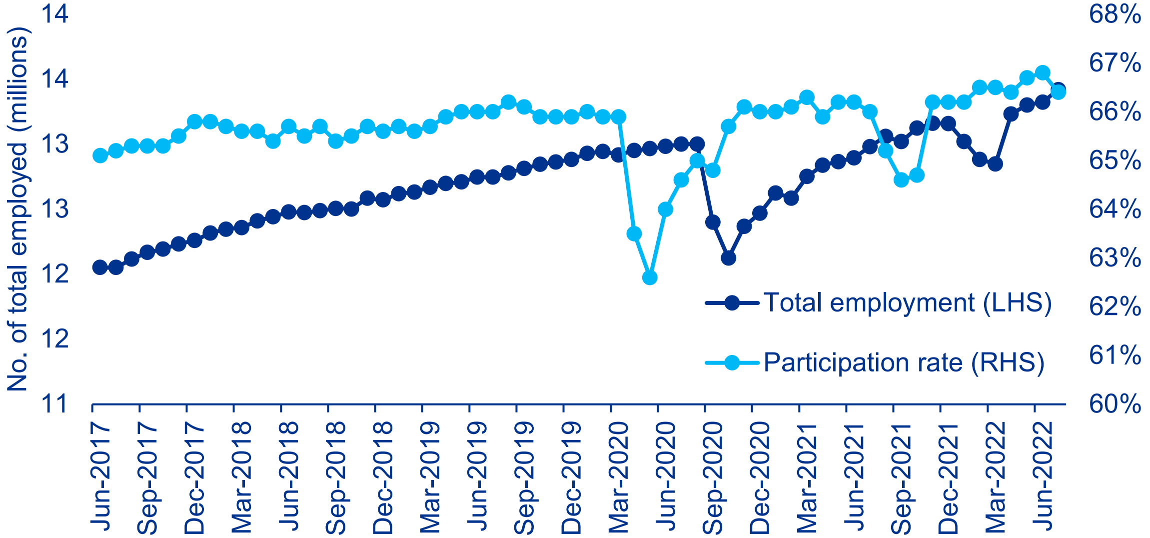
The strength of the recovery in the economy has led to the labour market tightening significantly across Australia, with the unemployment rate falling to a multi-decade low of 3.4% in July 2022. Unemployment rates have fallen across all states and territories, and although momentum in the economy is expected to ease in absolute terms businesses will continue to be stretched and looking to add workers, which will maintain the unemployment rate close to its current level over the near term.

Further evidence of the tightness of the labour market can be seen in the trends in employment and labour force participation. Strong demand for workers and in some sectors rising wages has encouraged people to enter the workforce, with the participation rate recording a near-record high of 66.4% in July 2022 (compared to 65.9% in February 2020). The underemployment rate, which adds those workers who would like to work more hours to the count of unemployed people, has also fallen sharply, to 6% (another multi-decade low).

Looking ahead we expect the current tight conditions to remain in the near term. Job advertisements and vacancies reached their highest levels since 2008 in June 2022, suggesting that slower growth momentum will not put a significant dent in labour demand in the near term – high frequency measures indicates that the number of vacancies are now falling, but they are so high in absolute terms that it will be an employees' market for some time.

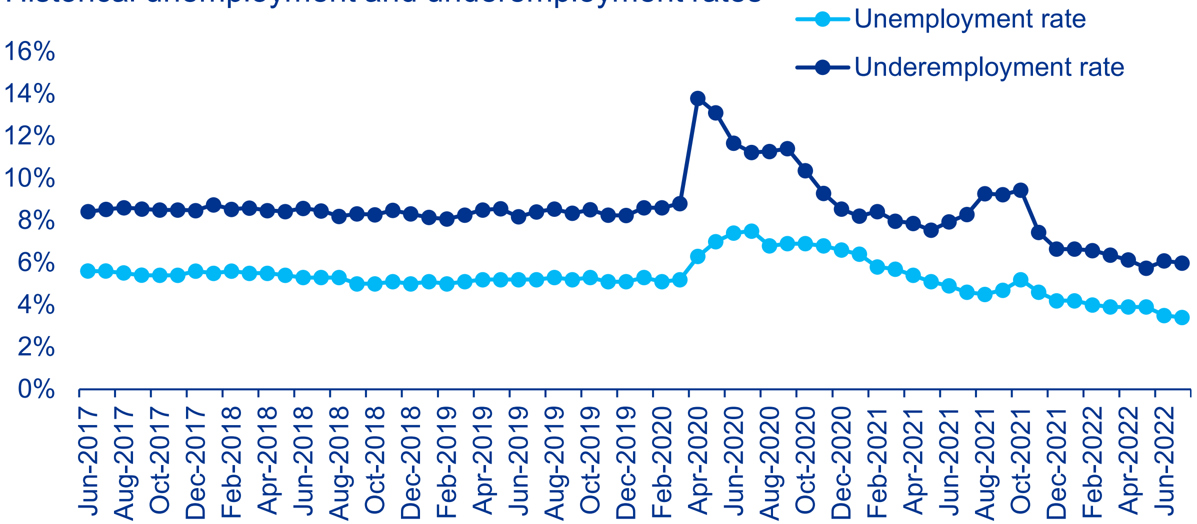
The tight labour market is expected to begin easing in 2023 and into 2024 as a result of slower growth in activity and increasing labour costs. The unemployment rate will likely remain at a low levels until the end of 2024, driven by strong labour demand and long run drivers including higher participation rates among females and older Australians.

Historical employment and labour force participation rate



Source: ABS

Historical unemployment and underemployment rates



Source: ABS

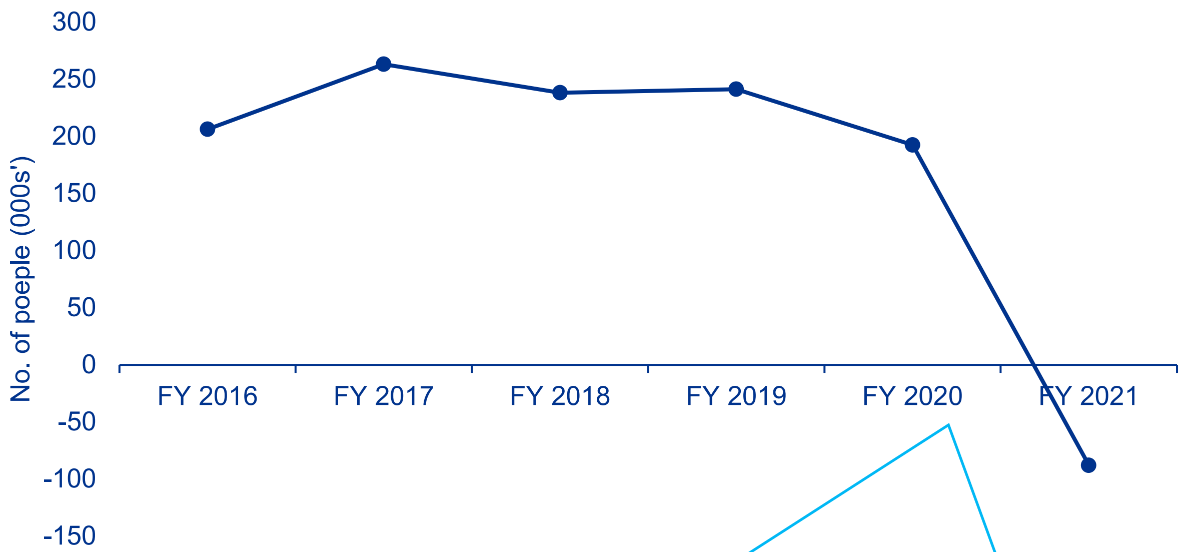
Labour Migration

Prior to the pandemic, positive overseas migration provided a significant source of new workers to the local labour market, on both a temporary and permanent basis. The closure of the border between 2020 and early 2022 put a stop to these inflows, with overall net migration turning negative in FY20/21.

The impact of these 'missing' workers is being felt most in two broad areas, highly skilled occupations, such as software engineers and chefs, and lower skilled occupations in hospitality, agriculture and retail (with these roles typically undertaken by temporary workers and students).

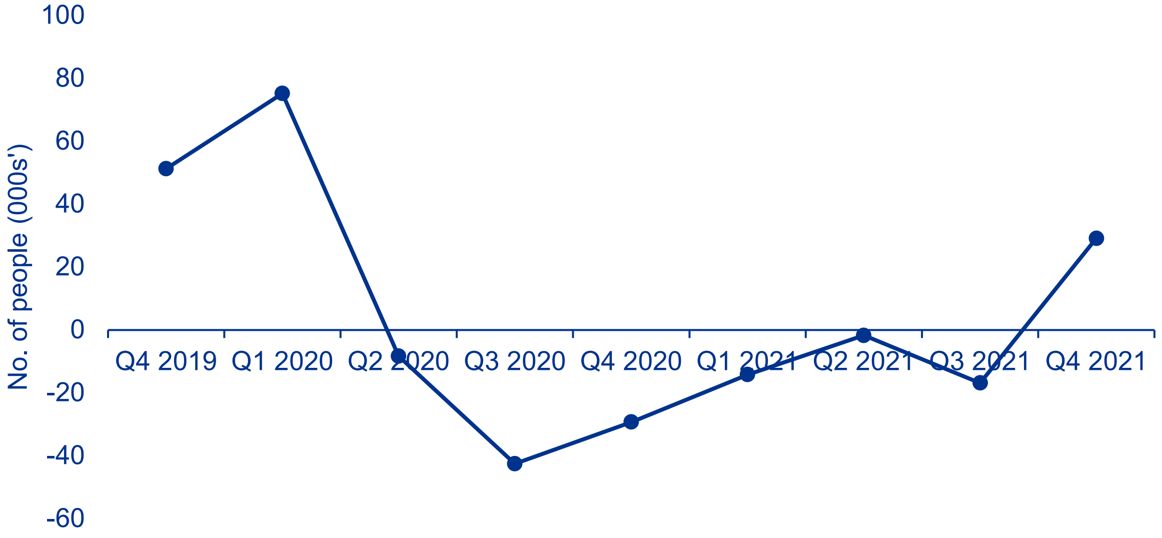
The reopening of international borders could also help to alleviate labour shortages in some specific industries/occupations, and the latest visa application and issued data suggests that these inflows will pick up over the next 6-12 months. But inward migration will not be able to relieve general pressure in the market; while migrants add to the workforce, they also increase demand in the economy, which will flow back into the labour market.

Annual net migration in Australia



Source: ABS

Quarterly net migration in Australia



Source: ABS

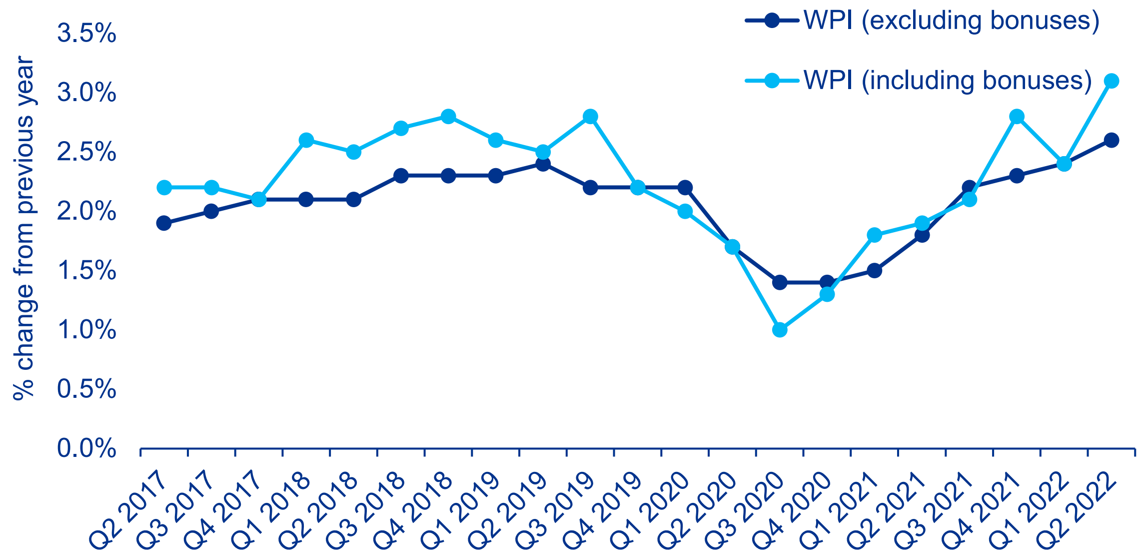
Wages

Wages grew at their fastest rate in eight years (2.6% y/y) in the June quarter data release, but at less than half the pace of inflation. The acceleration in wages growth is partly a result of the unwinding of temporary wage freezes in the public sector, but it also reflects upward pressure on earnings in the private sector, particularly for those workers that are most in demand – the proportion of employees in the private sector that received a pay rise (14%) was the highest for a June quarter in nine years, with the average increase in wages jumping up to 3.8% y/y.

Notwithstanding the acceleration seen in some parts of the economy, momentum in wages growth remains modest. Workers in the public sector are lagging behind (+2.4% y/y), with many in this group subject to multiyear wage agreements that will expire in the future. And across the private sector a significant number of workers are subject to enterprise bargaining agreements or have their pay tied to the national minimum wage/award wage bands – for both of these groups, the June quarter is not a typical time period for pay resets and current momentum is constrained by the increases they received in mid-2021 or earlier.

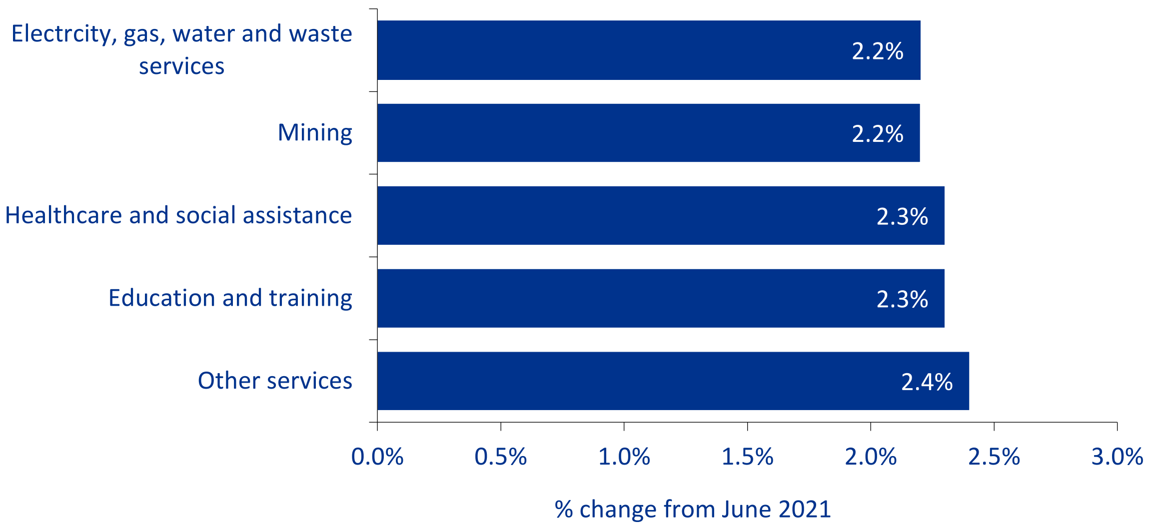
Annual wage growth was different across industries, with the construction industry recording 3.4%, it's highest annual growth rate since December 2012. While the Mining industry and the Electricity, gas, water and waste services (Utilities) industry both saw a 2.2% annual wage rise, the slowest pace across all industries in the economy.

Comparison between WPIs including and excluding bonuses



Source: ABS

Bottom five industries for wage growth in June 2022



Source: ABS

Wages (con't)

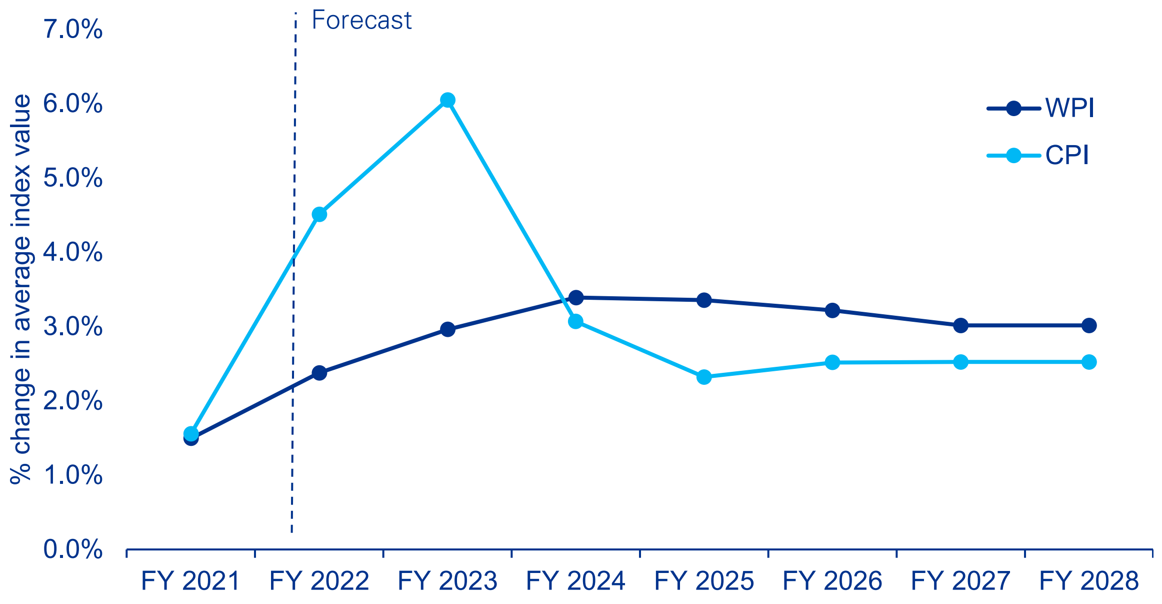
Looking ahead, wages growth is projected to continue accelerating. In the private sector further upward pressure is expected to materialise, as businesses compete to attract and retain their workforce through larger annual pay resets and the implementation of the national minimum wage/award wage bands annual uplifts.

Across the public sector and for those subject to enterprise bargaining agreements, momentum will be a slower burn and contingent on the timing of negotiations; this dynamic is also expected to result in wages growth remaining relatively strong over the medium term, as those on agreements signed through the pandemic 'catch-up' with the rest of the workforce.

Given this dynamic, wages growth is expected to accelerate to around 3.4% in late 2023/early 2024, from its current rate of 2.6%. Following this, the moderation in growth momentum in the economy is projected to feed through to the labour market, with weaker demand for labour easing pressure on wages.

Over the long run, nominal wages are anchored to the trajectory for price inflation and productivity improvements. It is worth noting that the WPI intentionally removes some productivity improvements that manifest themselves as changes in the composition of the workforce. But other more general improvements are captured, such as the digitisation of workplace administration (See Technical Appendix for the WPI definition). Overall, wages growth is expected to track in line with inflation (c.2.5%) and productivity growth that is captured within the WPI (c.0.5%).

National nominal WPI forecast



Source: KPMG Economics, ABS

Changes to superannuation:

The WPI is measured similarly to the CPI, where a 'basket' of employers is surveyed with changes to the price of labour reflected in an index, reported quarterly. Characteristics that are captured in the WPI include underlying wage inflation, labour force characteristics and bargaining power. Since superannuation is considered a non-labour cost, ongoing changes in Australia, which include 0.5% increases in mandatory contributions each year until FY 2025, are not included in the WPI (see Technical Appendix for further information).

Utilities Sector

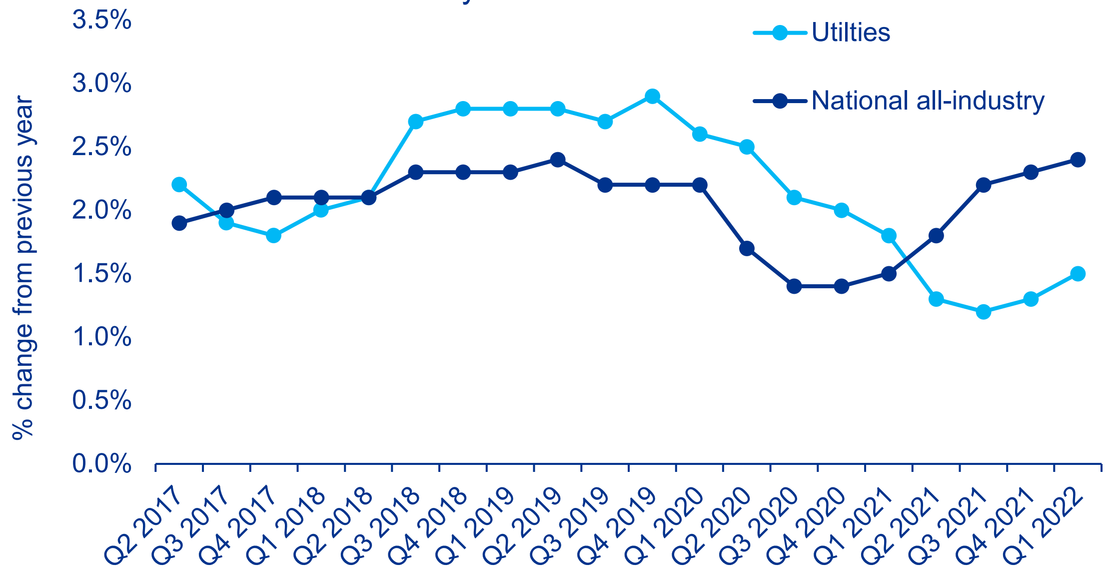
The utility industry includes the generation, retailing, distribution and transmission of electricity as well as supply of gas, water, and sewerage and drainage services.

The price of energy has increased worldwide because of the conflict in Ukraine, though Australia has been less impacted than Europe in particular. The price of wholesale electricity has increased abruptly since the start of 2022, and was approximately four to five times higher in June and July compared to the start of 2022. Wholesale electricity prices are expected to decline over the coming quarters, but will remain elevated for some time. Wholesale gas prices are also significantly higher than one year ago. Gas prices reached a peak in mid-June and are expected to rise in September 2022 as a result of increases in wholesale prices.

Total demand for electricity has not changed significantly since the Covid 19 outbreak, but changes have been seen in the pattern of consumption. Electricity consumption by businesses and industries decreased, while residential consumption increased, as people switched to working or studying from home. Overall, GVA in the sector declined only 1.2% in FY20/21.

During the past ten years, the utility sector has generally experienced faster wages growth when compared to the overall economy. Growth slowed markedly in 2021, as enterprise agreements reset at lower levels, consistent with the weaker economic environment through the pandemic. As mentioned earlier, according to recent July 2022 ABS data, out of all sectors in the economy, Utilities saw the lowest wage growth in the June quarter (2.2%) through the year alongside Mining, while the Construction industry reported the highest annual rise (3.4%). On an annual average basis, wages growth in the sector is currently tracking below 2% y/y.

Nominal utilities industry WPI compared to the nominal national all-industry WPI



Source: ABS

Utilities wages: EBAs

The Trends in Federal Enterprise Bargaining Report provides information about industry wage growth covered by Enterprise Bargaining Agreements (EBAs). For the Utilities industry, there were 333 EBAs current as of March 2022, with an Annual Average Wage Increase (AAWI) of 2.5%. EBA AAWI growth rates tend to move faster than the WPI because the WPI excludes non-wage costs such as superannuation and adjustments to the workforce (see Technical Appendix for the WPI definition).

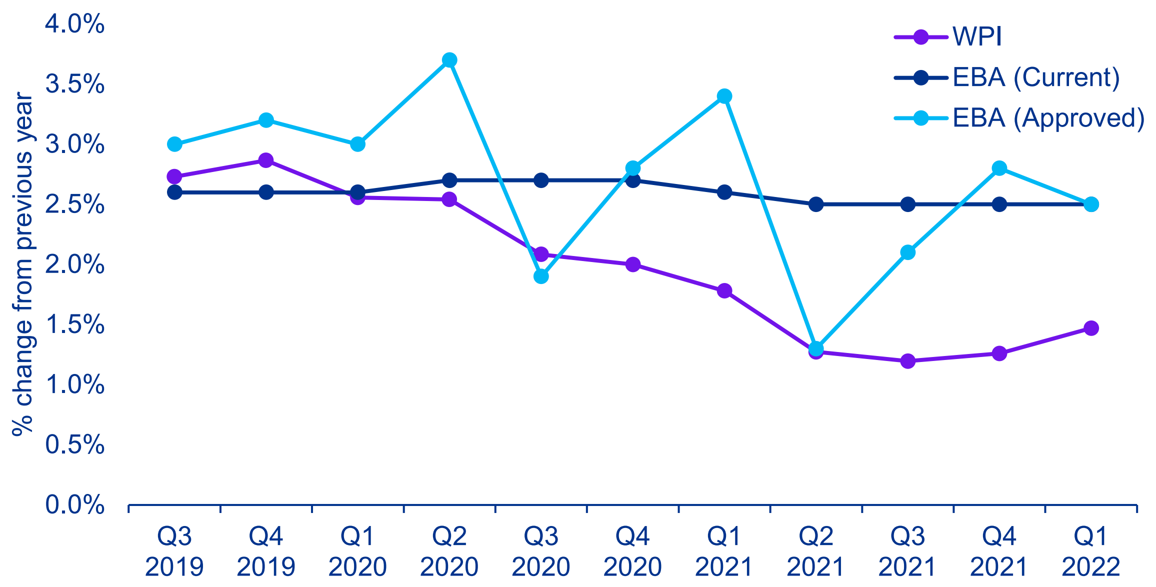
The prevalence of EBAs in the utilities sector means the evolution of agreements is a key driver of wages growth in the near term. As of May 2021, the ABS reports 59.8% of employees in the utilities industry were covered by a collective agreement, with a further 32.7% covered by an individual agreement. Employees on an individual agreement have average weekly total cash earnings similar to employees on a collective agreement, whereas employees on an award on average earn 41.5% less than those on a collective agreement. Therefore, the signing of new EBA agreements act as a signal for future wage growth.

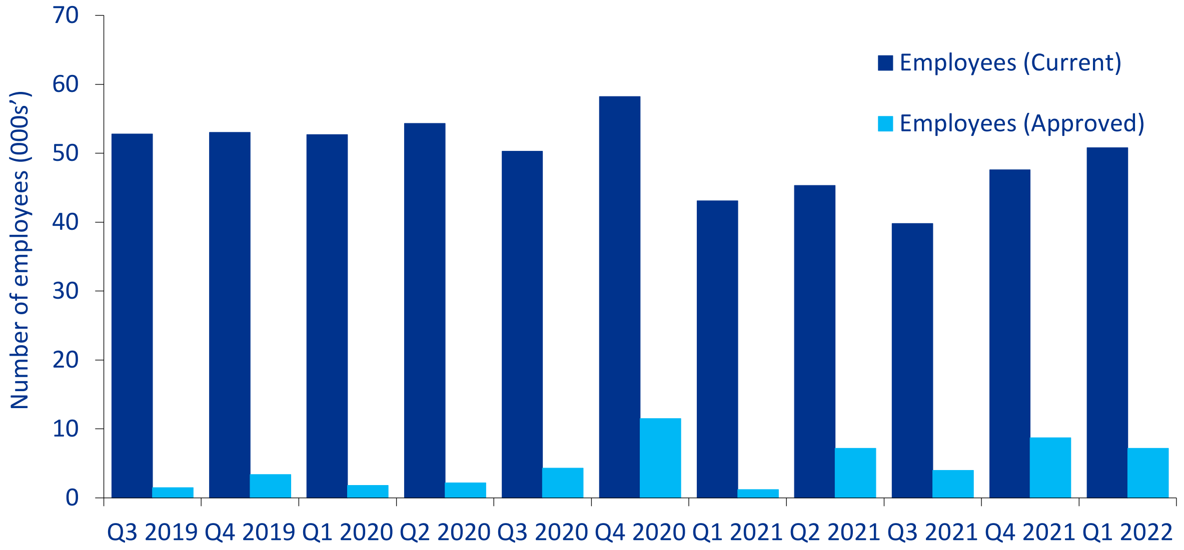
From December 2021, the new agreements signed have generally had a faster pace of growth than pre-existing agreements, and as a result the AAWI has been gradually rising. Evidence includes 41 EBAs approved in Dec-2021 at an AAWI of 2.8% and 36 EBAs signed in March 2022 at an AAWI of 2.5%. Looking ahead, in FY23, 125 EBAs expire, with an average AAWI of 2.4%. Given the current economic environment, these agreements are expected to be re-negotiated at a higher rate, which will flow through to a further increase in the AAWI.

As EBAs are a good proxy for wage growth in the industry, KPMG utilises the data when forecasting in the near term. As the EBAs do not extend beyond the near term, they are treated as an indirect input into the medium/long term forecasts.

* The estimated number of employees is based on survey data collected by the Attorney General's Department (AGD) and may not align with data from the ABS. The AGD report suggests the number of employees should be used as an indicator and to use ABS data if available.

National utility industry EBA compared to the WPI





Source: ABS, Attorney General's Department

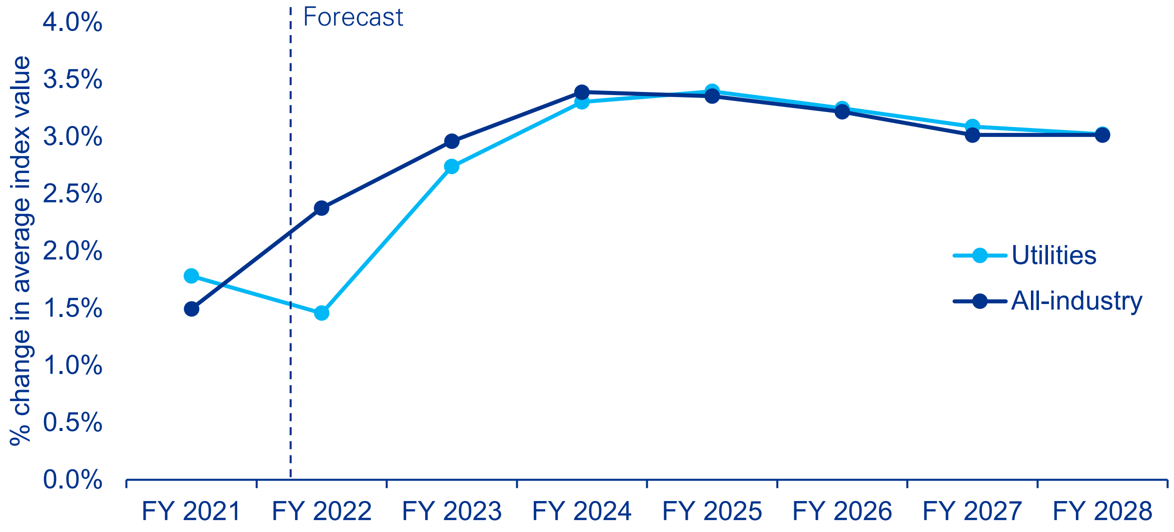
Utilities wages: WPI

Utilities industry wage growth has been steadily declining since FY2019/20, with FY2021/22 recording the slowest annual average growth rate (1.8%) since records began. Although, in FY2020/21 utilities wage growth outpaced the national average, the gap has been shrinking and the utilities industry now lags behind the all-industry average wages growth.

As discussed on the previous page, a key contributor to the decline is the industry being majority unionised, and the signing of new EBA agreements over 2020 and 2021 seeing significantly slower wages growth (as a result of the prevailing economic environment). Moving forward, wages growth in the sector will continue to be constrained by these agreements in the near term, but the pace is expected to accelerate through the next 24 months as they expire and reset at a higher rate.

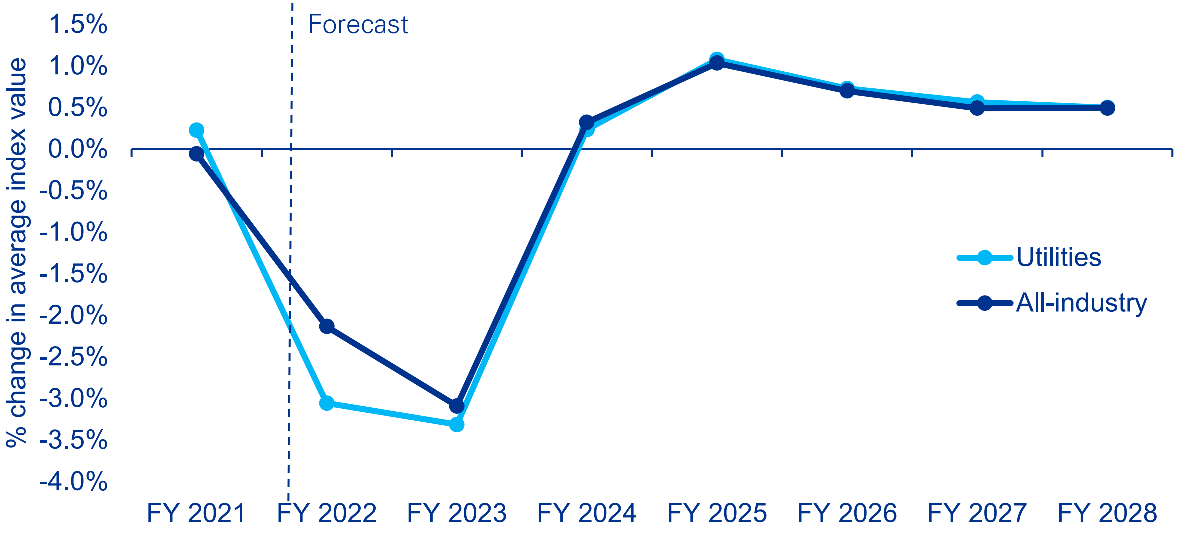
In FY24, wage growth is projected to close with the all-industry average, with a further 92 EBAs expiring; we expect these to also reset at a faster pace of growth. Beyond FY24, it is expected that the utilities industry WPI will follow the national all-industry WPI, consistent with the long-run assumptions outlined in the Technical Appendix.

National nominal utility industry WPI forecast



Source: KPMG Economics, ABS

National real utility industry WPI forecast



Source: KPMG Economics, ABS

02

State economic outlook

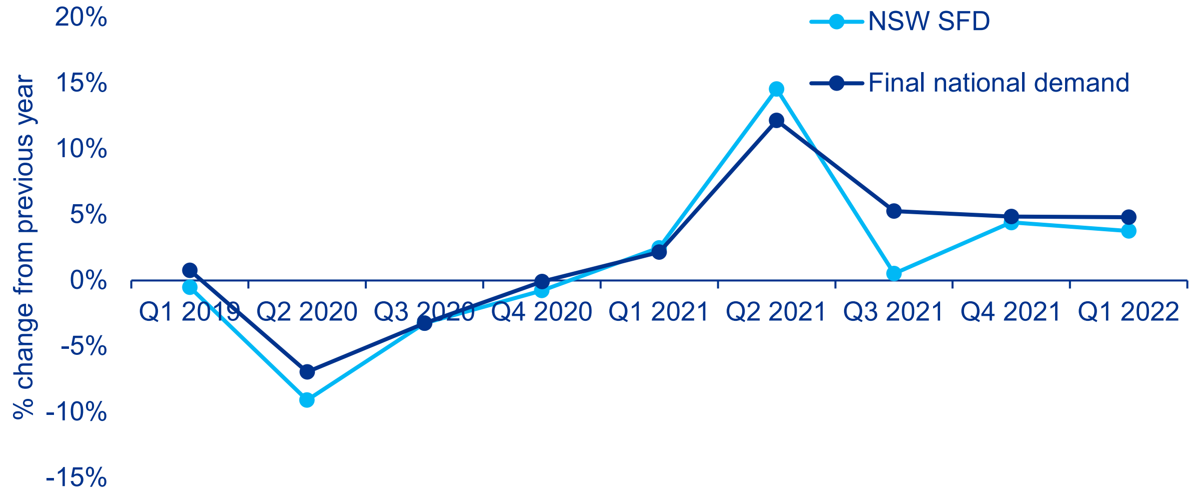
New South Wales Overview

New South Wales is Australia's largest state economy, accounting for approximately one third of the Australian economy's output and 30% of the population. The state's GSP is estimated at $643 billion, accounting for around 31% of Australia's GDP of $2.1 trillion, with the state's economy expected to grow at an average rate of 2.5% over the next five years. State Final Demand (SFD), an indicator of demand in the state's economy, has grow strongly since Q2 2020. However, Q3 2021 saw the Delta lockdown, which put a significant drag on activity. From Q1 2022 onwards, the state's economic performance has been broadly similar to the national average.

Sydney's headline inflation rate, while currently at 5.3%, is still trailing the national average. This is the result of slower rental growth than in other capital cities (a result of internal and external migration outflows) and policies implemented by the NSW government to ease the cost of living. For example, the NSW government is providing vouchers for childcare in addition to the federal subsidy, and public transport was free over the Easter school holidays in April.

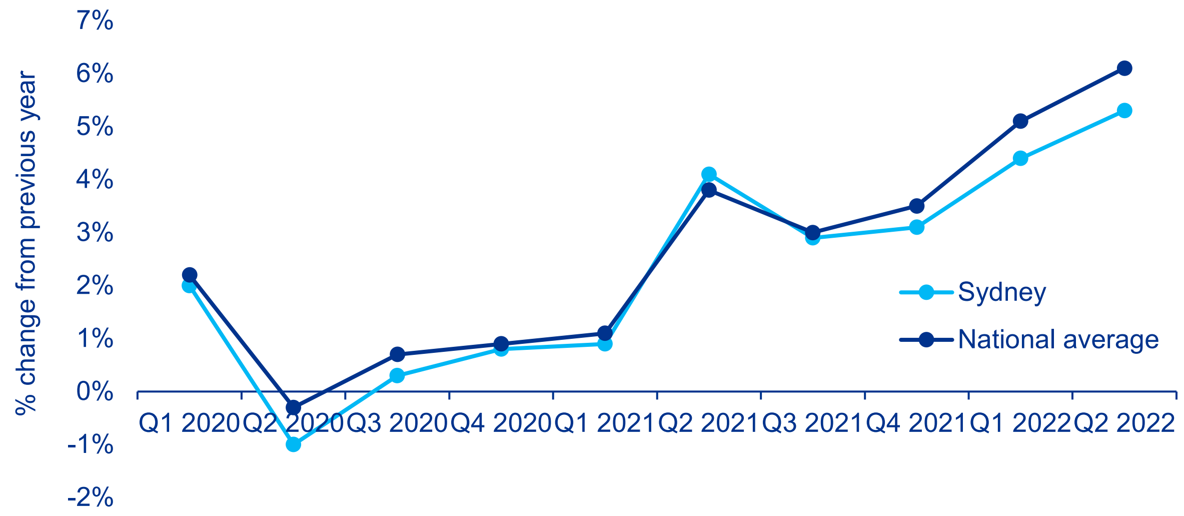
In addition to the cost of living subsidies, the NSW government has pledged to invest $1.4 billion in renewable energy, $11.7 billion in infrastructure and $3.3 billion in sustainable activities in 2022-23. In addition, the government has committed to investment in the health system, housing support, and additional support to ease the cost of living pressures. The state is also prioritising investments in productivity-enhancing reforms, such as their four-year infrastructure program, with the aim of driving long-term economic growth,.

New South Wales' SFD compared to national final demand



Source: ABS

Headline inflation rate, Sydney compared to the national average



Source: ABS

New South Wales Labour Market

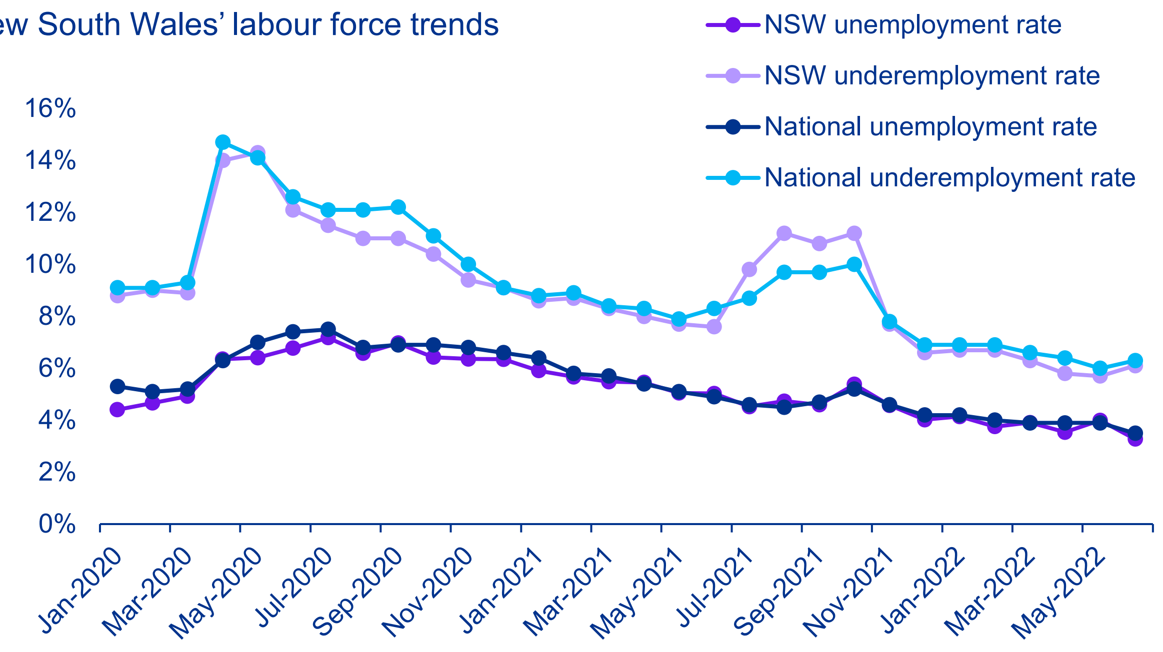
The state had a total of 4.3 million employed persons in July 2022, with Greater Sydney accounting for approximately 67% of the total. In the state, 42% of employees are under an individual contract, 28% covered by an Award and 25% under a collective agreement. In June 2022, the Fair Work Commission raised the minimum award rates by 4.6%, with Australian Government Awards lifting from 1st July 2022 and industry-specific awards changing from 1st October 2022. As of March 2022, there were 2,035 EBAs across the state with an AAWI of 2.6%. Wage growth is slowly increasing, in line with the tightening of the local and national labour market, with 166 EBAs approved in March-2022 having an AAWI of 2.7%.

The state reported a historically low unemployment rate of 3.3% in July 2022, just below the national average of 3.4%. Underemployment was elevated through 2021, largely as a result of the extended Delta lockdown (late June – October). As lockdowns have eased, underemployed has returned to the national average. In 2022, NSW has been consistently below the national average, and together with the unemployment rate the data strongly indicates that there is relatively limited spare capacity in the state's economy.

As the economy is recovering from the pandemic, the state is increasingly facing a skilled labour shortage, with education, healthcare and construction among the most affected industries. NSW is particularly exposed to the lack of skilled migration, as it typically accepts a disproportionately large number of overseas arrivals; while the state accounts for around 30% of the national population, around 35% of net overseas arrivals settled in the in the years immediately before the pandemic.

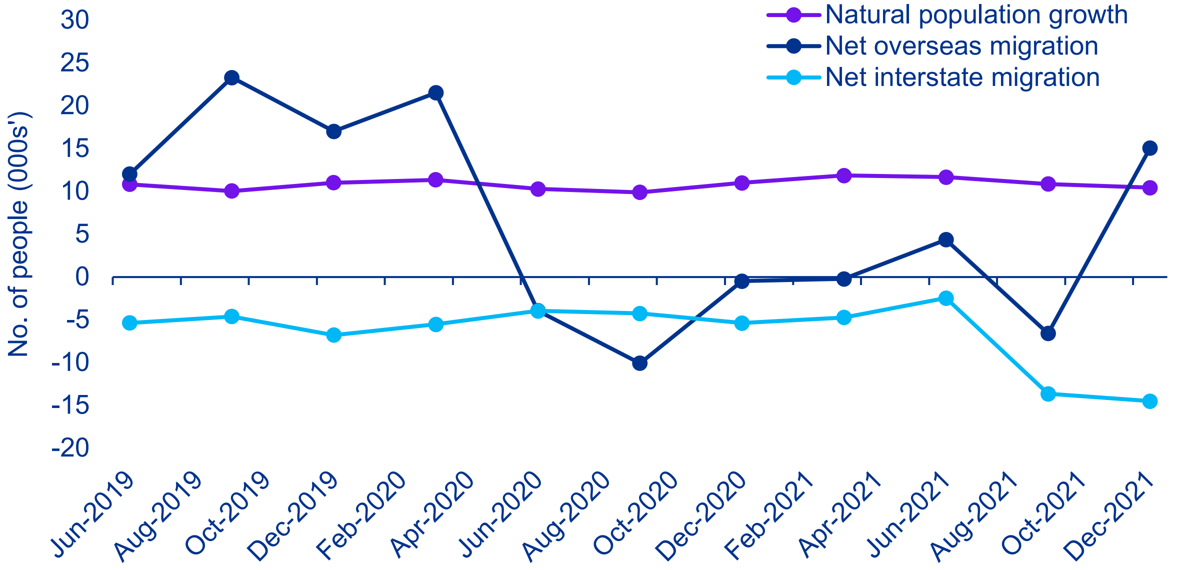
Data from the ABS shows December 2021 was the first quarter, since mid-2020, where migration to the state from overseas outpaced natural population growth. In contrast, interstate migration out of New South Wales increased over the same period, with locals likely taking advantage of job opportunities and the lower cost of living in other states.

New South Wales' labour force trends



Source: ABS

New South Wales' population movements



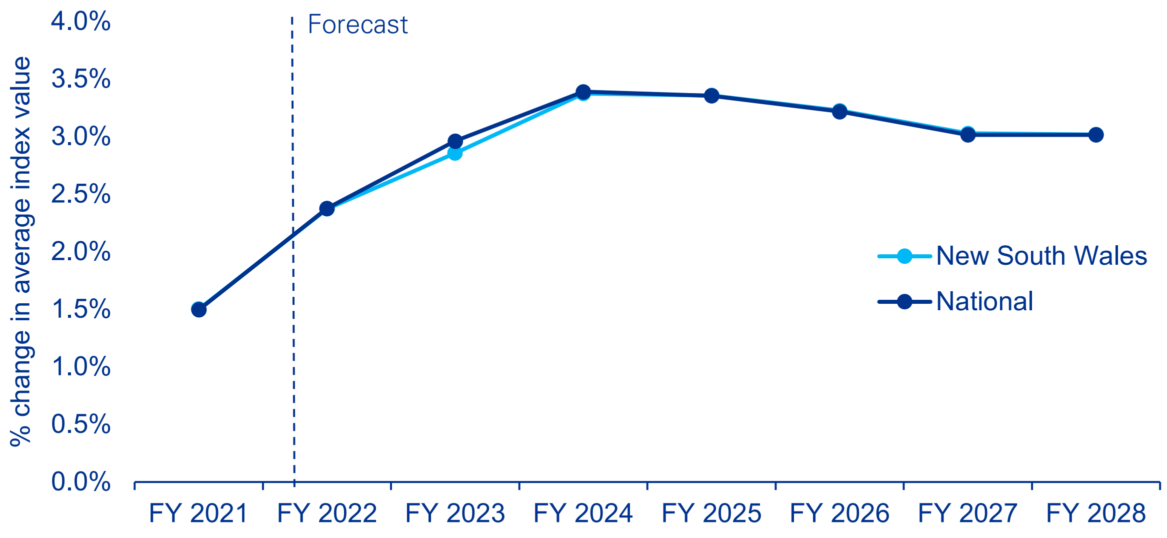
Source: ABS

New South Wales All-industry WPI

In line with the state's absolute size, the New South Wales all-industry WPI is a significant driver of the national all-industry WPI, and therefore changes in each quarter are typically very similar across the two series. Since Q2 2017, the state and national changes have only deviated by a maximum of 0.1% points quarter-to-quarter.

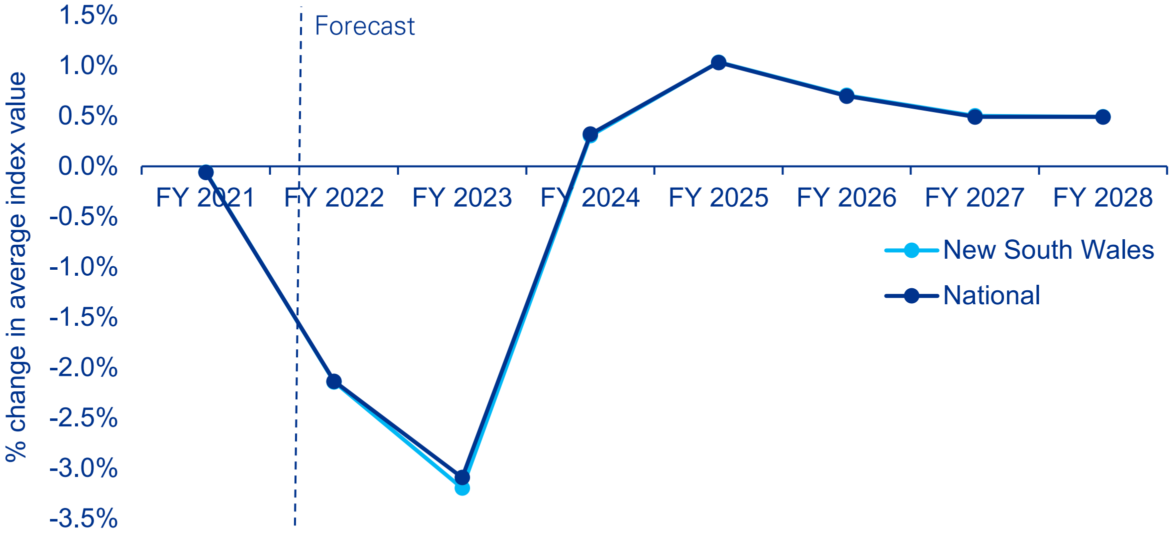
Consistent with this, NSW's economy is subject to the same drivers and headwinds that were previously outlined for the national economy; the tight labour market is expected to flow through and drive wages growth, with the pace peaking in late 2023/early 2024 before slower growth momentum eases pressures. Over the long run, price inflation and productivity growth will act as long run anchors for wages growth.

Nominal all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

New South Wales Utilities EBA

As previously outlined, AAWI in EBAs is a useful proxy for near term wage growth in the utility industry given the dominance of EBAs in the sector's wage setting process. While the ABS reports the wage setting in each state's utility industry, the Attorney General's Department data shows that 23% of employees are on a New South Wales specific EBA.

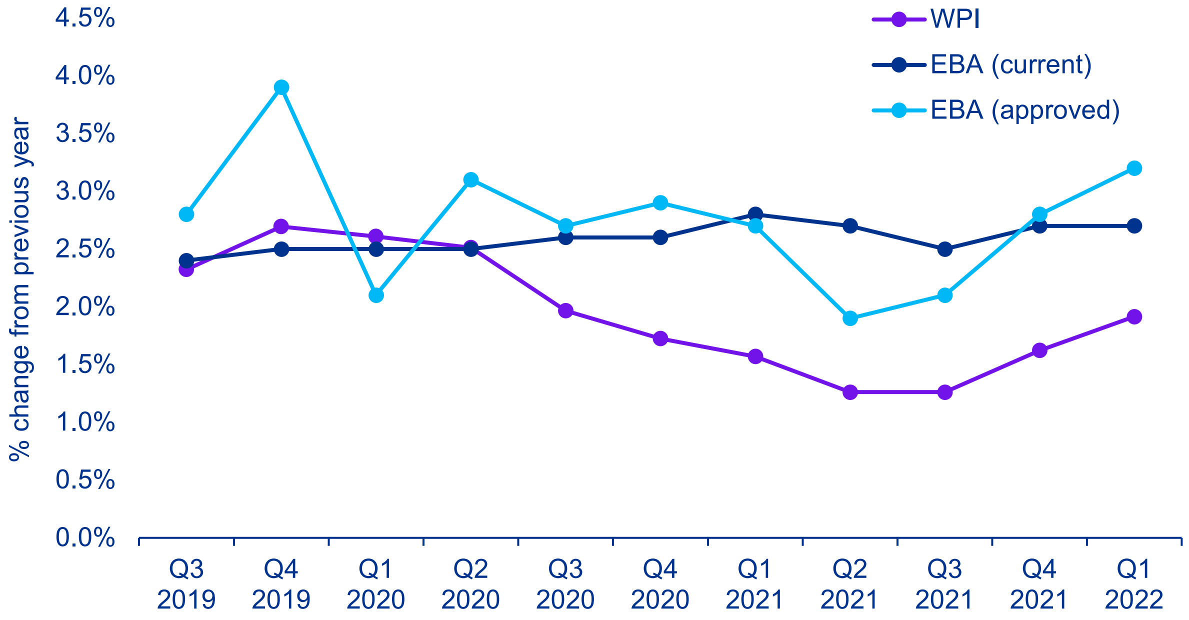
For example, in December 2021, around 5,400 employees in NSW entered into a new agreement with an AAWI of 2.8%, the most significant number of employees brought onto a new EBA of any quarter since September 2019.

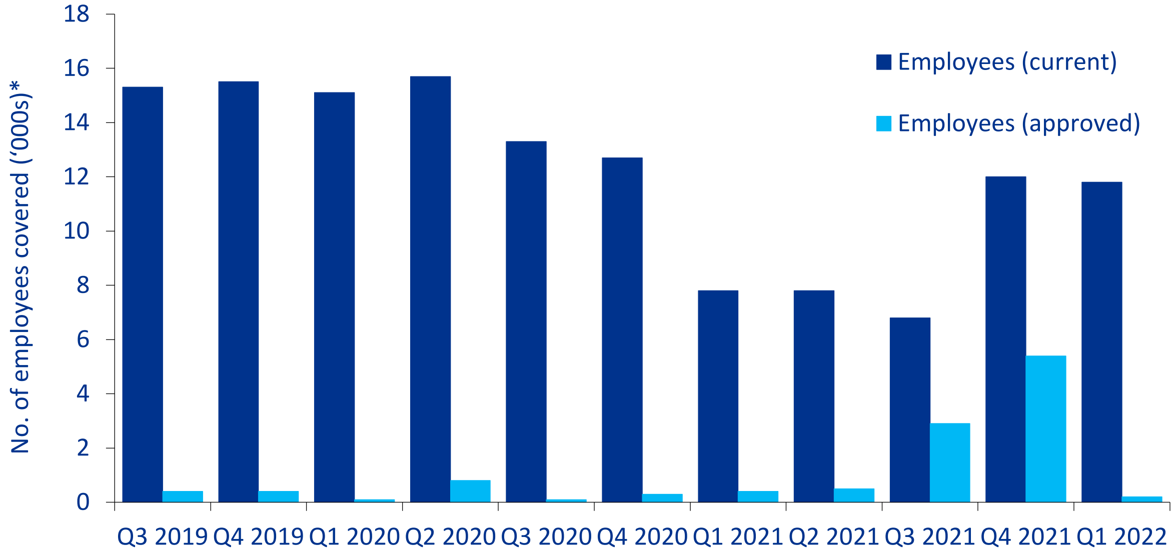
Within the utilities sector, the following EBAs are currently in place:

- In April 2022, TransGrid's EBA went into effect with an AAWI of 3% until December 2023.
- In October 2021, Endeavour Energy's EBA went into effect with an AAWI of 2.5% in FY22, 2.65% in FY23 and 2.8% in FY24. The contract expires in December 2023.
- In February 2022, Essential Energy's EBA went into effect with an AAWI of 2.5% for FY23 and FY24. The contract expires in June 2024.

As EBAs are a good proxy for wage growth in the industry, KPMG utilises this data when forecasting in the near term. As the medium/long run extends beyond the life of the EBAs, KPMG uses model fundamentals to drive the forecast.

New South Wales' utility industry EBA data compared to the WPI





* The estimated number of employees is based on survey data collected by the Attorney General's Department and may not align with data from the ABS. The report suggests that the number of employees should be used as an indicator and to use ABS data if available.

Source: ABS, Attorney General's Department

New South Wales Utilities WPI

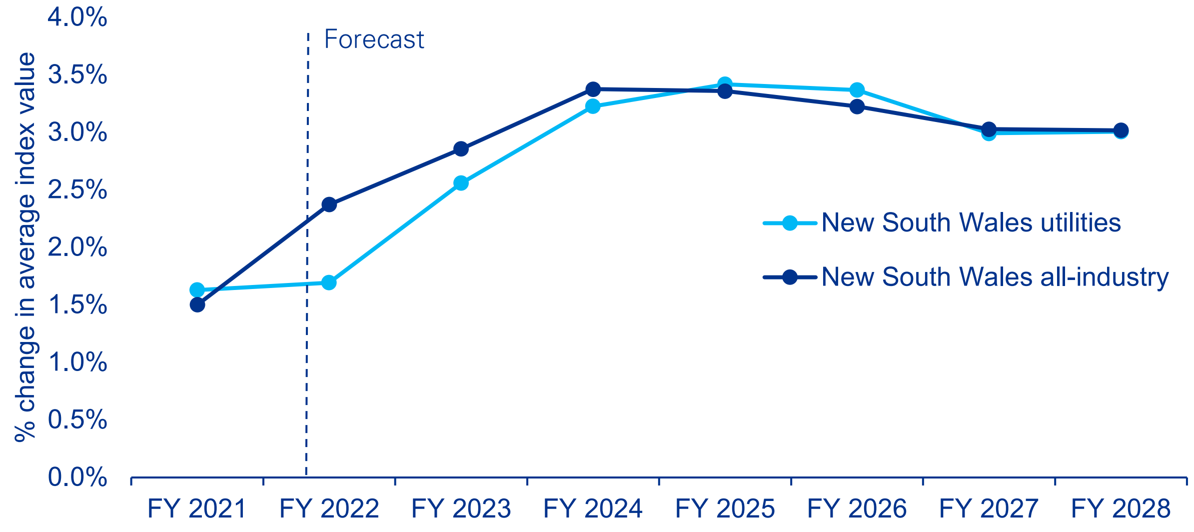
The utilities industry WPI slightly outperformed the all-industry WPI in NSW in FY21. However, similar to the national utilities WPI, over FY22 wages growth in the utilities sector was below the all-industries average.

GVA per employee declined 12.4% between FY20 and FY21 due to a fall in demand induced by pandemic lockdowns. As demand for energy recovers, it is expected that output per employee will increase – while not an immediate driver of wages growth (given the prevalence of EBAs, as previously outlined), productivity growth is a key anchor for the long run.

Recent EBAs that have been signed have included an AAWI growth rate that is higher than the current EBA average. Coupled with this, a significant number of employees are covered by the new agreements compared to previous periods, and general labour market conditions are contributing to upward pressure on wage growth. Overall then, KPMG expects a steady acceleration in nominal wage growth through FY23. The pace is then expected to peak in FY25, as residual strength in the state labour market and 'catch-up' as EBAs reset maintains upward pressure. Over the long-run the pace of growth is expected to track back to economic fundamentals (see Technical Appendix).

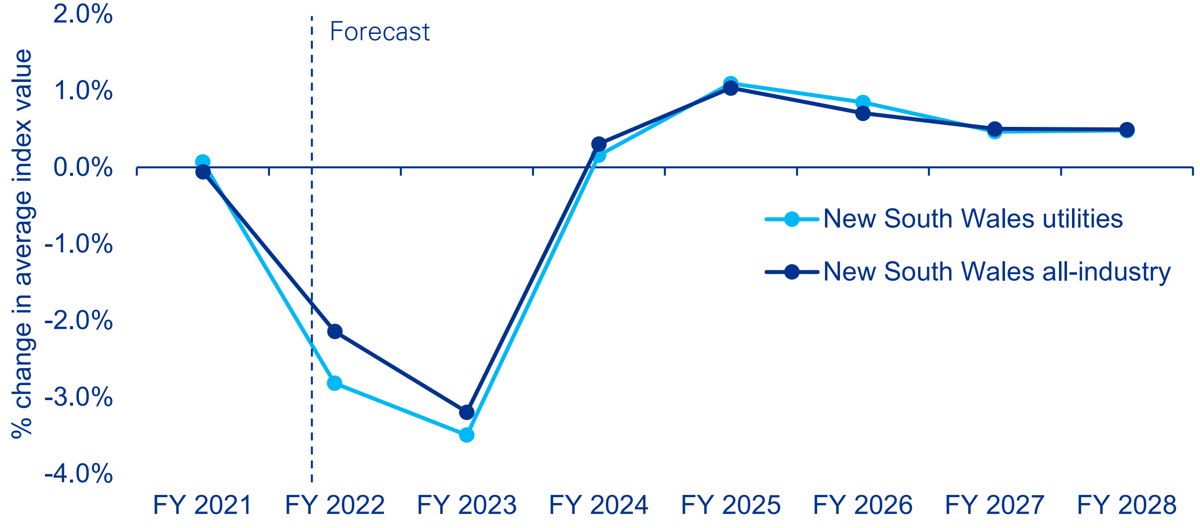
Despite growing nominal wages, KPMG expects a decline in real wages of 2.8% in FY22 as inflationary pressures outpace wage growth. KPMG's projections for wages and price inflation (with the acceleration in wages growth lagging behind price inflation) imply that the decline will continue through FY23, with real wages expected to decline by 3.5%. In FY24, KPMG expects inflationary pressures to return to the RBA target of 2-3%, with real wage growth increasing to a positive level.

Nominal utilities WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real utility industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Victoria Overview

Victoria accounts for 23% of Australia's economic output and 26% of the population. The state experienced the most pronounced lockdowns during the pandemic, and as a result GSP contracted 0.4% in 2021. SFD reflects this, with the state consistently having lower growth rates than final national demand during this period. However, as lockdowns eased, demand rebounded strongly, consistently outpacing the national average. Victoria's economy has largely closed the gap with the rest of the economy, with the easy wins from re-opening now largely exhausted.

Melbourne's headline inflation rate for the June quarter 2022 was 6.1%, the same as the Australian average. While less comprehensive than the NSW Government, the Victorian Government have provided rebates on the cost of living, such as energy rebates and travel discounts, which contributed to falling prices in the accommodation industry (a 0.7% decrease from the same quarter of the previous year).

The Victorian Government has allocated $300 million towards renewable energy infrastructure in the 2022-23 budget, to continue the state's transition to renewable energy. The state is targeting rooftop solar installations and household battery systems through rebates, and is developing a resilient transmission network, with $10 million set aside for microgrids and a further $8 million set aside to train electrical workers targeted at the renewable industry.

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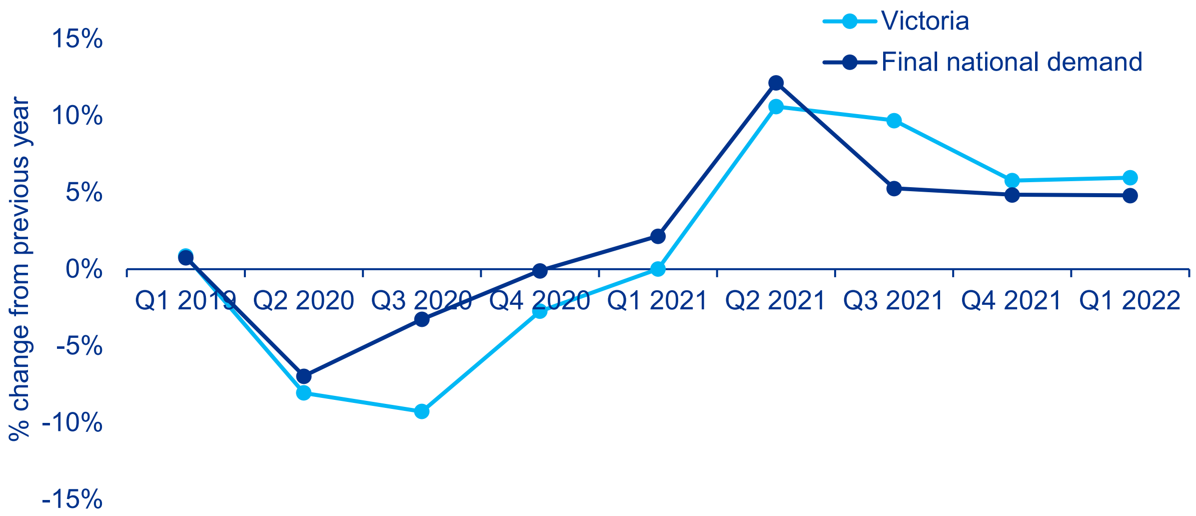
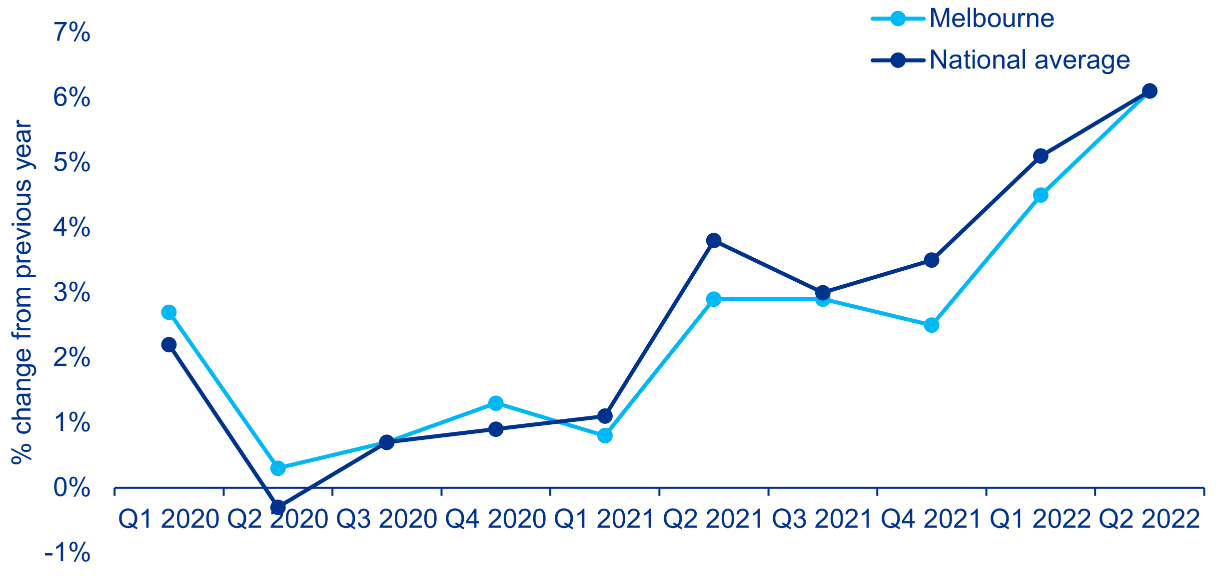
Victoria's SFD compared to national final demand



Source: ABS

Headline inflation rate, Melbourne compared to the national average



Source: ABS

Victoria's Labour Market

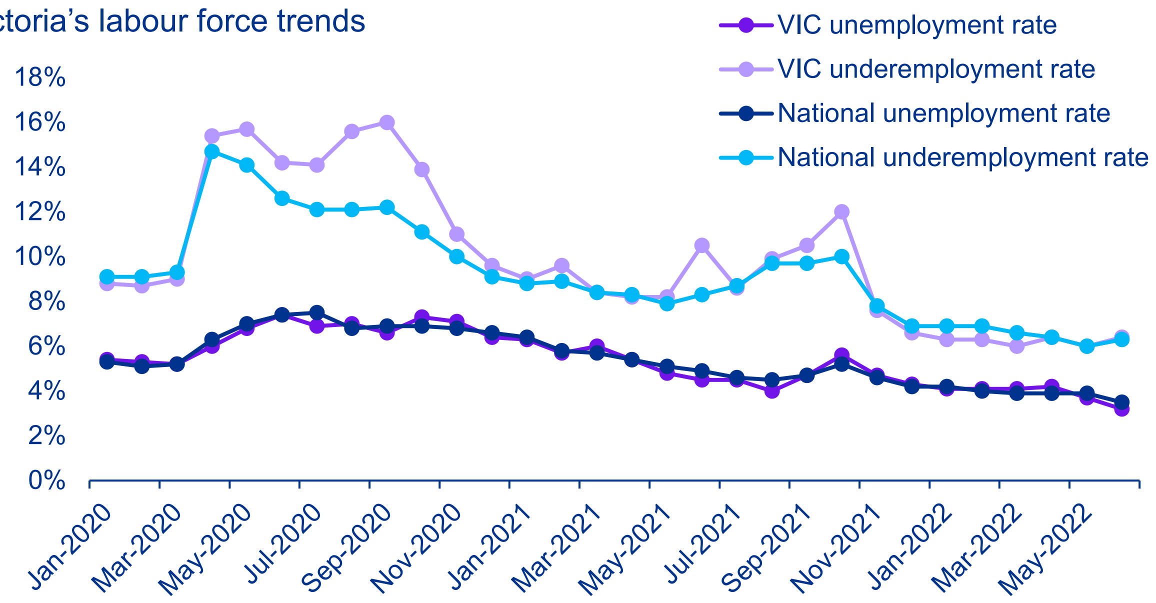
Victoria's economy is Australia's second-largest employer, with 20% of total employment. The workforce is highly metropolitan, with around 78% of all workers in the Greater Melbourne region (March 2022).

A significant proportion of employment contracts in Victoria are set by collective agreements, with 39% of employees currently under such an agreement. Individual contracts are similar at 38%, with only 19% of employees in the state covered by an Award. As of March 2022, there were 3,229 EBAs across Victoria, with an AAWI of 2.6%. AAWI have been steady in the state, with 355 EBAs approved in March 2022 with an AAWI of 2.6%.

Victoria reported a historically low 3.1% unemployment rate for the July quarter of 2022, below the national average of 3.4% and indicating a tight labour market in the state. As in NSW, Victoria's underemployment rate has been heavily influenced by lockdowns through the pandemic, with definite waves in mid-2020 and mid-2021. Once lockdowns eased, underemployment dropped below the national average through to March 2022.

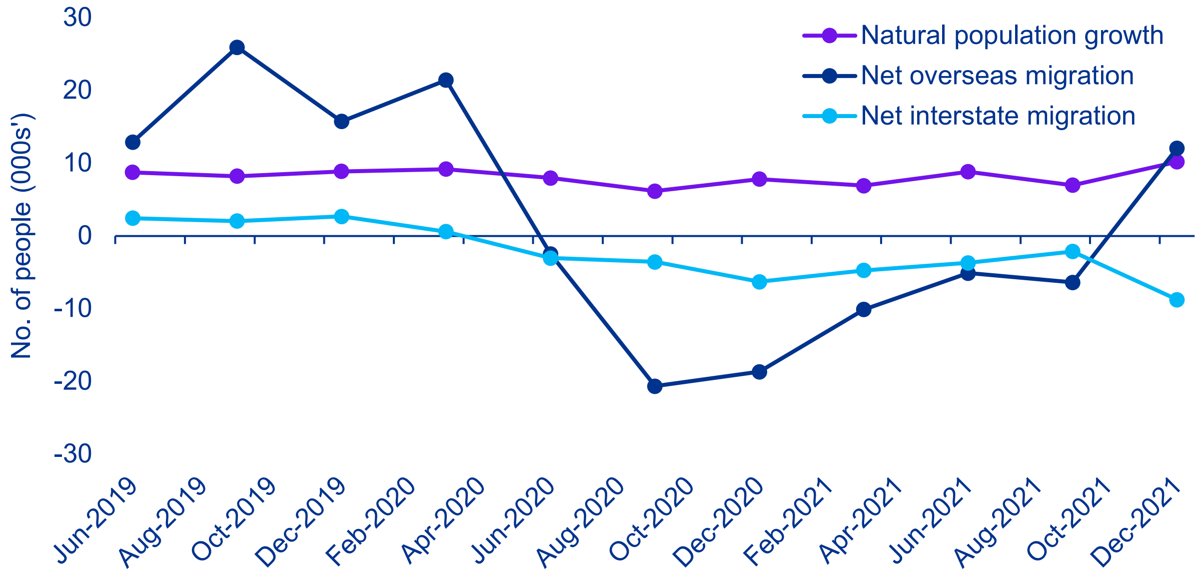
Migration in Victoria is also experiencing similar factors as New South Wales, with both overseas and internal migration flows turning sharply negative through the pandemic. The Victorian Government has created the Workforce Skills Pathways program to address the tight labour market and encourage migration to the state. Industries targeted by the program include hospitality and early-child care, and the state government aims to target regional migration with specific visas for these areas.

Victoria's labour force trends



Source: ABS

Victoria's population movements



Source: ABS

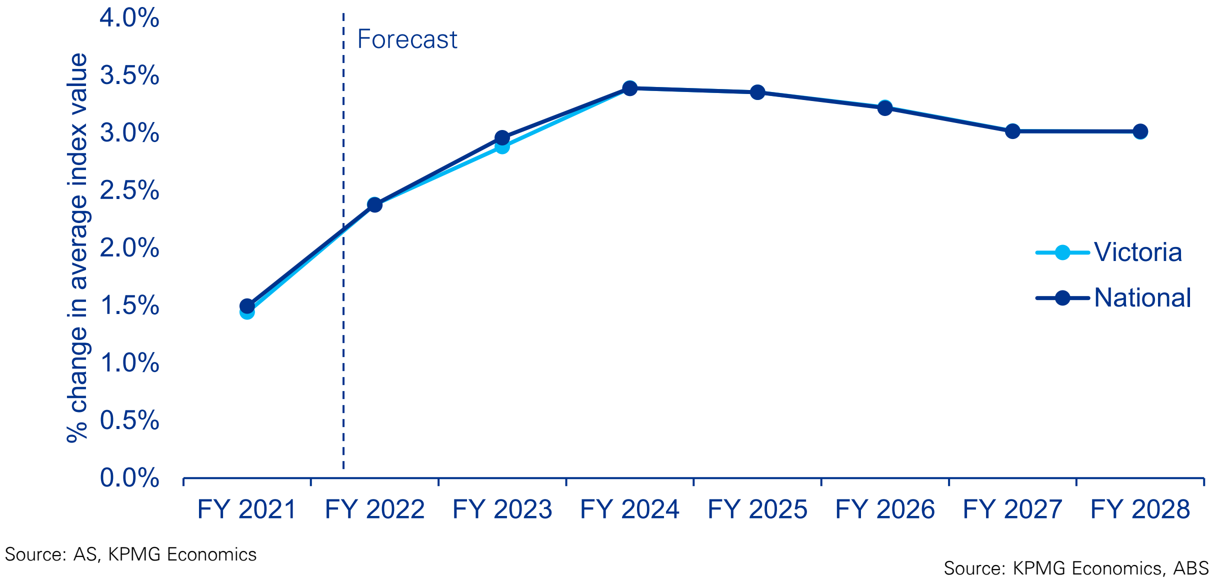
Victoria All-industry WPI

From FY17 to FY20, Victoria's all-industry WPI growth rate typically slightly outpaced the national equivalent, by around 0.2% points each year. However, during the pandemic the growth rate slowed with Victoria recording an average yearly rate of 1.4% in FY21, compared to the national equivalent at 1.5%.

Wage growth in the state is expected to increase slowly through FY22, broadly similar to the national average. Looking forward, Victoria is expected to experience similar wage growth to the national average, with the state's economy experiencing the same economic drivers, labour market tightness and wage pressures.

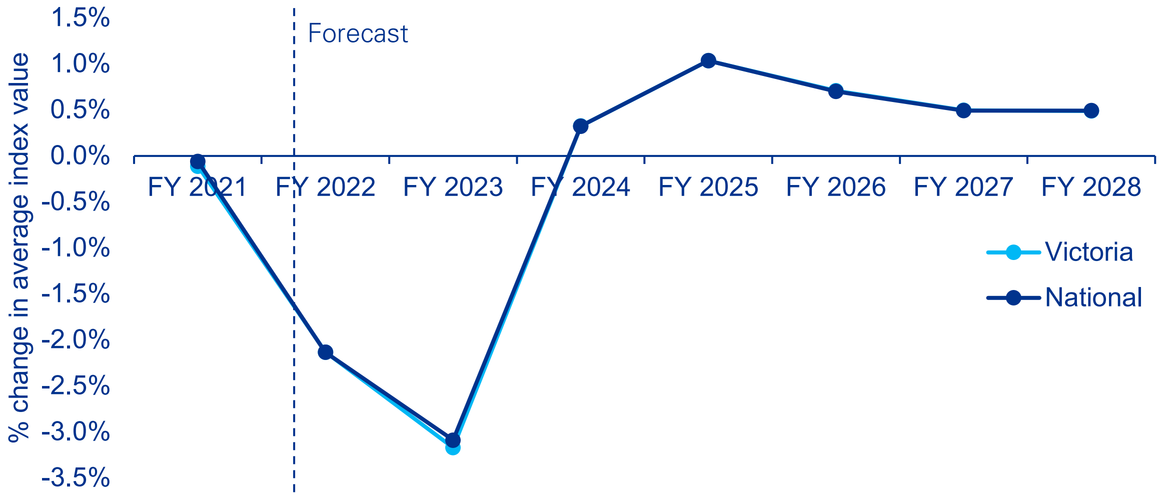
Victoria's economy is being buffeted by the same headwinds as NSW and the other states. A combination of high inflationary pressures and a historically low unemployment rate is expected to drive increased wage growth in the short to medium term.

Nominal all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Victoria Utilities EBA

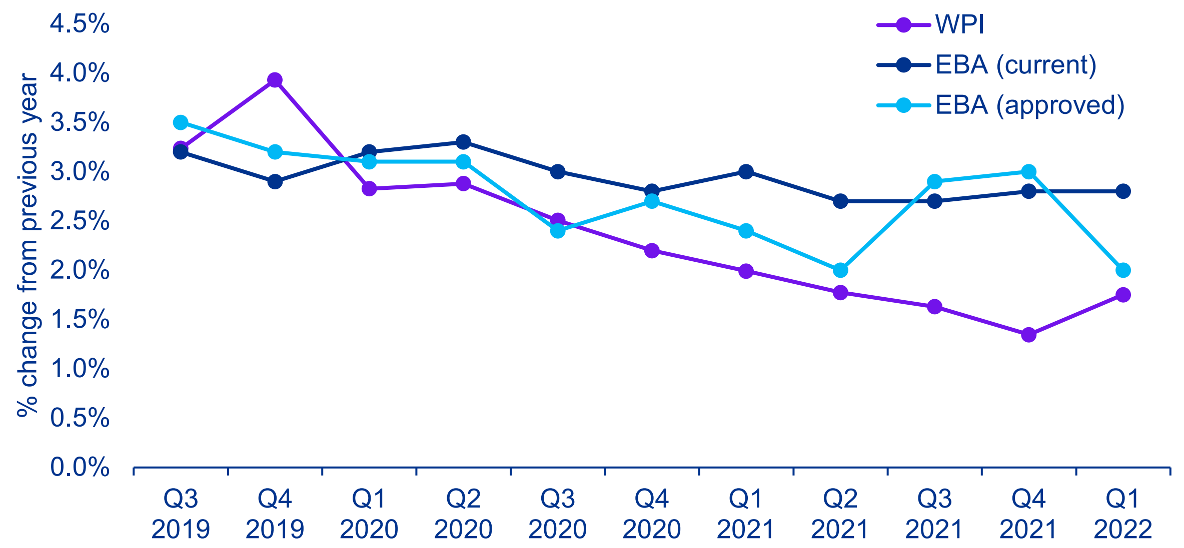
Victoria's EBA renewal is more consistent than New South Wales, which stems from the state having more EBAs, and requiring more renewals per period, even if the total number of employees is lower.

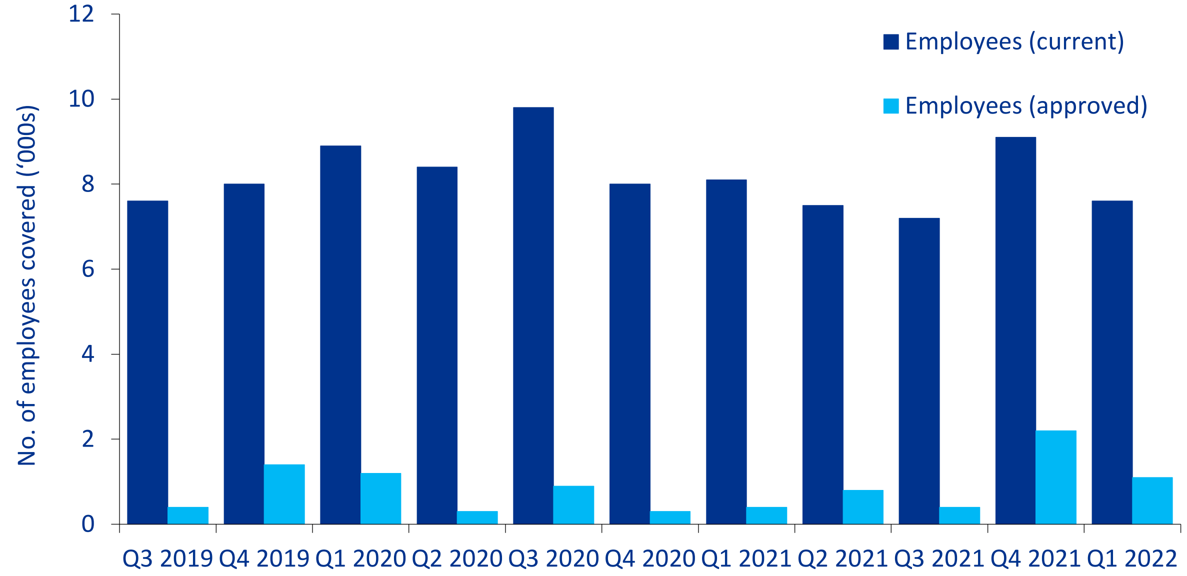
March 2022 had a lower approved AAWI than the previous two quarters, which could be related to different specific business negotiating abilities or could represent slower expected wage growth in Victorian utilities in future periods. Altogether, when combined with high inflation pressures, it is expected that wage growth will be strong in the near term, reflected in the WPI increase in the most recent quarter.

There were 88 EBAs current as of March 2022, with an AAWI of 2.8%. In December 2021, 11 EBAs were approved with an AAWI of 3%. Within the utilities sector, the following EBAs are currently in place:

- In March 2022, APA GasNet's EBA went into effect with an AAWI of 2% in FY22 with an increase of 2.25% in FY23 until the agreement ends in September 2023.
- In April 2022, AusNet Services' EBA went into effect with an AAWI of 2.63% in FY22 and FY23 until the agreement ends in August 2023.
- Multinet's EBA expired in June 2022, and a new one was not released at the time of writing this report.

Victoria's utility industry EBA data compared to the WPI





Source: ABS, Attorney General's Department

Victoria Utilities WPI

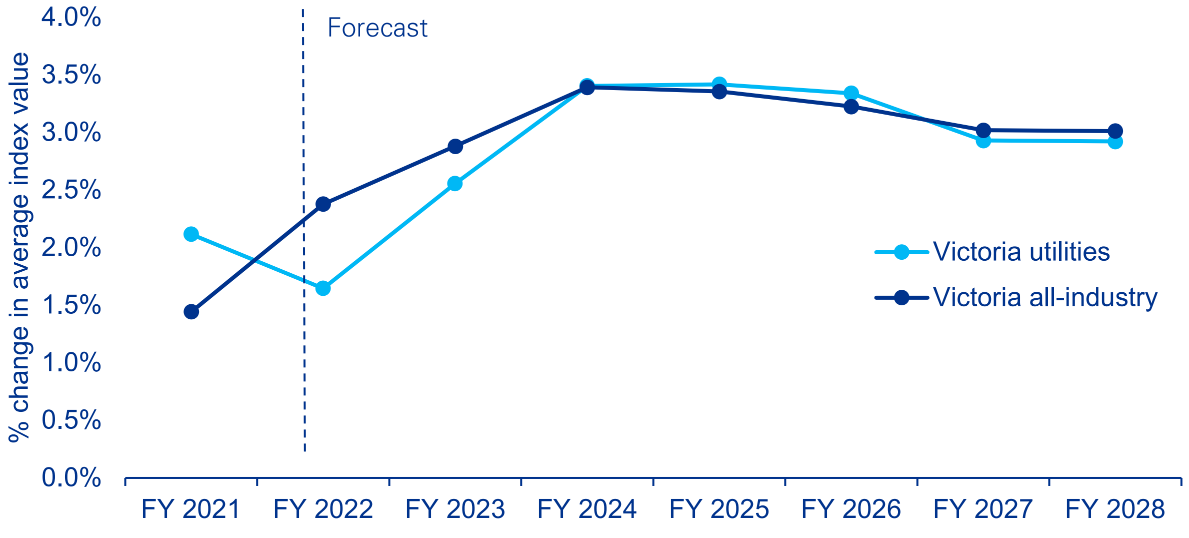
The Utility industry slightly outperformed the all-industry WPI in Victoria in FY21. However, the gap has declined and the pace of growth is now below the all-industry average, similar to the national utilities WPI.

GVA per employee increased by 15.3% between FY20 and FY21 as employment decreases over the pandemic more than offset the decline in GVA. As demand for utility services recovers and output steadily increases, productivity growth will underpin long run growth wages in the sector. As in other states, newly agreed EBAs in the most recent quarters have seen the AAWI stabilise, and this is expected to pick up going forward as a result of labour market and inflation conditions.

This acceleration will flow into the WPI, which is also expected to see a pick-up in growth over the next two financial years, to reach a peak around 3.4% in FY2024. Over the long term wages growth is expected to fall back to around 3% pa.

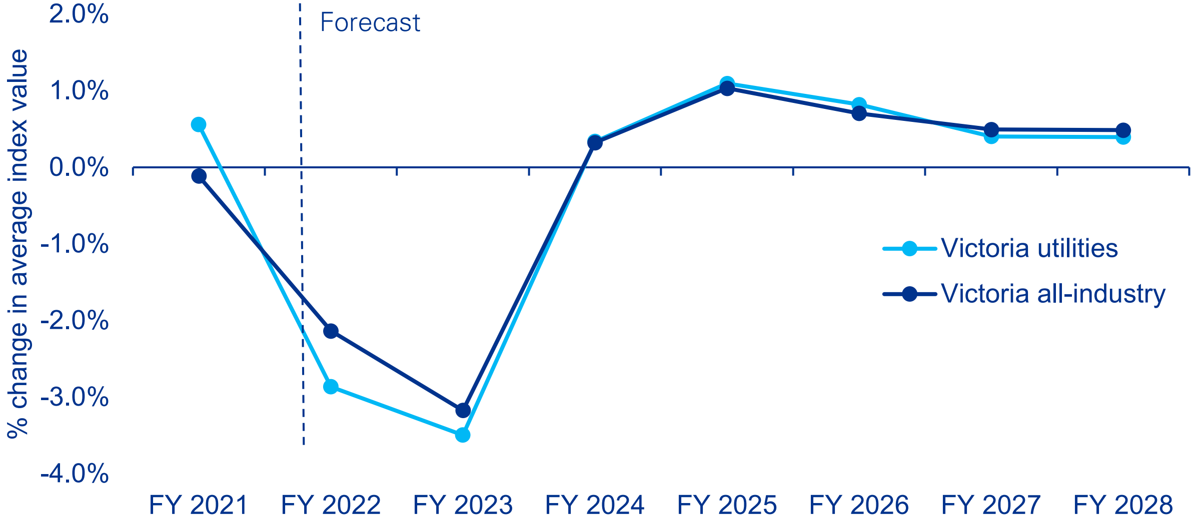
Real wages are expected to follow a similar path as New South Wales' real wage growth, with a decline in FY22 and FY23 before returning to positive growth rates, as expected inflation returns to the RBA target band.

Nominal utility industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real utility industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

South Australia Overview

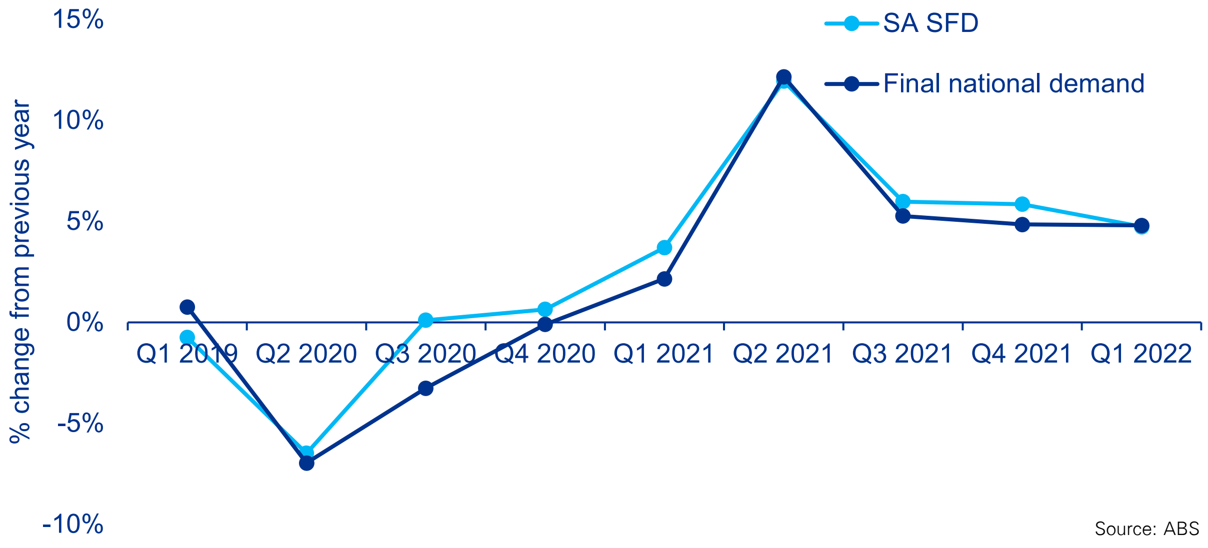
South Australia is a relatively small state in Australia, only accounting for 5.7% of GDP (June 2021) and around 6.5% of the country's total employment (July 2022). The state was an outperformer through the pandemic, with local demand growing robustly as a result of relatively limited lockdown restrictions. But the gap with the other states has closed in recent quarters, as NSW and VIC in particular have caught up.

Adelaide maintained a lower inflation rate than the national average through 2021, but this trend reversed in the most recent data, with headline inflation rising to 6.4% in the June 2022 quarter. Key drivers of this outperformance were shortages in construction supplies and higher freight costs, that have driven a faster pace of new dwelling construction inflation (4.9% compared to 4.6% nationally). The price of automotive fuel in South Australia has also increased more than the national average (4.9% increase compared to 4.2% increase nationally).

The South Australian Government has introduced a cost of living concession to help people on low and fixed incomes by subsiding general expenses such as council rates, energy and medical bills. Other schemes include the introduction of an education materials subsidy for parents of students and access to free travel for seniors in the Adelaide metropolitan area.

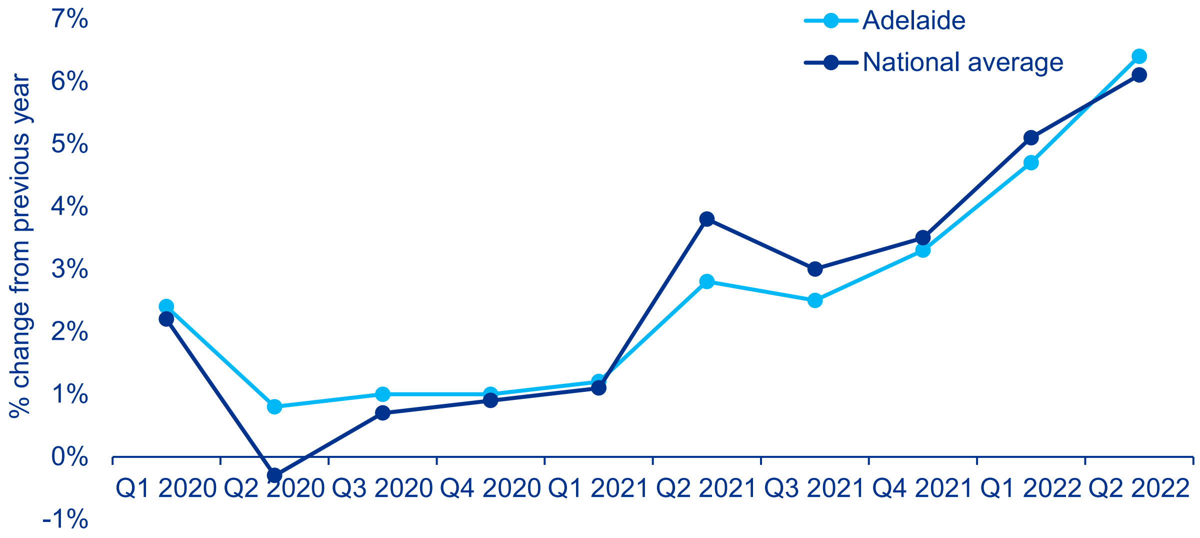
Clean hydrogen production is a key focus area for the South Australian Government, with the 2022 budget outlining $593 million over four years to be invested in developing an energy production plant and storage facility. Additionally, $18.6 billion is committed to infrastructure spending and a further $897 million over five years for new initiatives for jobs in the economy.

South Australia's SFD compared to national final demand



Source: ABS

Headline inflation rate, Adelaide compared to the national average



Source: ABS

South Australia's Labour Market

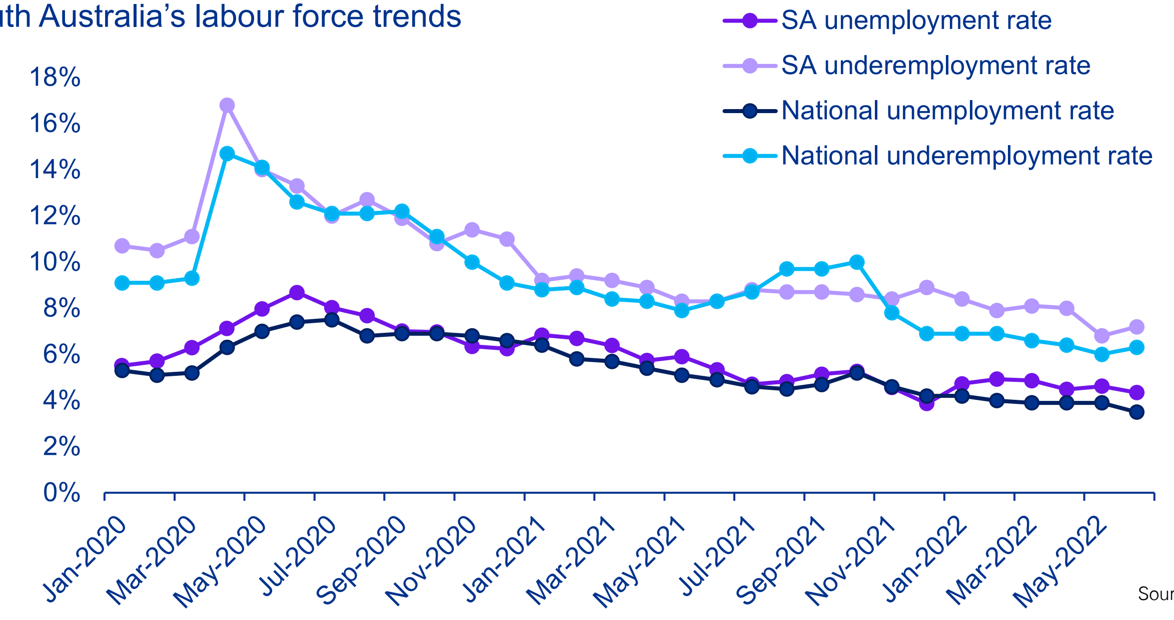
Like Victoria, South Australia's workforce is dominated by the capital city, with 79% of employees in the greater Adelaide area (March 2022). Unlike Victoria and NSW, pandemic lockdowns did not impact the state to the same extent.

Similar to Victoria, a majority of employment contracts are negotiated through collective agreements, with 38% of all employees in the state covered by EBAs. Individual agreements are slightly lower, at 32%. Unlike most states, South Australia has a large share of its employees on an Award, with 28% of total employment under an award contract. With a high proportion of workers under an Award, South Australia will be impacted by the award wage increases in FY23 to a greater extent than the larger states. As of March 2022, there were 569 EBAs across South Australia, with an AAWI of 2.6%. Wage growth is slowly increasing in the state, with 58 EBAs approved in March 2022 with an AAWI of 2.8%.

Total employment growth slowed in the state over FY22 to 2.4%, significantly lower than the national increase of 3.2%. Furthermore, the state recorded the highest unemployment rate across the country in July 2022 at 4%, 0.6%pts higher than the national average. Underemployment has also been higher in 2022 in South Australia, with the state consistently sitting above the national average. Pre-pandemic, this trend also existed, and thus could be indicative of both the national economy and South Australia's economy returning to normal levels. However, similar to the national economy, the state is experiencing historically low unemployment and underemployment, suggesting a tight labour market exists in the region.

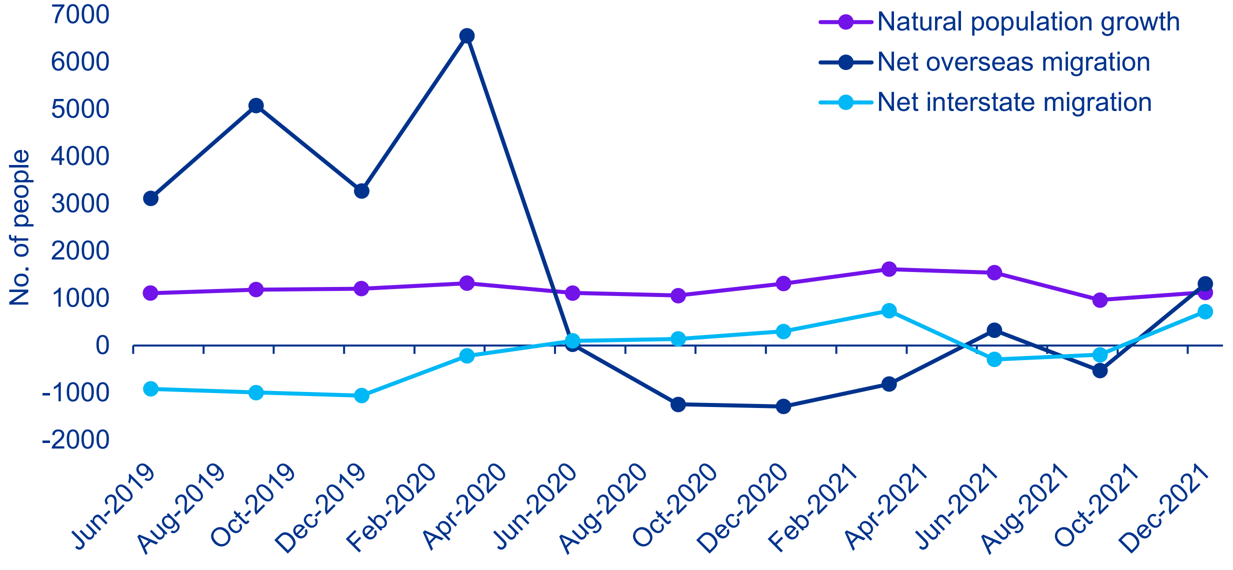
Data from the ABS suggests that employment in the state has broadly remained steady over 2022, indicative of an economy operating close to full employment. Prior to that, high levels (relative to the past) of positive interstate migration helped to drive both spending and labour supply in the state.

South Australia's labour force trends



Source: ABS

South Australia's population movements



Source: ABS

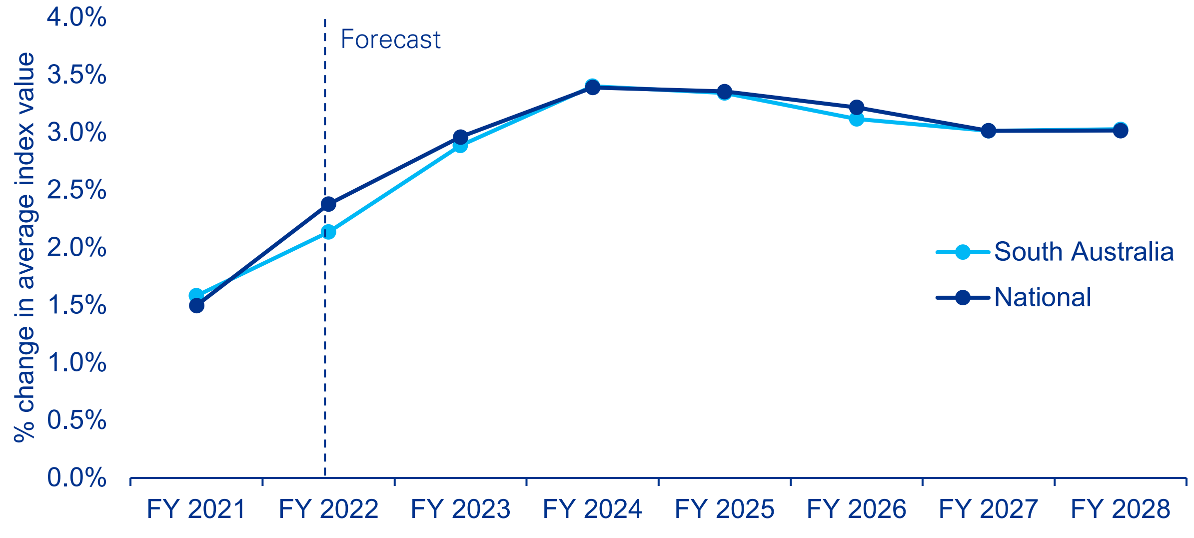
South Australia All-industry WPI

Pre-pandemic, the South Australian all-industry WPI resembled the national equivalent. Once the pandemic restrictions were implemented in 2020 in the major states, South Australia's WPI growth rate was typically stronger than the national average with the FY21 average growth rate being 1.6% compared to the national at 1.5%. However, in FY22, the state's WPI growth slowed and fell slightly below the national equivalent.

Looking ahead, increases in the award and national minimum wage, and labour market pressures are expected to drive nominal wages growth up to around 3.4% in FY24, before a gradual softening to a long run rate of around 3% pa; the make-up of South Australia's economy means that wages growth broadly tracks in line with the other East Coast states (and so the national average).

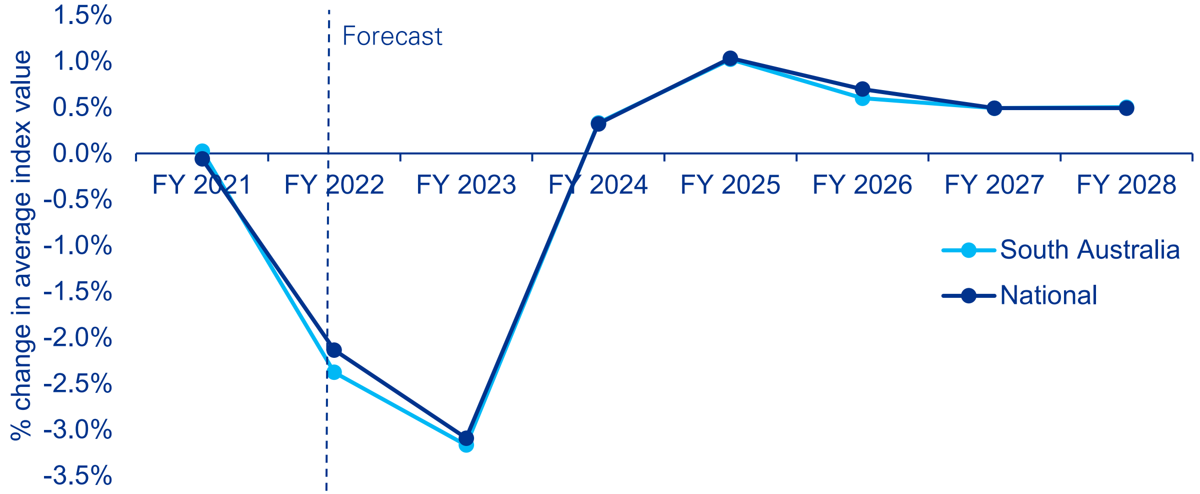
The real wage growth forecast suggests a similar outlook to the national equivalent with a stronger decline in FY22, primarily caused by the major states experiencing stronger demand and tighter labour market conditions in the very near term.

Nominal all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real all-industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

South Australia Utilities EBA

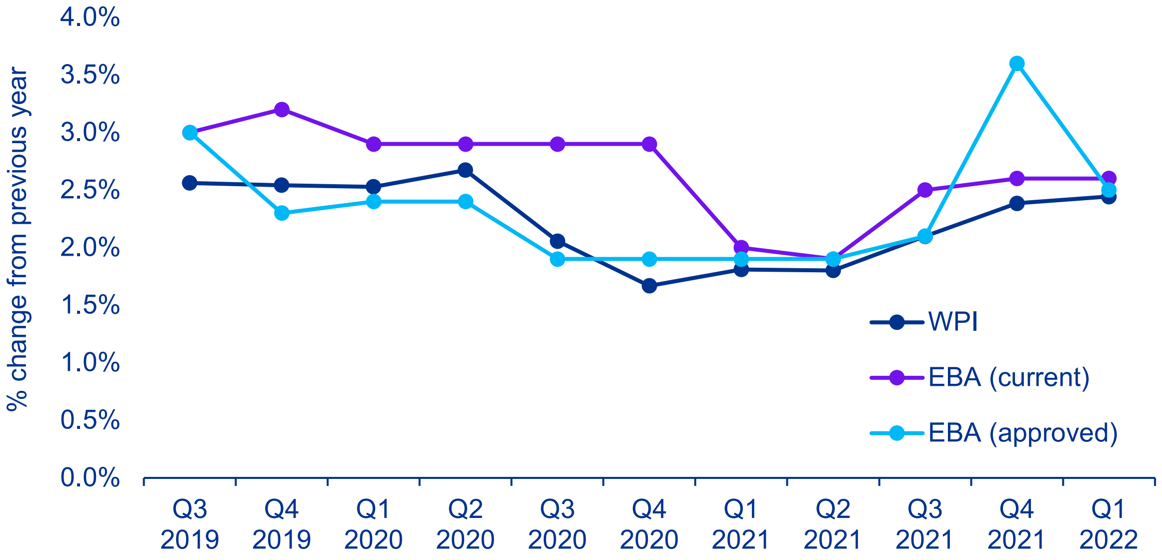
South Australia has significantly fewer EBAs and employees than the larger states; therefore, some quarters have no new EBAs being approved, and the AAWI remains constant. During the pandemic periods of 2020-21, a small number of EBAs were approved, and wage growth remained steady.

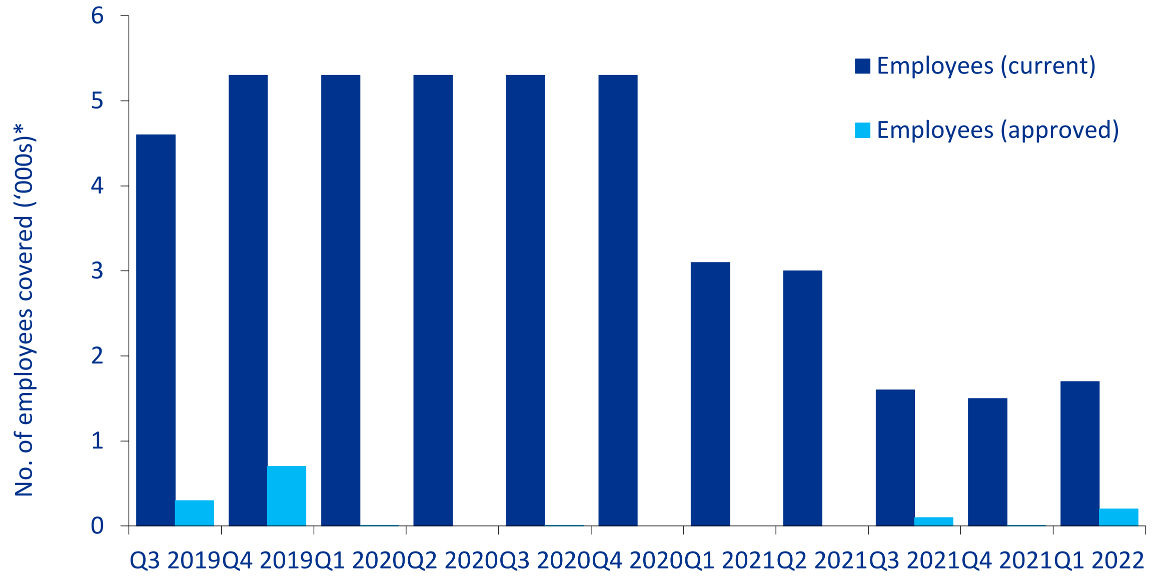
While the ABS doesn't report the wage setting in each state's utility industry, data from the Attorney General's Department shows that 3% of employees on an EBA are based in South Australia. However, 27% of EBAs are multi-state and so include South Australians. March 2022 had the most significant number of employees being approved onto a new EBA since December 2019, and the AAWI agreement was similar to pre-pandemic levels. Altogether, when combined with broader labour market conditions, wage growth is expected to be strong in the near term.

There were 3 EBAs current as of March 2022, with an AAWI of 2.5%. In December 2021, 11 EBAs were approved with an AAWI of 3%. Within the utilities sector, the following EBAs are currently in place:

- In March 2019, ElectraNet's EBA went into effect with an AAWI of 2.5% in FY21, maintaining 2.5% wage growth to FY22 until the agreement ends in September 2022.
- In July 2021, APA Networks' (who own MurryLink) EBA went into effect with an AAWI of 1.75% in FY22 and 2% wage growth in FY23 until the agreement ends in July 2023.

South Australia's utility industry EBA data compared to the WPI





Source: ABS, Attorney General's Department

South Australia Utilities WPI

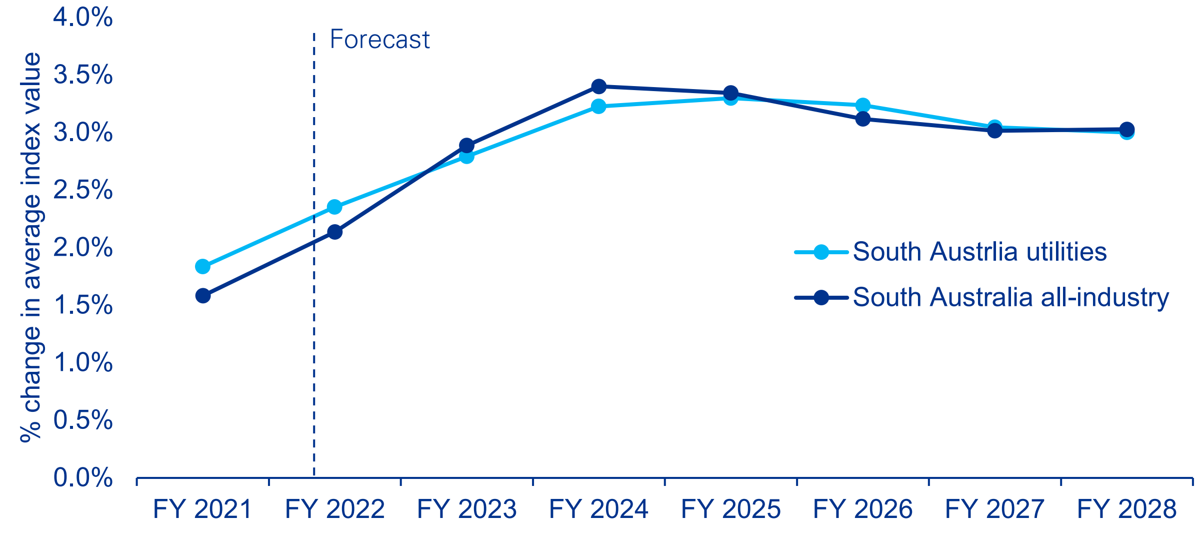
Utility industry wage growth outperformed the all-industry in FY21 and this is expected to continue through FY22, albeit with the gap narrowing. The South Australian utilities WPI is estimated to have remained ahead of the all-industry WPI in FY22, unlike in New South Wales and Victoria.

Productivity per utility employee increased by an average of 24.6% between FY20 and FY21. However, the industry only achieved this growth because 25% of its total employees left the industry, with GVA remaining relatively flat. It was only in March 2022 that employment in the industry stabilised.

Recent EBAs signed include an AAWI growth rate similar to the current EBA average, this, combined with general labour market conditions is contributing to upward pressure on wage growth. KPMG expects steady nominal wage growth through FY23, with the pace projected to peak in FY25 as residual strength in the state labour market maintains upward pressure. Over the long run, wages growth is expected to fall back to around 3%, in line with the outlook for inflation (2.5%) and WPI productivity growth (0.5%).

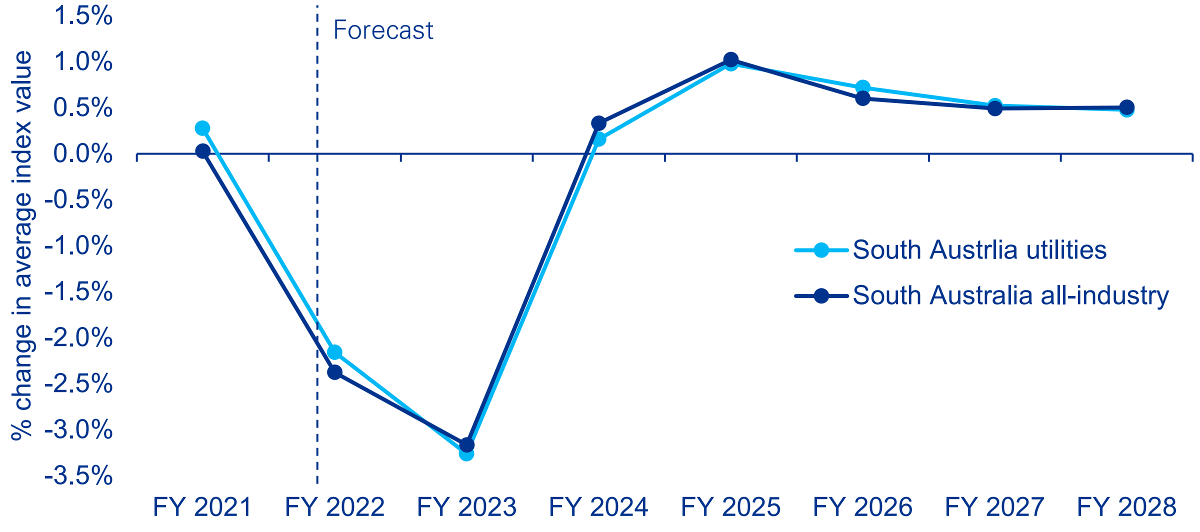
Real wages are expected to follow a similar path in South Australia as at the national level, with a decline in FY22 and FY23 before returning to positive growth rates as expected inflation returns to the RBA target band.

Nominal utility industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

Real utility industry WPI forecast (average growth each FY)



Source: KPMG Economics, ABS

State forecast tables

Nominal wage forecasts, % average change from previous financial year

	2021	2022	2023	2024	2025	2026	2027	2028
NSW all-industry WPI	1.5%	2.4%	2.9%	3.4%	3.4%	3.2%	3.0%	3.0%
NSW utilties WPI	1.6%	1.7%	2.6%	3.2%	3.4%	3.4%	3.0%	3.0%
Victoria all-industry WPI	1.4%	2.4%	2.9%	3.4%	3.4%	3.2%	3.0%	3.0%
Victoria utilties WPI	2.1%	1.6%	2.6%	3.4%	3.4%	3.3%	2.9%	2.9%
SA all-industry WPI	1.6%	2.1%	2.9%	3.4%	3.3%	3.1%	3.0%	3.0%
SA utilties WPI	1.8%	2.4%	2.8%	3.2%	3.3%	3.2%	3.0%	3.0%

Source: KPMG Economics, ABS

Real wage forecasts, % average change from previous financial year

	2021	2022	2023	2024	2025	2026	2027	2028
NSW all-industry WPI	-0.1%	-2.1%	-3.2%	0.3%	1.0%	0.7%	0.5%	0.5%
NSW utilties WPI	0.1%	-2.8%	-3.5%	0.2%	1.1%	0.9%	0.5%	0.5%
Victoria all-industry WPI	-0.1%	-2.1%	-3.2%	0.3%	1.0%	0.7%	0.5%	0.5%
Victoria utilties WPI	0.6%	-2.9%	-3.5%	0.3%	1.1%	0.8%	0.4%	0.4%
SA all-industry WPI	0.0%	-2.4%	-3.2%	0.3%	1.0%	0.6%	0.5%	0.5%
SA utilties WPI	0.3%	-2.2%	-3.3%	0.2%	1.0%	0.7%	0.5%	0.5%

Source: KPMG Economics, ABS

Note: Forecasts for Q2 2022 were completed and delivered to the AER before data from the ABS was released. While this report references the latest data from the ABS, the projections provided are based on historical data through to March 2022.

Source: KPMG Economics, ABS

Detailed Victorian Tables

Victorian calendar year wage forecasts, % average change from previous year

	2021	2022	2023	2024	2025	2026	2027	2028
Nominal all-industry WPI	2.0%	2.5%	3.2%	3.5%	3.3%	3.1%	3.0%	3.0%
Nominal utilties WPI	1.7%	2.1%	3.0%	3.5%	3.3%	3.3%	2.9%	3.0%
Real all-industry WPI	-0.8%	-3.8%	-1.0%	0.9%	0.9%	0.6%	0.5%	0.5%
Real utilties WPI	-1.1%	-4.3%	-1.2%	0.9%	0.9%	0.7%	0.3%	0.5%

Source: KPMG Economics, ABS

Victorian calendar year to financial year wage forecasts, % average change from previous year

	CY 2021	CY 2022	Jan-Jun 2023*	FY 2024**	FY 2025	FY 2026	FY 2027	FY 2028
Nominal all-industry WPI	2.0%	2.5%	2.3%	2.6%	3.4%	3.2%	3.0%	3.0%
Nominal utilties WPI	1.7%	2.1%	2.1%	2.7%	3.4%	3.3%	2.9%	2.9%
Real all-industry WPI	-0.8%	-3.8%	-1.1%	0.4%	1.0%	0.7%	0.5%	0.5%
Real utilties WPI	-1.1%	-4.3%	-1.4%	0.6%	1.1%	0.8%	0.4%	0.4%

Source: KPMG Economics, ABS

* The percentage change presented is from the calendar year 2022 to June 2023, representing the change in the average for the index over a six-month period.

**The percentage change presented is the change in the average index value between Jan-Jun 2023 and FY2023/24.

03

Technical Appendix

WPI data assumptions

WPI definition

WPI, as currently defined by the ABS, is a measure of changes in the price of labour in the Australian labour market, similarly to calculating the CPI. The WPI follows price changes in a fixed "basket" of jobs and the ABS strips out productivity growth (as a result of changes in the mix of the workforce and roles undertaken), labour inputs and compositional changes. Furthermore, the WPI does not include mandated superannuation contributions as it is a non-wage cost, similar to the payroll tax, public holiday compensation, and other worker's compensation.

Seasonal adjustment of state WPIs

The national all-industry WPI used for forecasting includes a seasonal adjustment by the ABS to account for public holidays, events or other seasonal influences which occur systematically over the course of a calendar year and influence the WPI from quarter to quarter.

Sources of WPI data

The ABS publishes the WPI nationally and for all state and territory jurisdictions at the aggregated industry level. WPI data is available for all industries nationally. However, the WPI is not released for each industry for all states due to small sample sizes and confidentiality reasons. In the case of the utilities sector, the ABS releases state indices for New South Wales, Victoria and Queensland. KPMG has therefore created the series for South Australia using the state's all-industries WPI series, EBAs in South Australia for the utilities sector, the implied 'other states' utilities WPI series and other labour market indicators such as employment. **Therefore, there is no guarantee that the estimated utility industry WPI for South Australia matches what the ABS data would report if it were made available to the public.**

In this report, estimating South Australia's WPI included variables such as:

- National WPI growth
- Overall national utilities wage growth
- Other states utilities and all industry wage growth
- Industry EBAs in South Australia
- Labour Force statistics in South Australia

Furthermore, South Australia's WPI estimate is normalised with the other states to ensure the WPI is consistent with state employment levels relative to the rest of Australia.

Inflation definition

The CPI forecasts provided reflect a change in the 4-quarter moving average, consistent with the measure of growth in the WPI. These two series together were used to calculate the real wage growth series.

Model assumptions

Short-run labour price assumption

The evolution of the WPI in the short run is driven by labour market conditions, which are proxied by the unemployment rate, and previous changes in the WPI to capture the 'sticky' nature of wages growth generated by award/minimum wage and EBA dynamics.

Long-run labour price assumption

The short run evolution of the WPI is anchored to a long run profile, which defines growth in the WPI as a function of labour productivity growth, price inflation and fundamental shifts in the labour market.

To illustrate the transition from short run to long run trajectory we can use a simple example. If there is shock increase to domestic demand, widening the gap between actual output and potential output, such as Australia is currently experiencing in the post-COVID-19 recovery, the strength of demand flows through to the labour market and increases demand, which generates upward pressure on wages – firms are forced to compete harder for workers. The increase in input costs is then passed onto final output prices; firms can't indefinitely absorb contracting profit margins.

In an inflation-targeting framework, the central bank response to a widening output gap and increasing price inflation is the raising of interest-rates (this transmission happens within our broader macroeconomic framework), which reduces domestic demand and pressure on CPI and WPI inflation as the output gap returns to zero and excess demand for labour subsides. In the long run, the WPI returns to evolving in line with price inflation and productivity.

National all-industry WPI

The long-run variables include:

- National CPI
- National unemployment rate
- National productivity (GDP / Total employment)

The short-run variables include:

- Previous quarter national all-industry WPI
- National unemployment rate

State all-industry WPI

The long-run variables include:

- National all-industry WPI
- State unemployment rate
- State productivity (GDP / Total employment)

The short-run variables include:

- Previous quarter state all-industry WPI
- State unemployment rate

Utilities national WPI

The long-run variables include:

- National CPI
- National unemployment rate
- Utilities productivity (GVA utilities / Total employment)

The short-run variables include:

- Previous quarter national all-industry WPI
- National unemployment rate

State utilities WPI

The long-run variables include:

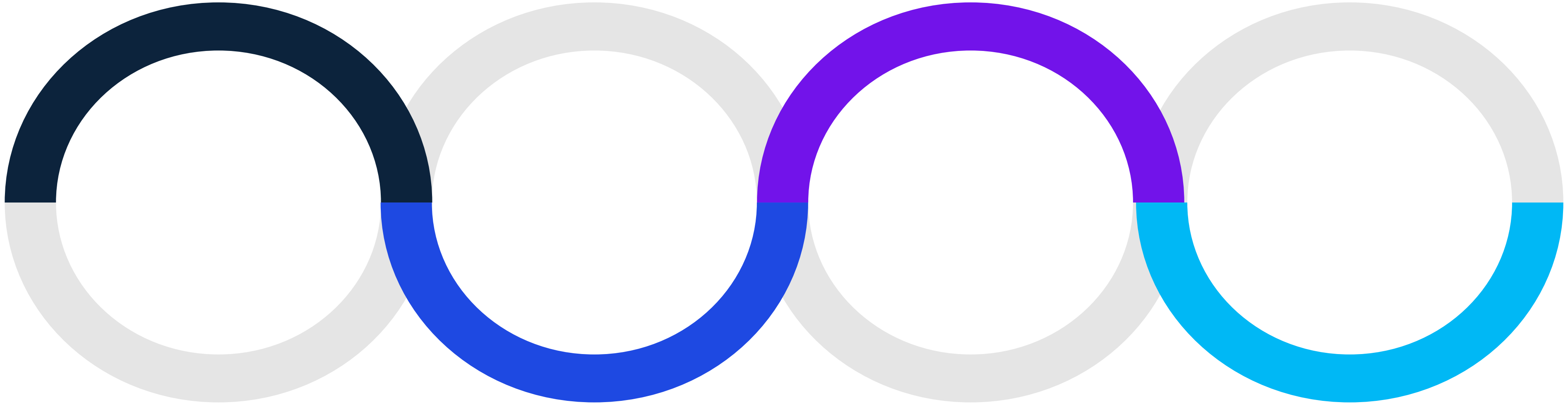
- Utilities national WPI
- State unemployment rate
- Utilities productivity (GVA utilities / Total employment)

The short-run variables include:

- Previous quarter all-industry WPI

Note: Due to the industry typically hiring high-skilled labour and a majority of employees being on an EBA, the state unemployment rate is not significant in the short-run.

Model process



Inputs

Historical data:

ABS

- National Accounts
- Labour Force Survey
- State Accounts
- Wage Price Index

Forecasts:

KPMG forecasts, developed within the NiGEM macroeconometric model framework

Modelling

The inputs are transformed to meet the assumptions of an error-correction model including, logarithmic scaling and taking the first differential depending on the variable.

Once the model generates an output the model is checked for robustness. The model is then used to generate forecasts for each WPI series.

Normalisation

Both the state all-industry WPI and the state utilities WPI are checked and aligned to the national series to ensure complete consistency across the projections

Expert review

All forecasts are reviewed by expert economists at KPMG to ensure the forecasts reflect the outlook for labour price growth and the wider economy.

If further adjustments are required or new variables are suggested for testing, the process is repeated.

Error Correction Model

An Error Correction Model (ECM) is a time-series model utilised when the underlying variables have a long-run cointegration.

The "error correction" term relates to a mechanism within the model where the deviation from the long-run equilibrium in the last period influences the short-run outcome in the current period.

Therefore, ECMs estimate the speed at which the dependent variable returns to equilibrium from its starting position.

KPMG applied ECMs to forecast the Wage Price Index (WPI) for the following:

- National all industry WPI
- National utilities WPI
- New South Wales, Victoria and South Australia all industry WPI
- New South Wales, Victoria and South Australia utilities WPI

The basic functional form of an error-correction model is outlined below:

$$\Delta y_t = \beta_0 + \beta_1 \Delta x_{1,t} + \cdots + \beta_i \Delta x_{i,t} + \gamma \left(y_{t-1} - (\alpha_1 x_{1,t-1} + \cdots + a_i x_{i,t-1}) \right)$$

Where:

$\Delta y_t =$	**Change in the dependent variable in the current period**
$\beta_0 =$	**Intercept**
$\beta_i =$	**Slope coefficient for short-run independent variable i**
$\Delta x_{i,t} =$	**Change in the short-run independent variable i for the current period**
$\gamma =$	**Error correction term**
$y_{t-1} =$	**Previous period dependent variable**
$a_i =$	**Slope coefficient for long-run independent variable i**
$x_{i,t-1} =$	**Long-run independent variable i in the previous period**

04

Data sources & references

Data Sources

Desktop research

- Ministers Minutes
- Statement of Monetary Policy RBA
- Fair Work Commission
- NSW Government
- Victorian Government
- South Australian Government
- National Australia Bank
- Australian Energy Regulator (AER)

Literature review and internal reports

- KPMG Quarterly Economic Update

Primary data

Australian Bureau of Statistics:
- Labour Force Survey
- National Accounts
- State Accounts

NiGEM forecasts

Attorney-Generals Department

Subject Matter Experts

- KPMG industrial relations team

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