



Australian
Gas Networks

Attachment 8.4

BIS Oxford Economics - Input price escalation forecasts

Final Plan 2023/24 – 2027/28

July 2022



**BIS OXFORD
ECONOMICS**

INPUT PRICE ESCALATION FORECASTS TO 2027/28

**PREPARED BY BIS OXFORD ECONOMICS
FOR AUSTRALIAN GAS NETWORKS, AUSNET
SERVICES & MULTINET GAS NETWORKS**

FINAL REPORT

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1. EXECUTIVE SUMMARY

BIS Oxford Economics was engaged by Australian Gas Networks, AusNet Services and Multinet Gas Networks (collectively referred as “the Victorian Gas Distributors” or “the businesses”) to prepare forecasts of discrete set of labour escalation prices, relevant to gas distribution networks in Victoria from 2021/22 to 2027/28. We understand these forecasts will be used by the Victorian Gas Distributors to develop their operating and capital expenditure forecasts. These forecasts, in turn, will be included in the businesses’ next revenue reset submission to the Australian Energy Regulator (AER), with the next Access Arrangement period covering the five-year period from 2023/24 to 2027/28 (FY24 to FY28) inclusive.

For **gas network related labour**, BIS Oxford Economics forecasts total wage costs for the Victoria Electricity, Gas, Water and Waste Services (EGWWS or ‘Utilities’) sector — expressed in Wage Price Index (WPI) terms — will average 3.1% per annum over the seven-year period from FY22 to FY28, the same as the Australian EGWWS WPI average over the same period. For the five-year regulatory period from FY24 to FY28, the average increase in the Victorian and Australian EGWWS WPI are forecast to be 3.4%. In real terms, the Victorian EGWWS WPI is forecast to average 0.8% p.a. over the five years to FY28 (see Table 1.1 below).

Note that these forecasts include the impact of the proposed increases to the Superannuation Guarantee (SG) over the five years from FY22 to FY26. We anticipate that the Australian and NSW EGWWS WPI will be, on average, -0.1% lower in each of those 5 years, than if the SG increases did not proceed. RBA research shows that employees tend to receive lower wages due to the imposition of a SG increase. In effect some of the employees’ wage increase (which they would have received in the absence of the SG increase) is replaced with the extra superannuation contribution. This means that although the ‘statutory’ incidence of the higher superannuation contributions are borne by employers, over time a proportion of these higher SG costs are passed from employers to employees via lower wage growth (i.e. the ‘economic incidence’).

However, given the SG is in effect a labour ‘on-cost’, in terms of escalating total wage costs over the regulatory period, **the full annual 0.5% for the SG increase** should therefore be **added to the forecast increases in the WPI** for each relevant year (FY22 to FY26). Section 5.3 includes a discussion of SG increases, how they apply to the WPI (and other wage measures) and the assumptions underpinning the impacts of the WPI forecasts in this document. Excluding the -0.1% annual impact of the SG increases, the forecast real growth in Australian EGWWS WPI would be 0.9% over the 5-year regulatory period to FY28, slightly below the 1.0% p.a. averaged over the past decade.

Over the forecast period from FY22 to FY28, EGWWS WPI growth is expected to remain higher than the All Industries WPI average, with the Australian All Industries WPI forecast to average 3.1% over the five years to FY28. This means that the Australian EGWWS WPI is expected to be 0.3% higher than the All Industries average. Note that the impact of the SG Increases on the All Industries WPI is assumed to be -0.24% in each of the five years to FY26, higher than the impact on EGWWS wages. Excluding the SG increase impacts, the difference vis-a-vis the EGWWS and All Industries WPI would be around 0.3%, which is slightly below the historical differences over the past decade.

Utilities wages are forecast to increase by more than the national average over the forecast period because of the following factors:

- the electricity, gas and water sector is a largely capital intensive industry whose employees have higher skill, productivity and commensurately higher wage levels than most other sectors
- strong union presence in the utilities sector will ensure outcomes for collective agreements, which cover 65% of the workforce, remain above the wage increases for the national 'all industry' average. In addition, with the higher proportion of employees on EBAs, compared to the national average (38%), and EBAs wage rises normally higher than individual agreements, this means higher overall wage rises in the EGWWS sector.
- increases in individual agreements (or non-EBA wages) are expected to strengthen from the current subdued pace as the labour market tightens, especially from mid-2022 when the unemployment rate is expected to fall and remain below 4%.
- demand for skilled labour will pick up and strengthen with the high levels of utilities investment from FY22 to FY28, with overall utilities investment levels expected to remain elevated over the next 7 years. This will also be a key driver of wages going forward.
- the overall national average tends to be dragged down by the lower wage and lower skilled sectors such as the Retail Trade, Wholesale Trade, Accommodation, Cafés and Restaurants, and, in some periods, also Manufacturing and Construction. These sectors tend to be highly cyclical, with weaker employment suffered during downturns impacting on wages growth in particular, such as occurred in the wake of the COVID-19 impacts. The EGWWS sector is not impacted in the same way due to its obligation to provide essential services and thus retain skilled labour.

During the COVID-19 crisis, the EGWWS sector fared much better than just about all other sectors, along with the Education, Health & Social Assistance and Finance and Insurance sectors, in terms of wage increases over FY20 and FY21. However, relatively low quarterly increases of 0.1% in each of the March and June quarters 2021 has seen annual growth in the EGWWS WPI slip below the All Industries average for only the second time in the past two decades. Overall, we expect EGWWS WPI growth to be 1.6% in FY22, around 0.5% lower than the All Industries average. We believe this will be a short-lived aberration and that the EGWWS WPI will rebound strongly over the next year to again outpace the national average. Driving this will be much higher EBAs negotiated in an environment of high inflation (above 3%) and a very tight labour market, particularly for the types of skilled labour that dominate in the sector.

The overall labour market is expected to remain tight over the next few years, with the unemployment rate to fall back under 4% due to an acceleration of employment growth through calendar 2022 and FY23 and FY24, which will outpace population and labour force growth and see the unemployment rate remain under 4% over the next few years. Hence, we expect to see the emergence of critical skilled labour shortages and competition for scarce labour, particularly from the mining and construction sectors, which will push up wage demands in the utilities sector. Mining investment is now picking up and is forecast to see significant increases over the next 3 years to FY24 and remain at elevated levels to the end of the decade. Meanwhile, there is similar strong growth coming through in the Construction sector, with solid increases across all segments of the overall construction sector (residential construction, non-residential building and civil engineering & infrastructure construction) over FY22 to FY25, leading to strong labour demand in that sector, particularly from 2024 when activity surpasses the 2018 levels (previous peak).

Employers are already reporting an increasing shortage of technicians and trade workers, and employees with STEM skills. These are essential workers in the utilities sector. A key problem is that the TAFE (technical and further education) systems across the country have simply not been training enough workers. BIS Oxford Economics research shows this is being compounded by new graduates

in the trades stream in particular not increasing fast enough to replace retiring workers, with some numbers actually falling. Despite government announcements that they are moving to address the TAFE system, it is unlikely that these issues will be addressed within the next 5 years. Added to this is that skilled immigration has been suspended. When it does return, it is likely to be a slow ramp-up, meaning that the skill shortages will persist and won't be easily or quickly solved by migration.

With strong competition for similarly skilled labour from the mining and construction industries, firms in the utilities sector will need to raise wages to attract and retain workers. In other words, the mobility of workers between the EGWWS, mining and construction industries means that demand for workers in those industries will influence employment, the unemployment rate and hence spare capacity in the EGWWS labour market. Businesses will find they must 'meet the market' on remuneration in order to attract and retain staff and we expect wages under both individual arrangements and collective agreements to increase markedly over the FY23 to FY26 period.

Table 1.1 Summary – Labour Cost Escalation Forecasts: Victoria & Australia - including Impact of Proposed Superannuation Guarantee Increases (financial years)
(percent change, year average, year ended June)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Period averages		
				Forecasts		Next Regulatory Period					2015-21	2022-28	2024-28 (f)
NOMINAL PRICE CHANGES													
<u>1. Electricity Network-Related Labour</u>													
EGWWS WPI - Victoria (a)	3.0	3.3	2.1	1.8	3.0	3.3	3.5	3.6	3.4	3.2	3.0	3.1	3.4
EGWWS WPI - Australia (b)	2.8	2.7	1.8	1.7	2.9	3.2	3.5	3.5	3.4	3.2	2.4	3.1	3.4
<u>2. Contractor Labour Cost Escalation</u>													
Construction WPI - Victoria (c)	2.4	2.2	1.0	2.8	2.9	3.2	3.4	3.5	3.5	3.1	2.2	3.2	3.4
Construction WPI - Australia (b)	1.9	1.5	1.3	2.4	2.8	3.2	3.5	3.6	3.4	3.1	1.7	3.1	3.4
<u>3. All Industries Wages</u>													
All Industries WPI - Australia (d)	2.3	2.1	1.5	2.3	2.7	3.0	3.1	3.2	3.1	2.9	2.1	2.9	3.1
Consumer Price Index (headline) (e)	1.6	1.3	1.6	3.5	3.2	2.7	2.6	2.6	2.6	2.6	1.6	2.8	2.6
REAL PRICE CHANGES (g)													
<u>1. Electricity Network-Related Labour</u>													
EGWWS WPI - Victoria (a)	1.4	1.9	0.5	-1.7	-0.1	0.5	0.9	1.0	0.9	0.7	1.4	0.3	0.8
EGWWS WPI - Australia (b)	1.1	1.3	0.2	-1.9	-0.3	0.5	0.9	1.0	0.8	0.6	0.8	0.2	0.8
<u>2. Contractor Labour Cost Escalation</u>													
Construction WPI - Victoria (c)	0.7	0.9	-0.7	-0.7	-0.3	0.5	0.8	1.0	0.9	0.6	0.6	0.4	0.7
Construction WPI - Australia (b)	0.2	0.2	-0.3	-1.1	-0.4	0.5	0.9	1.0	0.9	0.5	0.1	0.3	0.8
<u>3. All Industries Wages</u>													
All Industries WPI - Australia (d)	0.7	0.8	-0.1	-1.2	-0.5	0.2	0.5	0.6	0.6	0.3	0.4	0.1	0.4

Sources: BIS Oxford Economics, ABS

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for Victoria

(b) Australian sector wage forecasts provided for comparison

(c) Construction Sector Wage Price Index (WPI) for Victoria

(d) Australian All Industries AWOTE and WPI provided for comparison.

(e) Inflation forecasts are RBA forecasts for the next 2 years from latest 'Statement of Monetary Policy'. Beyond that, inflation forecasts are based on a glide-path to the mid-point of RBA inflation target (2.5%) by year 5. The overall forecasts are then calculated as a geometric mean of the 'official' RBA inflation forecasts over the next 5 years or to the end of the regulatory period, with years 3,4 and 5 CPI equal to the calculated 5-year geometric mean. This methodology is the position adopted by the AER in its Final position paper "Regulatory treatment of inflation" of December 2020.

(f) Average Annual Growth Rate for 2023/24 to 2027/28 inclusive, ie for next regulatory period.

(g) Real price changes are calculated by deducting the inflation rate from nominal price changes.

Wages in the Victorian utilities sector are expected to move in line with the national utilities sector average over the Victorian Gas Distributors upcoming regulatory period (see Table 1.1). We expect Victorian utilities WPI growth to track just above the national average for the next three years. From FY25 we are forecasting the Victorian utilities WPI to virtually match the national average. There will be strong wage pressures in Victoria, particularly from high and increasing levels of construction activity, while the Victorian utilities sector will face competition for key skilled workers from interstate utilities, construction and mining sectors. With strong competition for similarly skilled labour from the

mining and construction industries, firms in the Victorian utilities sector will need to raise wages to attract and retain workers. This is expected to be accompanied by historically high levels of utilities related construction in the state (although lower than FY19-FY22) and construction activity generally. The overall strengthening in the labour market, and particularly in the Construction and Mining sectors – which are key competitors to the utilities sector in terms of ‘similarly’ skilled workers - is expected to result in utilities WPI growth accelerating over the 2023 to 2026 period, and subsequently remain elevated over FY27 before easing.

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy **external labour cost escalation** by wages growth (as measured by the WPI) in the Victorian construction industry. Our research has shown that construction activity (i.e. work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year.

Our forecast is for the Australian and **Victorian Construction WPI** to average 3.4% over the five-year period to FY28 – or 0.7% per annum on average in real (inflation-adjusted) terms (see Table 1.1). While this is a marked improvement on the past five years, it is still well down on the 4.3% annual national average (nominal terms) of the decade to 2011/12. Note that these wage forecasts for the Construction WPI include the impacts of the SG increase over FY22 to FY26 (i.e. covering the first three years of the the Victorian Gas Distributors next regulatory period). In the construction industry sector, we estimate the impacts will be -0.21% for each year of the SG increase.

A significant increase in the September 2021 quarter has pushed Victorian wage growth well above the national average, with the outcome for FY22 expected to be 2.8%, 0.4% higher than the national average. Higher construction sector EBAs in the state (compared to the national average) are expected to hold the Victorian construction WPI growth above the national average over FY22 and FY23, with EBAs approved over the past 1 to 3 years averaging 0.3% higher than the national average.

We are forecasting Victoria’s overall construction activity to show a small increase in FY22, followed by moderate growth over FY23 to FY24, which will see the level of Victorian construction activity push above previous peaks in FY23 (see chart 6.7). However, given that the growth in activity in the state will lag the national average over FY21 to FY26, we are forecasting Victoria’s construction WPI growth lag the national average over FY25 and FY26, before matching or slightly outpacing the national increases over FY27 and FY28, as Victoria’s construction activity shows similar growth (see Table 1.1).

Australian and Victorian construction wages are expected to gradually pick up over FY22 and FY23 and then strengthen appreciably over FY24 to FY26, particularly as construction activity levels surpass the previous highs of FY18 and FY13 (in 2024 – see figure 5.4) and skills shortages begin to manifest. The increases in construction activity from FY23 will be driven by higher levels of residential and non-dwelling building and particularly by strong increases in engineering construction, boosted by a new wave of mining investment and a plethora of publicly funded transport infrastructure projects (particularly in NSW, Victoria and Queensland). The stronger activity will underpin higher wages due to strong labour demand and expected widespread skill shortages in the construction industry.

2. INTRODUCTION

BIS Oxford Economics was engaged by Australian Gas Networks, AusNet Services and Multinet Gas Networks (collectively referred as “the Victorian Gas Distributors” or “the businesses”) to prepare forecasts of discrete set of labour escalation prices, relevant to gas distribution networks in Victoria from 2021/22 to 2027/28. We understand these forecasts will be used by the Victorian Gas Distributors to develop their operating and capital expenditure forecasts. These forecasts, in turn, will be included in the businesses’ next revenue reset submission to the Australian Energy Regulator (AER), with the next Access Arrangement period covering the five-year period from 2023/24 to 2027/28 (FY24 to FY28) inclusive. Over the next regulatory period, forecasts of both nominal and real price growth of the relevant inputs are provided. The forecasts in this report were finalised in mid-March 2022.

The Australian Bureau of Statistics is the primary data source for the consumer price index, wages, employment, real gross value added and investment (including engineering construction) data, and for a range of other economic variables. The data used in the projections is the latest available as at early March and includes the December quarter Consumer Price Index, Wage Price Index and Producer Price Indices data releases. Other inflation and interest rate data were sourced from the Reserve Bank of Australia.

Forecasts of the economic variables in this report were mostly sourced from BIS Oxford Economics reports, including *Australian Macro Service, Long Term Forecasts: 2021 – 2036*, *Engineering Construction in Australia 2021-2036* and *Building in Australia 2021-2036*, along with other unpublished forecasts and from BIS Oxford Economics internal research and modelling.

The previous Summary section presents an overview of the outlook for the labour, including numerical forecasts which are presented in the summary table (and separately provided in an excel spreadsheet).

Section 3 provides a macroeconomic outlook for Australia and Victoria. This section also has forecasts of key economic variables plus a discussion of the drivers and logic underpinning the projections, to provide context for the labour market outlook.

Section 4 discusses BIS Oxford Economics’ national wage and CPI projections and discusses the use of the Reserve Bank of Australia forecasts of the Consumer Price Index (CPI) for the deflation of nominal wages and other input costs. Forecasts of the All Industries Wage Price Index (WPI) are also provided in Section 4. Note that most of the references to historical data and forecasts of wages in Sections 4 and 5 are in nominal terms unless specifically stated that the data/forecasts are in real (inflation-adjusted) terms.

Sections 5 provides the forecasts and rationale of the wage projections for the Electricity, Gas, Water and Waste Services (EGWWS) and Construction sectors for Australia and Victoria, as measured by the Wage Price Index (WPI).

3. MACROECONOMIC OUTLOOK

3.1 AUSTRALIA MACROECONOMIC FORECASTS

Australian economy during and post-COVID recession performed better than expected

The Australian economy suffered a steep downturn in the first half of calendar 2020, with the -7.3% cumulative decline in real Gross Domestic Product (GDP) over the March and June quarters producing a small fall in GDP in FY20. However, the bounce back in the September and December quarters was stronger-than-expected, despite extended lockdowns in some states (mainly Victoria) and prolonged border closures. Further healthy growth in the March and June 2021 quarters of 1.9% and 0.7% respectively, saw GDP surpass the pre-pandemic levels in the March quarter 2021. Overall, GDP year-average growth in FY21 was 1.5%.

GDP contracted by 1.9% in Q3 (September quarter 2021), with strict lockdowns in New South Wales, Victoria and the ACT due to the Delta variant causing a sharp decline in consumption. Household consumption fell by -4.8% q/q in Q3, led lower by sharp falls in NSW, Victoria and the ACT - each of these regions spent all or most of Q3 in lockdown. As expected, services consumption led these falls. However, unlike in previous lockdowns, goods consumption also fell in the quarter. This is partially attributable to payback from the remarkable strength in retail in 2020. But there are also signs that supply disruptions have weighed on growth, with consumer goods imports falling sharply, and a steep drawdown of wholesale inventories. Net exports made a strong contribution to growth in Q3, as mining and energy commodities recovered from weather-related disruption, while global supply disruptions contributed to a fall in imports. Public demand also boosted growth, pushed higher by the accelerated vaccination program. Investment was subdued overall, with locked down regions weighing on positive momentum elsewhere.

The economy bounced back smartly in Q4 2021 from the Delta lockdowns, with retail sales rising to a record level and the labour market absorbing spare capacity. GDP increased 3.4%, led mainly by household consumption (+6.3% q/q) and a strong contribution from re-stocking business inventories, offset by lower net exports and declines in private and public investment. However, this momentum will be short lived as the economy grapples with an explosion in COVID cases from the Omicron variant. We have dialled down our outlook for consumption growth in Q1 2022, with a pickup in public-related spending on vaccination programs providing some offset. GDP growth was 4.7% in 2021. The Omicron variant poses a risk to the growth outlook at present; our forecasts assume the timing of some travel and household spending is delayed due to virus concerns, but currently we are not forecasting a return to widespread lockdowns. The continued rapid rollout of the vaccine and relatively high vaccination rates has removed much of the downside risk from the outlook. The greatest risk and uncertainty to the outlook is now the escalation of the Ukraine-Russian conflict and the impact of trade sanctions on Russia on world GDP growth.

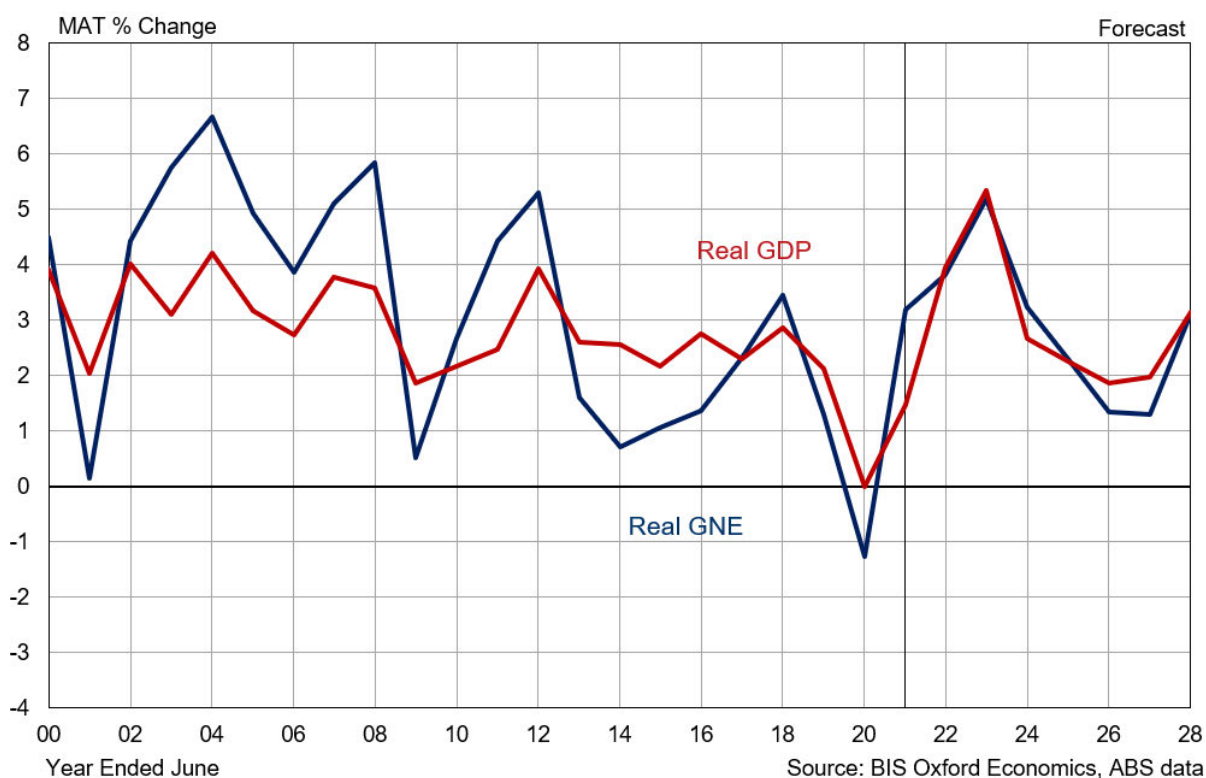
Locally, the pipeline of residential construction work to be done remains strong, boosted by the government's HomeBuilder program. Labour and materials shortages will lead to a less acute, but more protracted cycle than was previously anticipated. In terms of business investment, non-residential construction remains subdued overall, although forward-looking indicators suggest an uptick in activity from the second half of 2022. Machinery & equipment investment is on an upswing, supported by fiscal policy measures. Disruption to import flows will make the cycle patchy, but survey measures suggest expenditure will pick back up once these bottlenecks clear. We expect the strength in business investment has further to run, with these incentives in place until June 2023. The mining sector has remained relatively insulated from the pandemic shock, although there were initial deferrals of oil and LNG investments. Mining investment picked over FY21 and will continue to rise and remain strong well into the middle of the decade as some of the deferred investments are started. Commodity

prices have rebounded from their lows of 2020 and with prices for a number of commodities to remain at healthy levels over the medium term, we expect further investments to get underway. Overall, new business investment is expected to grow by around 8% in each of FY22 and FY23. The recovery in business investment will not only drive near term demand but will increase the economy’s productive capacity in the long run.

Labour market outcomes improved substantially in late 2021. The participation rate climbed over 2 percentage points (ppts) in both NSW and Victoria as workers re-entered the labour force and found employment. Nationally, employment rose 0.5% q/q in Q4, while the unemployment rate fell to 4.2% in December and January 2022. The recent pickup in frictional unemployment has largely unwound, with large flows of workers from outside the labour force moving into employment attributable to employee-employer linkages that were preserved through lockdowns. The outlook for the labour market is positive, and we expect this strong momentum to carry continue in 2022.

Fiscal policy remains very supportive, and infrastructure spending is set to increase in the near term; projects in planning stages have been brought forward (including accelerating the planning application procedure), and direct grants for individuals to put towards dwelling construction or major alterations and additions (the HomeBuilder program) have spurred activity. Monetary policy settings remain extremely accommodative. The RBA have so far responded with a dovish policy stance to the faster-than-expected progress toward full employment and the inflation target – signalling they will tolerate an inflation overshoot to ensure the wages recovery is well entrenched.

Figure 3.1 Australia Key Indicators



Global Economic Outlook

Although some of the initial worst fears about Omicron have proved unfounded, the unexpectedly large surge in global COVID-19 cases is causing more cautious behaviour by individuals and greater disruption to businesses than envisaged. Global GDP is forecast to increase 3.8% in 2022, down from

the 5.8% estimated for 2021. There remain plenty of unknowns regarding the Omicron variant and its health impact. But the evidence from economies such as South Africa, the UK and Denmark suggests that the Omicron wave is likely to be associated with much smaller rises in hospitalisations than earlier Covid waves. And for now, our initial assessment that there would only be a modest reimposition of mobility restrictions is correct. Nonetheless, the rise in global COVID-19 cases to more than double the previous peak points to greater economic damage via increased voluntary social distancing and disruption to businesses from staff having to self-isolate.

At this stage, we have not fully factored in the impacts of the war in the Ukraine and associated economic sanctions on global growth, apart from some preliminary adjustments to some commodity prices such as oil prices, which will impact consumer price inflation.

In response to the surge in COVID-19 cases, we have lowered global GDP growth for Q1. As with previous COVID-19 waves, we expect activity to rebound quickly when cases start to fall back, so the downward revision to the outlook in Q1 will be largely offset by a bigger bounce in Q2. Nonetheless, the weak start to the year will dampen overall 2022 growth slightly. Meanwhile, greater disruption in the near term – especially in China where a zero-tolerance approach to COVID-19 continues to be pursued – points to slower normalisation of supply-chain pressures and potentially a slower transition of consumer spending from goods back to services. Partly due to this, we have lifted our 2022 global CPI inflation forecast by 0.3ppt to 4.5%. Inflationary pressures keep building due to higher commodity prices, supply shortages and weak currencies. But inflation is still expected to fall sharply over the course of year, limiting the need for aggressive monetary policy tightening.

Emerging Markets (EMs) enter 2022 facing a resurgent pandemic, threatening some softening in demand in Q1, alongside continued supply-chain disruption. Apart from China, most governments have not tightened COVID-19 related curbs to any significant degree so far, but we have turned more cautious in the short term, lowering our 2022 GDP growth forecast for EMs to 4.6% (down 0.1pp from a month ago) before a 4.8% rise in 2023. We still estimate overall EM growth at 6.7% in 2021. China has stuck to its zero-tolerance approach to Covid, which is weighing on consumption and, with headwinds from the real estate sector persisting, we still forecast GDP growth will slow to 5.0% in 2022 from an estimated 8.0% in 2021. Elsewhere, restrictions remain mild, amid expectations that the Omicron health impact is less severe than previous variants. However, disruption associated with staff absences and fading business confidence highlighted in latest PMI (Purchasing Managers Index) surveys point to a muted start to the year. We expect output growth will bounce back in Q2. China's COVID-19 policy has delayed supply-side normalisation. We continue to see a turnaround in EM inflation, with annual rates peaking in H1. Policy rates will be raised in many countries, including in Brazil and Russia, which have front-loaded rate hikes, but also in Asia, albeit remaining below pre-Covid levels.

The spread of the Omicron variant and year-end slump in consumer spending put a chill on the US economy in Q1, with our forecast seeing GDP essentially flat on the quarter. But as the Omicron wave recedes, we foresee a spring rebound led by buoyant demand for in-person services. Given the weak start to the year, we now forecast that the US economy will grow 3.5% in 2022 and 2.5% in 2023.

The anticipated strong performance of the US economy and rising US interest rates will see a broad-based appreciation of the USD in the near-term. The Australian dollar was broadly steady through January before taking a step down to US\$0.70 in late January. The very dovish messaging from the RBA will have kept some downward pressure on the currency, especially as rate increase expectations become more entrenched in the US. The AUD averaged below US\$0.73 in the March quarter. With expectations for tighter monetary policy in the US now well established, our outlook is for the AUD to be broadly steady over 2022, before appreciating gradually alongside monetary tightening in Australia in the medium term, to near US\$0.80 by mid-decade, before easing back to the long-term average of US\$0.75.

Beyond the near-term disruptions, we expect global growth will return to its trend pace of around 3% by 2023, and gradually slow over the long term as resident population growth eases. Australia's trading partner growth (weighted by export proportions) is forecast to grow at a faster pace over the next 5-20 years (between 0.5 to 1% higher), due to the high weights of China, East Asia and India (all of which are expected to outpace the average pace of global growth) in Australia's export mix.

GDP to lift in FY23 and remain buoyant to FY25

Australian domestic demand increased by 2.5% in FY21, with the huge bounce-back in both farm and non-farm stocks pushing the growth in Gross National Expenditure (GNE) to 3.2%. However, with net exports detracting from growth, GDP rose 1.5%. Although the recent lockdowns will detract from domestic demand in the second half of 2021, we expect a strong bounce-back over the first half of 2022 and into FY23, led by private consumption expenditure as households spend heavily on services, funded by the increased savings accumulated over the past year or so and the 'return to normalisation' due the widespread dissemination of vaccines. Australian GNE is forecast to increase 3.9% in FY22 and 5.3% in FY23, with GDP forecast to increase by 3.5% in FY22 and 5.3% in FY23 as domestic demand strengthens and net exports provide less of a drag (see figure 3.1 and Table 3.1).

Table 3.1 Australia – Key Economic Indicators, Financial Years

Year Ended June	Historical						Forecasts						
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total New Private Investment (+)	-5.4	-2.0	3.7	-2.7	-3.3	1.9	6.4	7.4	5.2	1.7	-3.2	-2.1	4.3
New Public Investment (+)	8.1	8.6	11.2	4.8	0.5	5.6	8.3	8.8	2.4	-1.4	-2.7	-1.8	1.4
Gross National Expenditure (GNE)	1.4	2.3	3.5	1.3	-1.3	3.2	3.9	5.3	3.3	2.3	1.2	1.3	3.1
GDP	2.7	2.3	2.9	2.1	0.0	1.5	3.5	5.3	2.9	2.3	1.9	2.0	3.2
Inflation and Wages													
CPI (Yr Avg) - RBA forecasts (*)	1.4	1.7	1.9	1.6	1.3	1.6	3.5	3.2	2.7	2.6	2.6	2.6	2.6
Wage Price Index (Jun on Jun)(**)	2.1	1.9	2.1	2.4	1.7	1.8	2.2	2.6	2.8	2.8	3.0	2.8	2.8
Wage Price Index (Yr Avg)(**)	2.1	2.0	2.1	2.3	2.1	1.5	1.4	1.8	2.3	2.5	2.5	3.1	2.9
Average Weekly Earnings (Yr Avg)(^)	1.9	2.0	2.4	2.7	3.9	2.7	1.8	2.8	2.8	3.1	3.3	3.6	3.3
Employment													
– Employment Growth (Yr Avg)	2.3	1.5	3.0	2.4	0.5	0.6	2.8	2.9	2.1	2.0	1.7	1.0	1.6
– Employment Growth (May/May)	1.9	2.1	2.6	2.8	-5.6	8.3	2.3	2.1	2.1	1.9	1.4	1.0	1.9
– Unemployment Rate (May) (%)	5.7	5.5	5.4	5.2	7.0	5.1	3.8	3.8	3.8	3.8	4.1	4.3	4.1
Labour Productivity Growth													
– Total	0.5	0.8	-0.2	-0.2	-0.5	0.9	0.8	2.3	0.7	0.3	0.2	1.0	1.6
– Non-farm	0.7	0.6	0.0	0.0	-0.3	0.6	0.7	2.6	0.6	0.3	0.2	1.0	1.6

+Expenditure on new assets (or construction work done). Excludes sales (or purchases) of second hand assets.

*Headline CPI forecasts based on Reserve Bank of Australia's current forecasts to June 2024 quarter. Beyond this, we've used the arithmetic mean of the next 3 years and then the mid-point of the Reserve Bank's 2 to 3 per cent inflation target range after 2024.

** Based on Ordinary Time Hourly Rates of Pay Excluding Bonuses. Includes Impact of SG increases.

^ Average Weekly Ordinary Time Earnings for Full-Time Adult Persons. Includes impact of SG increase.

Housing and business investment are expected to ease over FY24 and FY25 as the government incentives finish or are reduced. However, we expect further moderate growth in business investment in FY24 and FY25 as deferred investment is undertaken, although some sectors, such as hotel construction and other tourism-related investment, will take longer to recover. Meanwhile, public investment is expected to peak in FY24, and remain at elevated levels in FY25, as a large pipeline of

transport infrastructure and social and institutional buildings projects come through. Meanwhile, government recurrent expenditure is expected to weaken sharply as the boost from the NDIS and vaccine roll-outs finish and governments attempt budget repair.

With the initial rebound from the pandemic likely to be over by late 2022, the pace of growth will naturally slow. Overall, we are forecasting GNE to ease to 3.3% in FY24 and 2.3% in FY25. GDP is forecast to ease to 2.9% in FY24 and 2.3% in FY25. Net exports will detract from growth over FY23 to FY25, as a sharp lift in imports (particularly service debits – mainly outbound tourism) outpaces solid increases in exports. Over the four years to FY25, domestic demand growth is forecast to average 3.7% per annum, while GDP is forecast to average 3.5% p.a.

Inflation rising, but interest rates to remain low over the next 2 years, before gradually rising

Annual headline inflation jumped to 3.5% (y/y) in the December quarter 2021, while underlying inflation lifted from 2.1% to 2.7%. Transitory components continue to drive headline inflation, including high fuel prices, but with upward price pressure emerging from supply chain disruption, there are signs inflationary pressures are broadening. Overall wage growth remains benign for now, but as the economy reopens, the labour market tightens and spare capacity is absorbed, wage pressures will mount. Our forecast is for this to be a gradual process through 2022, but the upside risks to this outlook have increased. The stronger-than-expected inflation data appears to have accelerated the RBA's timetable for raising rates. Governor Lowe has dropped his guidance that rates will be on hold until 2024, but the Bank is still signalling the expect rates will be on hold until there is a sustainable rise in wages.

The cash rate forecast to remain at or below 0.25% until late 2022, before gradually rising to 2.0% by late 2025 as wages and CPI inflation rise back toward historical averages, and the unemployment rate falls below 4.0%. Meanwhile, the 1.9% rise in the cash rate in Australia means the benchmark housing variable rate will rise to 6.2% by late 2025, which will be enough to slow consumer spending and impact housing and business investment over FY26 and FY27. With government capital spending falling at that time and recurrent spending still constrained, the end result will see annual GDP growth easing to around 2% over those two years.

Mild slowdown in mid-2020s, before economy moves to trend growth

The tightening of monetary policy will precipitate an overall slowing of economic growth in the mid-2020s. But as consumers and businesses re-adjust to the 'normalcy' of higher interest rates – although at much lower levels than the 2000s and 2010s – investment and consumer spending will return to long term trend (or potential) rates of growth over the second half of the 2020s with an initial rebound in GDP growth to 3.2% in FY28.

Potential growth will slow primarily due to a smaller contribution from labour force growth compared to pre-covid history. Net overseas migration will ease back to a more normal level (after the strong rebound over the next 3 years), and the contribution from natural increase (births minus deaths) will also moderate. The relatively large cohort of Australians aged 65+ moving into retirement will also place downward pressure on the labour force participation rate, although this will continue to be somewhat alleviated by relatively high net immigration.

3.2 OUTLOOK FOR VICTORIA

After outperforming the national economy in 6 years to 2019 inclusive, Victoria experienced a larger-than-average fall in output through the coronavirus downturn, due to the more severe experience of the pandemic which severely restricted activity over 2020 and 2021.

Relative to NSW, Victoria's economy was less impacted by lockdowns in the September quarter (Q3) 2021, with output contracting by 1.5% q/q. Household consumption led the fall (-5.1% q/q), while

business investment was remarkably resilient. There was a strong uptick in non-residential construction investment, which is still normalizing after the extended lockdowns in 2020, while dwelling investment weathered the brief construction industry shutdown quite well, increasing by 2.3% q/q. The dwelling investment upswing has further to run in 2022 given the strong run of land sales and building approvals in the state. However, we now expect this cycle will be more protracted, with labour and materials shortages set to delay the speed at which work can be done.

Growth in Q4 rebounded by 3.7% q/q, due to the reopening of the economy in October and November. Growth in SFD through the year was 6.1% (Dec/Dec), with State Final Demand (SFD), employment and (estimated) Gross State Product (GSP) all now above their pre-COVID peaks. However, COVID cases picked up in Victoria over December to February, with consumer caution and time spent in quarantine challenging the economy in Q1 2022. Nevertheless, this is expected to be a short-lived headwind, with the strong rebound from the COVID-affected expected to see SFD and GSP increase 5.9% and 4.3% respectively in FY22.

Over FY23, the recovery momentum will wane, but still remain healthy. The Victorian economy should see a boost in the second half of 2022 from the return of international tourists and students, with the recovery in domestic demand continuing to build through the year. Further increases in residential building and public investment over FY23 and FY24, accompanied by solid growth in business investment over FY22 to FY25 are expected to underpin growth in employment, SFD and GSP over the next three years. Economic growth in the state economy is then predicted to ease in FY26, in line with the national economy. A weakening in both business and public investment at that time will act as a drag on the state economy. Growth will then begin to build from 2027, with Victoria showing above-average growth to the end of the decade.

In the long run we still expect the state to again outperform the national average, but by less than was evident pre-COVID - Victoria's economy had been partially driven by rapid expansions in higher education and tourism, and there will be permanent losses in these areas. In tandem with this, the state has been disproportionately impacted over FY21 and FY22 by an outflow of migrants internationally and domestically, which has reduced its working age population and labour force. However, we expect this to gradually reverse over the next few years, with Victoria's population growth expected to again outpace the national average from FY24. This will provide an added boost to consumer, housing and infrastructure demand over the medium-to-long run.

Table 3.2 Victoria – Key Economic Indicators, Financial Years

Year Ended June							Forecast						
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Victoria													
Total Construction Activity(*)	8.8	7.3	15.4	4.9	2.0	-5.1	2.4	4.6	2.0	-4.4	-9.1	-3.0	4.0
State Final Demand	4.4	4.2	5.1	3.4	-1.0	-0.6	5.9	4.1	2.8	2.1	1.1	1.5	3.4
Gross State Product (GSP)	3.4	3.8	3.4	3.1	0.1	-0.4	4.3	4.6	2.5	2.0	1.4	2.1	3.2
Employment Growth (Year Avg)	2.7	4.0	2.8	3.4	1.2	-1.1	3.1	2.3	2.0	2.0	1.6	1.1	1.9
Australia													
Total Construction Activity(*)	-5.2	-3.3	12.2	-9.2	-3.7	-0.9	3.4	12.7	6.2	-1.5	-6.6	-3.0	3.0
Australian Domestic Demand	1.4	2.3	3.4	1.5	-0.9	2.5	4.2	5.1	3.3	2.3	1.3	1.3	3.1
Gross Domestic Product (GDP)	2.7	2.3	2.9	2.1	0.0	1.5	3.5	5.3	3.0	2.4	1.9	2.1	3.2
Employment Growth (Year Avg)	2.3	1.5	3.0	2.4	0.5	0.6	2.8	2.9	2.1	2.0	1.7	1.0	1.6

Source: BIS Oxford Economics and ABS

* Total construction work done in constant 2019/20 prices as per the ABS Building Activity and Engineering Construction Activity
Total construction is the sum of new dwelling building (includes alterations and additions activity greater than \$10,000),
new non-building activity and new engineering construction.

4. WAGES AND INFLATION OUTLOOK

4.1 RBA CPI FORECASTS ARE USED TO CALCULATE REAL WAGES

To calculate real wage cost increases, we deflate nominal price growth by deducting expected inflation. For the inflation forecast, the preferred methodology of the Australian Energy Regulator (AER) involves using the official near-term CPI forecasts from the Reserve Bank of Australia (RBA) and a longer-term average based on the 2.5% mid-point of the RBA's inflation target band (i.e. 2 to 3%). The RBA's February 2022 'Statement on Monetary Policy' forecast the headline CPI rate to be 3 ¼ per cent in the June 2022 quarter (giving a year average of 3.5% for FY22). An easing to 3 ¼% is forecast for the December quarter 2022 and then to 2 ¾% in each of the June quarter 2023, December 2023 and June quarters 2024 - giving a year average CPI rate of 3.2% for FY23 and 2.75% for FY24. Beyond the RBA's forecast from the SoMP, we assume the CPI eases back to 2.5% over the medium-to-long term.

The AER has adopted a changed methodology for calculating CPI inflation, according to the AER Final position paper "Regulatory Treatment of Inflation", released in December 2020. The main changes for the expected inflation projection are to reduce the length of the geometric average from 10 to 5 years and have a 'glide-path' from the end-point of the latest RBA forecast to the 2.5% mid-point by year 5 of the forecast period – with this 2.5% projection maintained until FY28. The average then used for the five years from FY24 to FY28 is 2.6%.

4.2 OUTLOOK FOR CPI

Inflationary pressures have been rising, with short-term factors to push CPI above 4%

Consumer price inflation was subdued for the five years to the March quarter 2020, with annual (through-the-year or y/y) headline CPI inflation ranging between 1.0% and 2.2%; averaging 1.7%. Meanwhile, underlying inflation fell below the Reserve Bank's target 2-3% band in March 2016 and has stayed there.

Over the past 2 years, the headline CPI measure has been quite erratic, with the June quarter 2020 CPI actually declining by -1.9% q/q to be down -0.3% y/y, which was largely of due to the onset of COVID-19. The price falls flowed from a combination of the sharp downturn in consumer demand, the collapse of oil prices in the June quarter, the deferral of rents, the virtual suspension of childcare fees and other education fees, the deferral of health care rises and a range of other measures to 'administrated' prices in response to the COVID-19 'shock'. The reversal of many of these influences over the subsequent five quarters has seen the CPI move back to 3.0% y/y in the September quarter 2021. Significantly, the September quarter saw underlying (or core) inflation – which excludes the extreme price movements, such as the 'usual' petrol price volatility – move back into the RBA's 2-3% target range for the first time since the December quarter 2015. Overall, headline CPI inflation averaged 1.6% in FY21, following the 1.3% recorded in FY20.

Brisk headline inflation in Q4 was driven by several transitory factors that are expected to fade beyond the first half of 2022. Fuel prices increased 6.6% q/q, with higher oil prices boosting travel-related components and adding to freight costs. Inflation for consumer durables (motor vehicles, clothing & footwear, furniture & household items) recorded the strongest quarterly outcome since 2009 (1.5% q/q) due to a combination of supply-chain discounting compared to the previous quarter.

But over the past two quarters, there has been a noticeable broadening of inflationary pressures across components in the CPI. This has contributed to an increase in underlying inflation, which was

1.0% q/q in Q4, lifting the y/y pace to 2.6% y/y – just above the mid-point of the RBA's target range. In annualised terms and by CPI weight, around 57% of the components in the index recorded inflation faster than 3% in Q4, up from just 36% two quarters prior. This pickup has been a direct result of a sharp fall in items with inflation of less than 2%.

Inflation is primarily being driven by transitory factors. Inflation in these components remains strong, boosted by rising fuel prices and supply-chain disruption for imported goods. Supply-chain impacts have also caused a pickup in exchange-rate sensitive inflation. But the most material change over the past two quarters has been the increase in procyclical, or “labour-market sensitive” inflation components. These components include a range of market services, where prices are largely driven by domestic factors including labour costs. With the labour market already at a point of limited spare capacity and expected to tighten even further in 2022, we expect these components will drive the inflation profile in the coming year, mitigating the fallback in inflation that will occur when supply disruptions abate and fuel prices correct.

Another important component of procyclical inflation is the cost of constructing a new dwelling. Cost inflation in the construction sector has been escalating since the start of 2020, with the input cost measure increasing by 11.1% y/y in Q4. This has been due to both the surge in construction work generated by the HomeBuilder subsidy, and materials and labour shortages caused by this additional demand and exacerbated by supply bottlenecks and workplace restrictions. Until the past few quarters, subsidy payments had weighed on out-of-pocket costs for consumers, keeping a lid on CPI inflation. But with these payments tapering off, CPI inflation in the dwelling construction component has started to move more in line with cost pressures, rising to 7.5% y/y in Q4 2021. Our view is that construction cost inflation will slow in the coming quarters, but over the next year it will remain at a fast pace relative to its history.

We expect CPI inflation to jump further in the March quarter 2022 and remain elevated in the June quarter, with the headline rate predicted to push up to 4.8% (with the possibility of a 5+% read). Fuel prices will increase significantly in Q1, due to the impact on oil prices from the Ukraine war (and associated sanctions on Russian oil exports). Food prices will also jump in Q1 because of the impact on wheat and other foods prices from the Ukraine war, while the floods in eastern Australia will lead to substantial rises in some food prices. Although we expect oil and other commodity prices to ease through 2022, it will take some time for supply networks to completely normalise. But these pressures will abate over the second half of 2022 and in 2023, and their absence will cool headline inflation materially.

Price and wage inflation to increase back toward historical averages over the next 2 years

Beyond 2022, both underlying and headline inflation are expected to largely remain in the RBA's 2-3% target range over the forecast period. Supply-side pressures have further to run and will continue to drive headline inflation in H1 2022. But the broadening of inflation pressures makes us more confident in demand-driven inflation emerging through the year and filling the gap that will be left when supply-related cost pressures diminish. Moreover, the labour market enters 2022 in a stronger position than anticipated, with the unemployment rate currently (February) at 4.0%. This will contribute to wage pressures.

Some structural factors may also add to inflation, such as a return to higher rental and food inflation. Food accounts for over 10% of CPI basket (excluding meals out and takeaway food). Food inflation had averaged around 2.8% p.a. over the 25 years to 2014 but had been very weak over the five years to FY19 (averaging only 1.1% p.a.), which was a key factor which muted prices over recent years. This was due to intense competition between the major supermarkets and falling or weak global agricultural prices. The supermarkets cannot keep cutting prices (and either their own margins or

suppliers' margins), while world agricultural prices will pick up over the medium term as global oversupply dissipates.

BIS Oxford Economics' forecast for headline CPI inflation (in year average terms) is 4% in FY22, before easing to 3.3% in FY23, as fuel prices fall and housing costs begin to ease. Underlying inflation is expected to average 2.8% over the next two years.

Underlying and headline CPI inflation are subsequently expected to remain elevated over FY24 to FY26 as economic growth remains buoyant, profits, employment and wage growth strengthen, the unemployment rate declines and inflationary pressures re-build. Wages growth will accelerate as the unemployment rate falls back and stays below 4% over FY23 to FY26. The ongoing recovery in the global economy will also see global inflationary pressures remain elevated, pushing up manufacturing costs and prices over the medium term. The rise in the A\$ toward US80 cents in 2025 will provide some offsetting pressures between FY24 and FY26.

Overall, BISOE forecasts headline CPI inflation to be 2.4% in FY24, 2.7% in FY25 and 2.6% in FY26. The expected softening in the economy around mid-decade will see price and wage pressures weaken, with the CPI to ease back to around 2.3% over FY27 and FY28, before again rising to 2.5% over the latter years of the 2020s (see figure 4.1). Our forecasts, on average, are similar to current RBA forecasts.

CPI inflation projected to average close to 2.5% over the medium-to-long term

Headline CPI inflation is expected to sit close to the mid-point of the RBA's 2-3% target band in the long run based on the following:

- Tradeables inflation, which currently constitutes around one-third of the CPI basket, is forecast to increase by an average of around 1% to 2% per annum contributing around 0.5% to annual inflation. Limited movements in the A\$, steady (but subdued) increases in global manufacturing costs and some commodity price increases underpin this projection.
- Non-tradeables inflation comprises the remaining two-thirds of the basket, but this proportion is increasing due to the move toward services and higher price inflation (than tradeables). It is assumed to increase by around 2.5-3% per annum, contributing around 2% to headline inflation. This is weaker than the 3.7% average achieved from 2001 to 2015 when relatively high wage inflation, lower than average productivity growth to 2009 and also large rises in utilities prices pushed non-tradeables inflation to well outside of the RBA's 2 to 3% target range. We expect higher wages growth in the longer term and lower long-term productivity will also contribute to the maintenance of relatively high non-tradeables inflation.

4.3 NATIONAL ALL INDUSTRIES WAGES

The key determinants of nominal wages growth are consumer price inflation, productivity, the relative tightness of the labour market (i.e. the demand for labour compared to the supply of labour), and compositional (structural) changes in the labour market following the end of the mining investment boom.

Low wages growth over recent years

Wages growth has been relatively weak over the past 8 years, primarily due to weaker demand for labour, caused by both cyclical and structural factors. Among the underlying structural changes causing this unspectacular wage growth are increasing market flexibility and casualisation of the work force (what is commonly coined the 'gig-economy'), falling union membership, slower productivity growth and the effects of lower inflation expectations. Low wages growth is both a product of and key cause of low underlying inflation. Low wages are keeping business costs down and thus muting

upward price pressures, while a significant section of pay deals are being set in line with CPI inflation – especially for employees on awards.

The unemployment rate and underemployment rate are key indicators of the amount of slack in the labour market. The unemployment rate was just above 5% over the two years to the March quarter 2020, before the COVID impacts. Historically this rate was seen as close to the NAIRU, (the Non-Accelerating Inflationary Rate of Unemployment or the 'natural rate of unemployment'), but our latest research suggests that the natural rate has lowered in recent years, as a result of falling rates of unionisation and increasing casualisation. In addition, the relatively high underemployment rate suggested spare capacity in the labour market. The high underutilisation rate – the sum of unemployment and underemployment – reflected considerable slack in the labour market, which limits the bargaining power of workers and reduces pressure on wages.

Wage growth now rebounding, and will lift further as labour market tightens

Wage growth in terms of the wage price index (WPI) and average weekly earnings measures had been showing signs of improvement over the second half of 2018 to the March quarter 2020 at an average of 2.3% in terms of annual increases. However, the impact of the COVID-19 pandemic saw employment plummet and dramatically lift the unemployment and underemployment rates over the June quarter 2020. This reversed the nascent improvement in wages that had been building. Widespread wage freezes and very modest wage increases saw WPI growth weaken over FY21, with year average growth of 1.5% in the All Industries WPI.

Contributing to wages growth in FY21 was the increase in the National Minimum Wage (NMW), which was awarded by the Fair Work Commission at its Annual Wage Review in June 2020 – to be paid to workers in different industry sectors on a staggered timetable over 2020/21. Given the prevailing circumstances back then, the FWC only awarded a 1.75% increase – down from the 3.1% to 3.5% increases of the past 3 years, but which the FWC deemed prudent to provide the poorer paid workers with an adequate wage. Although only 13% of full-time workers (a much higher proportion for part-time workers) rely on the annual increase in the minimum wage as their primary wage-payment mechanism, a significant proportion of workers are also indirectly influenced by the NMW increase, as it usually flows onto industry awards. Furthermore, some industries that were less affected by the COVID-19 impacts also received pay rises over FY21.

As the economy and employment rebounds through FY22, growth in the All Industries WPI is expected to exhibit a modest recovery, rising to 2.4%. Part of the rebound will be driven by deferred pay increases from 2020 and 2021 and the ending of most pay freezes. The higher increase in the NMW – the Fair Work Commission awarded 2.5% effective July 2021 – will also underpin higher increases. Another key element which will add to wage pressures over FY22 and FY23 is the rapid tightening in the labour market that is now apparent. Employment at the beginning of 2022 is now well above pre-COVID levels, with the unemployment rate at 4.2% and labour force participation rates at record levels. The cessation of international migration to Australia since March 2020 has seen population growth plummet to just 0.2% in the year to June 2021, while the growth in the working age population (above 15 years old) has increased by only 45,000 (+0.2%) over the past year, compared to over 330,000 persons in FY19 and in the year to March 2020. Growth in the labour force has been facilitated by a marked increase in the labour force participation rate to record levels. However, there is now little scope to raise the participation rate further, and, with the underemployment rate pushing lower and job vacancies well above pre-COVID levels, wage pressures are building.

Fig. 4.1 Australia: Wages and Prices (includes Superannuation Guarantee Increases impact)

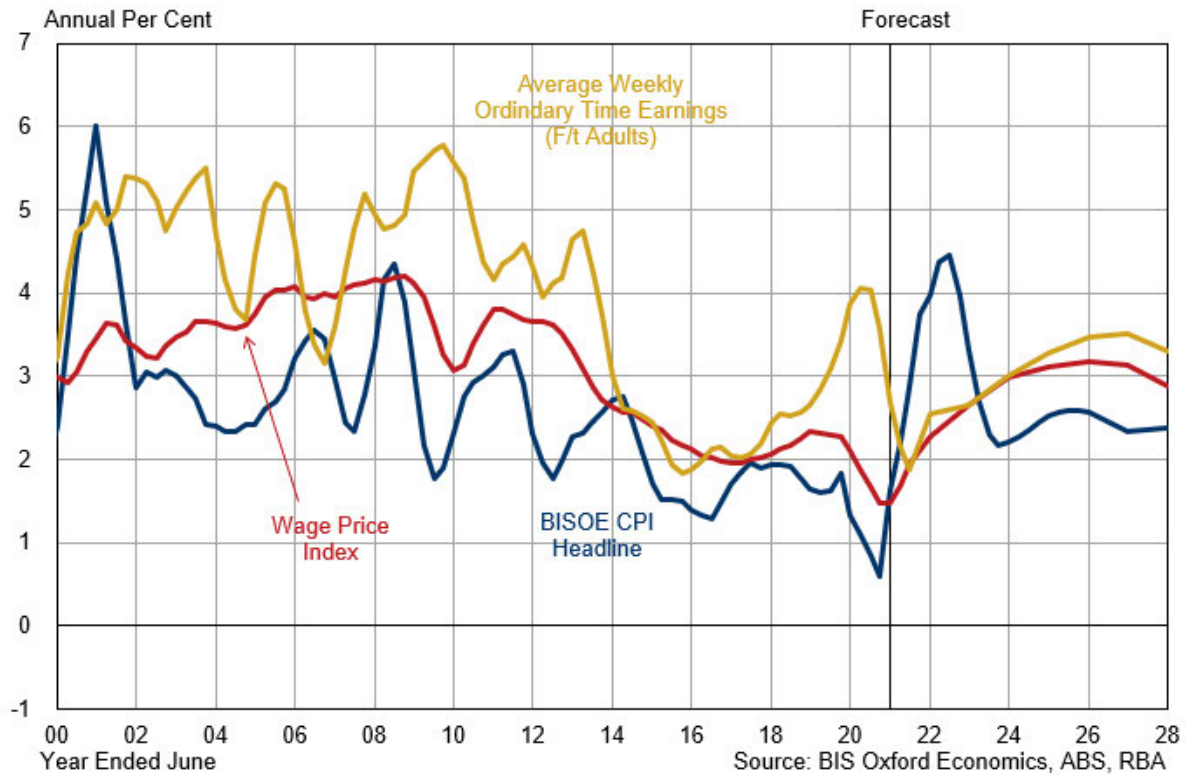
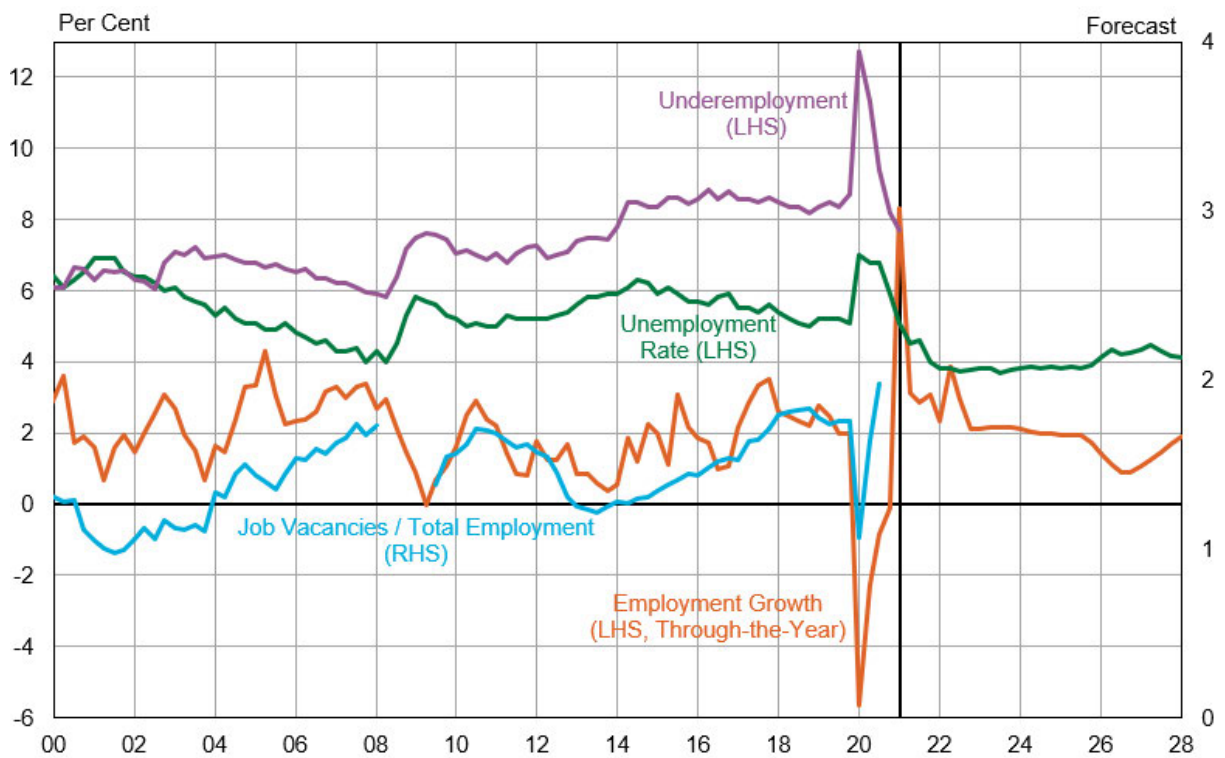


Fig. 4.2 Australia: Employment and Unemployment



As the economy continues to strengthen over FY23 to FY25, we expect to see further improvement in the labour market, with labour demand increasing and the unemployment rate falling below 4% by mid-2022 and remain around 3.8% over FY23 to FY25. We expect to see skill shortages manifest in many areas of the economy. The tightening labour market will see wage pressures increase, and the All industries WPI is forecast to increase to 3.2% in FY26, before easing over the subsequent 2 years as the economy cools and the unemployment rate rises back over 4%.

Forecasts for All industries wages are detailed in Table 5.1 and the Summary table in the Executive Summary. Overall, using RBA CPI forecasts, real (inflation-adjusted) WPI growth for the Australian All Industries WPI is forecast to decline in FY22 and FY23 as CPI inflation out-paces WPI growth. Thereafter, with WPI growth strengthening and CPI inflation easing, there will be positive growth in real wages from FY24 to FY28. Over the five-year period from FY24 to FY28, the real rate of increase is forecast to be 0.4%. Note that the forecasts in Table 1.1 include the impact of the Superannuation Guarantee Increases over FY22 to FY26, which for the All Industries WPI is -0.24% in each of those five years.

5. INDUSTRY WAGE FORECASTS - UTILITIES & CONSTRUCTION: AUSTRALIA & VICTORIA

5.1 NATIONAL & VICTORIA EGWWS WPI FORECASTS

Utilities wage growth is forecast to continue to outpace the national ‘all industries’ average over the forecast period.

The national (Australia-wide) EGWWS wage price index growth has consistently been above the national (all industries) average since the index’s inception in 1997 and averaged 0.6% higher over the past two decades (see Table 5.1 and Figure 5.1). Over these two decades, the average growth in the real (inflation adjusted) WPI was 1.3%. Since the collapse in wages growth following the end of the mining boom, the EGWWS WPI has continued to outpace the All Industries average, increasing by an average of 2.3% over the past 6 years to FY21 inclusive, 0.3% higher than the 2.0% national average.

Over the next seven years to FY28 inclusive, the EGWWS WPI at the Australian level is forecast to average 3.1% p.a., 0.2% above the All Industries WPI average. Over the 5-year period from FY24 to FY28 inclusive (the Victorian Gas Distributors’ next Access Arrangement period), the Australian EGWWS WPI is forecast to average 3.4%, which will be 0.3% above the All Industries average. In real terms, the Australian EGWWS WPI is forecast to average 0.8% p.a. over the five years to FY28. Note that these forecasts include the impact of the SG increase, which is expected to see the EGWWS WPI be 0.1% lower over FY22 to FY26 than if the SG increase did not proceed on the current timetable. Excluding the SG increase impact, the overall real average would be 0.9%, which is slightly less than the 1.0% p.a. averaged over the decade to FY20. In terms of the historical difference vis-à-vis the All Industries WPI average over the past decade, excluding the impacts of the SG increase (which is assumed to be 0.14% higher for the All Industries WPI) the difference is slightly lower than the 0.4% difference of the past decade (see Table 5.1).

BIS Oxford Economics regards the WPI to be a measure of the underlying wages growth in the utilities sector for total Australia. In terms of total wage costs — expressed in Average Weekly Ordinary Time Earnings (AWOTE) — BIS Oxford Economics expects EGWWS AWOTE to average 3.6% per annum over the five years to FY28, 0.3% higher than the EGWWS WPI. Our AWOTE forecasts are higher due to compositional effects. Apprentices, trainees and numbers of new staff have increased markedly over recent years, across the electricity, gas and water sector generally. Given slower growth in employment numbers over the next decade, it is likely that there will be overall up skilling of the existing workforce, which will see a commensurate movement by much of the workforce into higher grades (i.e. on higher pay), resulting in higher earnings per employee.

Wages growth in the EGWWS sector is invariably higher than the total Australian national (All Industries) average.

During the COVID-19 crisis, the EGWWS sector fared much better than just about all other sectors, along with the Education, Health & Social Assistance and Finance and Insurance sectors, in terms of wage increases over FY20 and FY21. However, relatively low quarterly increases of 0.1% in each of the March and June quarters 2021 has seen annual growth in the EGWWS WPI slip below the All Industries average for only the second time in the past two decades. Overall, we expect EGWWS WPI

growth to be 1.6% in FY22, around 0.5% lower than the All Industries average. We believe this will be a short-lived aberration and that the EGWS WPI will rebound strongly over the next year to again outpace the national average. Driving this will be much higher EBAs negotiated in an environment of high inflation (above 3%) and a very tight labour market, particularly for the types of skilled labour that dominate in the sector.

Table 5.1 Total Australia (All Industries) and Electricity, Gas, Water and Waste Services Average Weekly Ordinary Time Earnings and Wage Price Index (Year Average Growth)

Year Ended June	Average Weekly Ordinary Time Earnings ⁽¹⁾						Wage Price Index ⁽²⁾					
	All Industries			Electricity, Gas, Water and Waste Services			All Industries			Electricity, Gas, Water and Waste Services		
	Nominal \$/week	%CH	Real AWOTE %CH	Nominal \$/week	%CH	Real AWOTE %CH	Nominal Index	%CH	Real WPI %CH	Nominal Index	%CH	Real WPI %CH
2002	847	5.4	2.5	981	6.8	3.9	76.7	3.3	0.5	73.8	4.2	1.4
2003	890	5.0	2.0	1,001	2.1	-0.9	79.3	3.5	0.5	76.8	4.1	1.1
2004	932	4.7	2.3	1,057	5.5	3.1	82.2	3.6	1.2	79.9	4.1	1.7
2005	973	4.4	2.0	1,091	3.2	0.8	85.3	3.7	1.3	83.3	4.3	1.8
2006	1 018	4.6	1.4	1,111	1.9	-1.3	88.7	4.1	0.9	87.6	5.2	2.0
2007	1 054	3.6	0.6	1,152	3.7	0.7	92.2	3.9	1.0	91.8	4.8	1.8
2008	1 106	4.9	1.6	1,183	2.7	-0.7	96.1	4.1	0.8	95.7	4.2	0.8
2009	1 166	5.5	2.3	1,255	6.1	3.0	100.0	4.1	1.0	100.0	4.5	1.4
2010	1 231	5.6	3.2	1,351	7.6	5.3	103.1	3.1	0.8	104.4	4.3	2.0
2011	1 283	4.2	1.0	1,474	9.1	6.0	107.0	3.8	0.7	108.7	4.2	1.1
2012	1 338	4.3	2.0	1,510	2.5	0.1	110.9	3.6	1.3	112.5	3.5	1.2
2013	1 400	4.6	2.4	1,602	6.1	3.9	114.6	3.3	1.0	117.3	4.2	1.9
2014	1 442	3.0	0.3	1,635	2.0	-0.7	117.6	2.6	-0.1	121.1	3.2	0.4
2015	1 477	2.4	0.7	1,646	0.7	-1.0	120.4	2.4	0.7	124.5	2.8	1.1
2016	1 505	1.9	0.5	1,704	3.5	2.2	123.0	2.1	0.7	127.5	2.4	1.0
2017	1 536	2.0	0.3	1,777	4.3	2.6	125.4	2.0	0.2	130.3	2.2	0.5
2018	1 573	2.4	0.5	1,818	2.3	0.4	127.9	2.1	0.1	132.9	2.0	0.0
2019	1 615	2.7	1.0	1,842	1.3	-0.3	130.9	2.3	0.7	136.6	2.8	1.1
2020	1 677	3.9	2.5	1,896	2.9	1.6	133.7	2.1	0.8	140.2	2.7	1.3
2021	1 722	2.7	1.1	1,927	1.6	0.0	135.6	1.5	-0.1	142.7	1.8	0.2
Forecasts												
2022	1 766	2.5	-1.0	1,969	2.2	-1.3	138.7	2.3	-1.2	145.1	1.7	-1.9
2023	1 813	2.6	-0.5	2,034	3.3	0.1	142.4	2.7	-0.5	149.3	2.9	-0.3
2024	1 867	3.0	0.2	2,104	3.5	0.7	146.6	3.0	0.2	154.2	3.2	0.5
2025	1 929	3.3	0.7	2,182	3.7	1.1	151.2	3.1	0.5	159.6	3.5	0.9
2026	1 996	3.5	0.9	2,263	3.7	1.1	156.0	3.2	0.6	165.2	3.5	1.0
2027	2 066	3.5	0.9	2 343	3.5	1.0	160.9	3.1	0.6	170.6	3.3	0.7
2028	2 134	3.3	0.7	2 426	3.5	1.0	165.5	2.9	0.3	176.3	3.3	0.7
Compound Annual Growth Rates ⁽³⁾												
2001-2010	4.8		2.0	4.4		1.5	3.7		0.9	4.4		1.6
2010-2020	3.1		1.1	3.4		1.4	2.6		0.6	3.0		1.0
2021-2028	3.1		0.3	3.3		0.5	2.9		0.1	3.1		0.2
2023-2028	3.3		0.7	3.6		1.0	3.1		0.4	3.4		0.8

Source: BIS Oxford Economics, ABS

(1) Earnings per person for full-time adults. Data is year ended May (available only in November and May).

(2) Ordinary time hours excluding bonuses.

(3) CAGR (Compound Annual Growth Rates) for 2023-2028 is the average annual growth for 2023/24 to 2027/28 inclusive i.e. next regulatory period.

To a large extent, higher relative wages growth been underpinned by strong capital works program in the utilities sector over the past two decades (and particularly up to 2013 - resulting in robust employment growth over the same period), strong competition from the mining and construction workers for similarly skilled labour and the powerful influence of unions in the utilities sector.

In addition, the electricity, gas and water sector is a largely capital intensive industry whose employees have higher skill, productivity and commensurately higher wage levels than most other sectors. Further, the overall national average tends to be dragged down by the lower wage and lower skilled sectors such as the Retail Trade, Wholesale Trade, Accommodation, Cafés and Restaurants, and, in some periods, also Manufacturing and Construction. These sectors tend to be highly cyclical, with weaker employment suffered during downturns (such as the recent COVID-19 inspired downturn) impacting on wages growth in particular. The EGWWS sector is not impacted in the same way due to its obligation to provide essential services and the need to retain skilled labour.

Strong Union presence in the utilities industry and higher collective agreements outcomes pushes utilities wages above the All Industries average.

Trade unions are typically able to negotiate higher-than-average wage outcomes for their members through collective bargaining, resulting in stronger wage growth than the all-industry average. Across the EGWWS sector, there are a number of utilities unions such as the Communications, Electrical and Plumbing Union (CEPU) and Australian Services Union (ASU), which have a history of achieving high wage outcomes for the sector. Other unions active in the sector include the Australian Workers Union (AWU).

As at May 2018, 64.6% of full-time non-managerial employees in the EGWWS industry have their wages set by collective agreements, considerably higher than the national average of 38.4%. Over the past 10 years, a higher proportion of workers on collective agreements is associated with higher wage growth, with a correlation coefficient of +0.6 (see Figure 5.2). As we expect that the EGWWS industry will continue to have higher levels of unionisation than the national average, we expect that unions in the EGWWS industry will continue to be able to negotiate for higher wages for a substantial proportion of EGWWS employees, resulting in EGWWS wages growing faster than the national average.

Collective bargaining dominates the pay setting arrangements in the utilities sector, while the relative absence of workers relying on (often) low-increase awards (set in the National Wage Case) means the overall average level of total utilities wages (in A\$ terms) will generally be higher than the All Industries average. Over the outlook period, we expect collective agreements in the EGWWS sector to achieve average increases of 3.4%.

BIS Oxford Economics analysis shows collective agreements in the EGWWS sector were on average around 1.5% higher than CPI inflation over the 15 years to FY2014 (excluding the effects of GST introduction in 2000/01). In the six years to FY20, collective agreements were on average 1.4% above the CPI. Given the strength of unions in the sector and a still strong demand for skilled labour, collective agreements are forecast to remain around 0.9% above the 'official' CPI over the forecast period (this excludes SG increase impacts), which is lower than previous periods.

As well as increases in CPI, increases in collective agreements under enterprise bargaining are also influenced by a combination of inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook, and, as mentioned, by the industrial relations 'strength' of relevant unions. Because the average duration of agreements runs for two-to-three years, BIS Oxford Economics bases its near-term forecasts of Enterprise Bargaining Agreement (EBA) wages on the strength of recent agreements, which have been formalised or lodged (i.e. an agreement has been reached or approved) over recent quarters.

However, EBA outcomes were weaker over FY21 and are expected to remain subdued in FY22, compared to the 5 years to FY20, when EBAs averaged around 2.9%. EBAs in the EGWWS industry have been dragged down by an extremely low agreement in Western Australia in the June 2021 quarter and a relatively low agreement in NSW in the September quarter, which will have a short-term impact as both sets of agreements run for less than 2 years. We expect the next rounds of EBAs

negotiated in the sector to rise strongly over the next two years, due to a number of factors: CPI inflation will remain over 3%; the demand for skilled labour remains strong; and the recent high enterprise agreement outcomes in the construction sector will influence negotiations in the EGWWS sector, as some skills can be transferable.

Figure 5.1 Wage Price Index - Australia All Industries, Electricity, Gas, Water & Waste Services, and Construction (includes SG increases impacts)

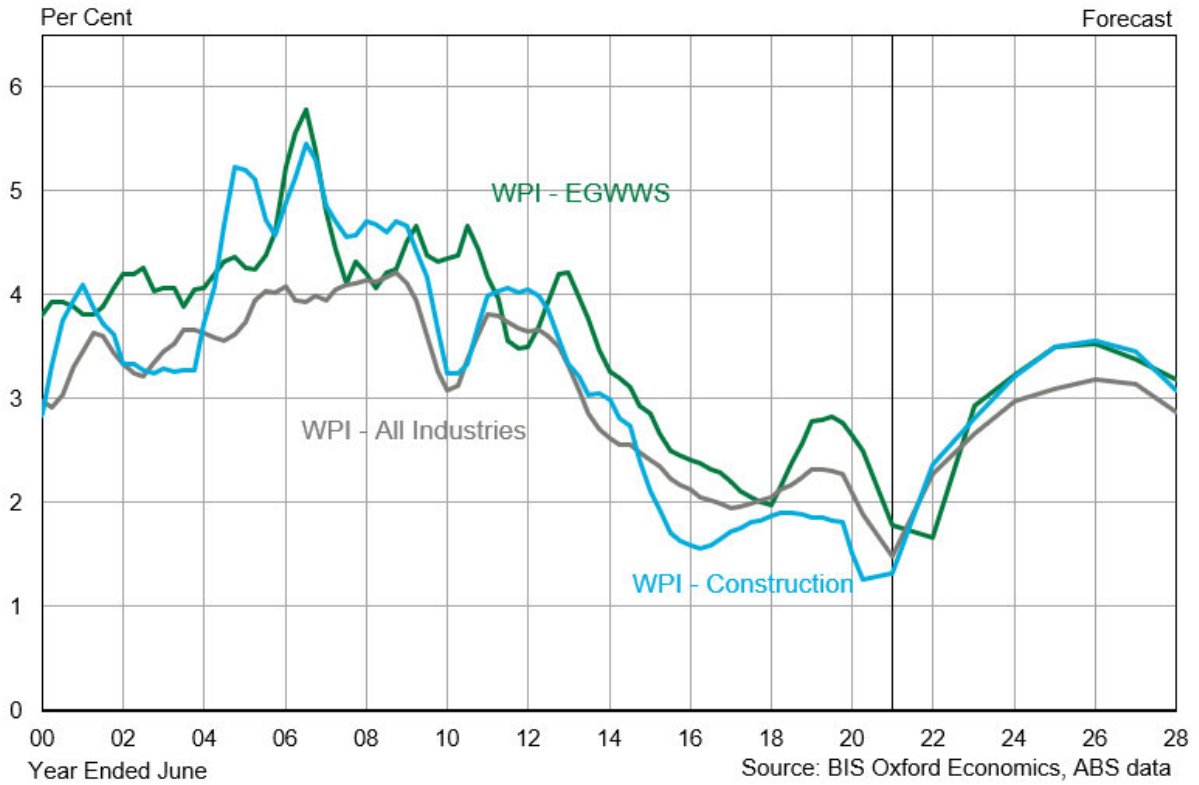
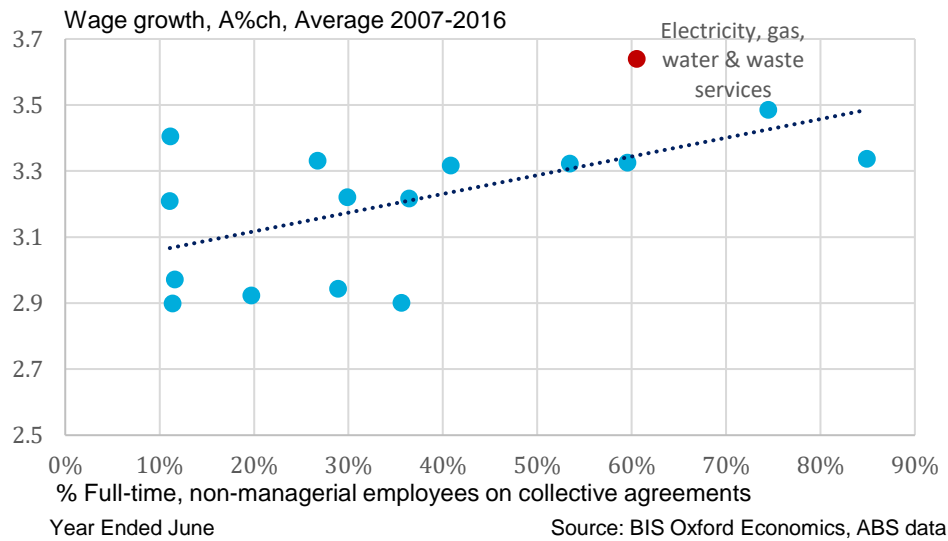


Figure 5.2 Average wage growth and unionisation rates by industry, 2007-2016



We believe investment in the sector, particularly engineering construction, has been the key driver of employment growth in the sector over the past two decades. Figures 5.5 and 5.6 illustrate this relationship, and shows employment has a much stronger relationship with utilities engineering construction rather than utilities output.

Wage increases under Individual agreements and EBAs will strengthen from FY24 due to tight supply and stronger demand for skilled labour from the Mining and Construction sectors.

Increases in individual agreements (or non-EBA wages) are primarily influenced by the strength of the labour market (especially the demand-supply balance of skilled labour), inflationary expectations, the recent profitability of relevant enterprises (which influences bonuses and incentives, etc.), current business conditions and the short-term economic outlook.

The overall labour market is expected to remain tight over the next year, with the unemployment rate to fall back under 4% due to an acceleration of employment growth through calendar 2022 and FY23 and FY24, which will outpace population and labour force growth and see the unemployment rate remain under 4% over the next few years. Hence, we expect to see the emergence of critical skilled labour shortages and competition for scarce labour, particularly from the mining and construction sectors, which will push up wage demands in the utilities sector. Mining investment is now picking up and is forecast to see significant increases over the next 3 years to FY24 and remain at elevated levels to the end of the decade (see Figure 5.3). Meanwhile, there is similar strong growth coming through in in the Construction sector, with solid increases across all segments of the overall construction sector (residential construction, non-residential building and civil engineering & infrastructure construction) over FY22 to FY25, leading to strong labour demand in that sector, particularly from 2024 when activity surpasses the 2018 levels (see Figure 5.4).

Employers are already reporting an increasing shortage of technicians and trade workers, and employees with STEM skills. These are essential workers in the utilities sector. A key problem is that the TAFE (technical and further education) systems across the country have simply not been training enough workers. BIS Oxford Economics research shows this is being compounded by new graduates in the trades stream in particular not increasing fast enough to replace retiring workers, with some numbers actually falling. Despite government announcements that they are moving to address the TAFE system, it is unlikely that these issues will be addressed within the next 5 years. Added to this is that skilled immigration has been suspended. When it does return, it is likely to be a slow ramp-up, meaning that the skill shortages will persist and won't be easily or quickly solved by migration.

With strong competition for similarly skilled labour from the mining and construction industries, firms in the utilities sector will need to raise wages to attract and retain workers. In other words, the mobility of workers between the EGWWS, mining and construction industries means that demand for workers in those industries will influence employment, the unemployment rate and hence spare capacity in the EGWWS labour market. Businesses will find they must 'meet the market' on remuneration in order to attract and retain staff and we expect wages under both individual arrangements and collective agreements to increase markedly over the FY23 to FY26 period.

EGWWS sector has high levels of productivity, compared to the national average, which underpins higher wages.

The EGWWS sector has one of the highest levels of sectoral productivity – as measured by real Gross Value Added (GVA) per employed person – among the 18 industry sectors, with only Mining and Finance & Insurance Services having higher productivity. Utilities' productivity is more than double the national average according to ABS data for Australia and well above the average for Victoria (see Figure 5.7). High productivity levels and commensurate skill levels are the key reasons

why wage levels are much higher in the utilities sector than most other industries (in terms of average weekly earnings measures – see Table 5.1).

Figure 5.3 Australia – Mining Investment

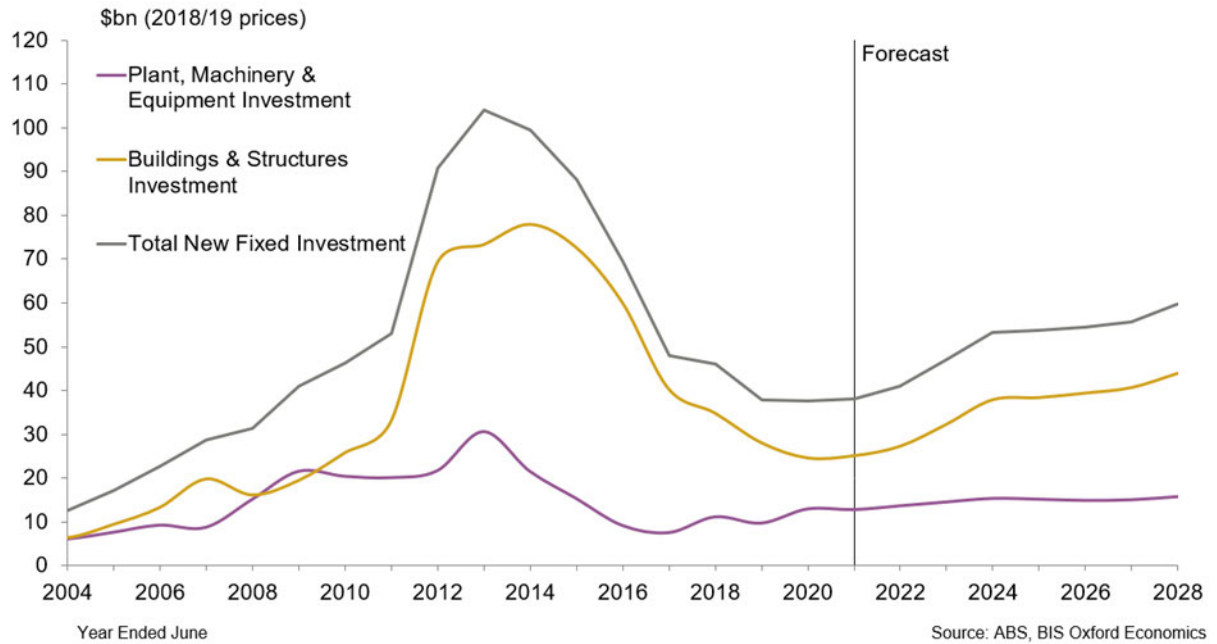
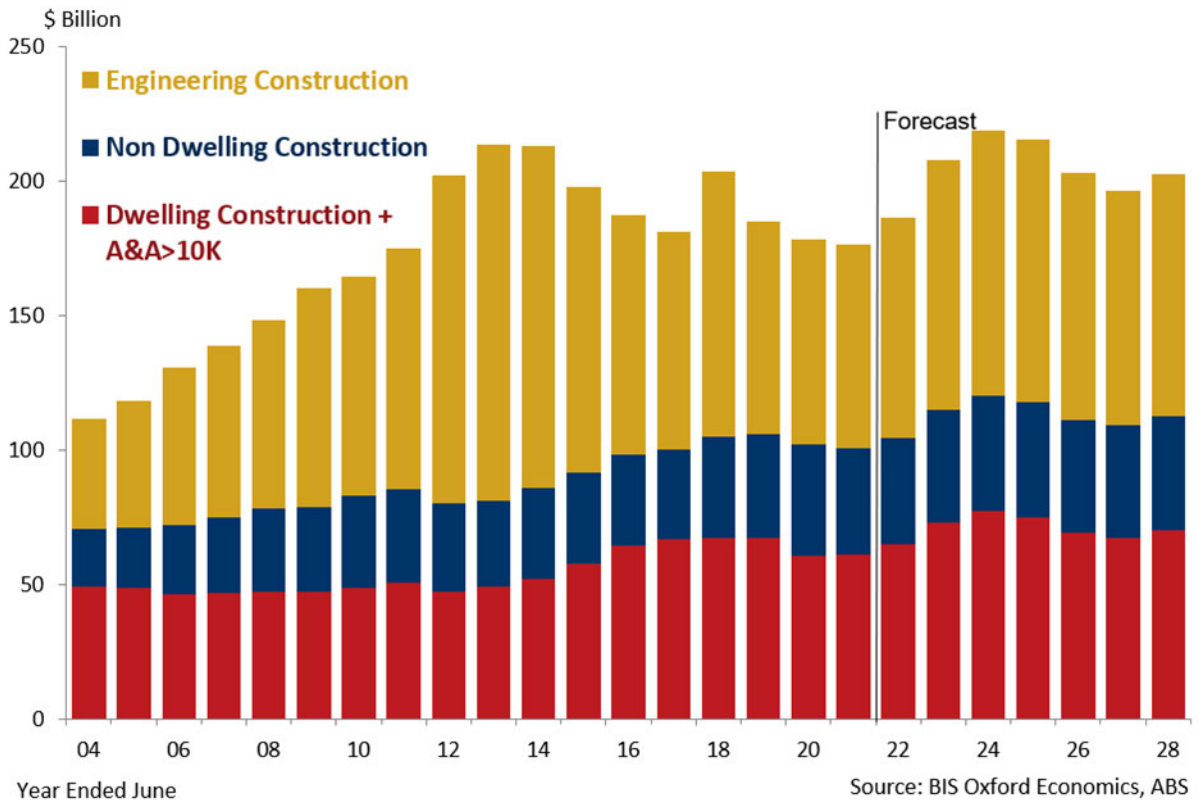


Figure 5.4 Australia – Construction Activity (real work done)



However, over the past 18 years, the growth in productivity in the sector has not been a driver of higher wages growth in the utilities sector. Productivity suffered a steep decline over 2001 to 2014 due to a combination of strong employment growth (mainly due to rising investment, as previously discussed) and weak growth in GVA, both in Australia and NSW (see Figures 5.5 and 5.6). Meanwhile, utilities wages growth was relatively strong over this same period. In effect, there is no clear relationship between wages growth and the traditional productivity measures (i.e. GVA/Employment) in the utilities sector. Low productivity is set to continue in part because GVA (output) growth is expected to remain low, with low output a function of low demand caused both by high prices and energy-saving (and water-saving) measures. However, employment levels are expected to remain relatively stable due to the need to maintain a skilled workforce to ensure reliability and undertake capital works to cater for population and economic growth and for capital replacement.

5.1.1 Outlook for utilities wages growth in Victoria

Wages in the Victorian utilities sector are expected to move in line with the national utilities sector average over the Victorian Gas Distributors upcoming regulatory period (see Tables 5.3 and 1.1). This is a departure from most of the past decade, including FY21, with the Victorian EGWWS WPI outpacing the national average over the decade since FY12 (including FY21), by an average of 0.5 ppts. This Victorian out-performance was somewhat boosted temporarily during the 2016-2018 period when the NSW government was privatising the electricity networks in the state and forced wages lower, as it attempted to make the networks look attractive in terms of their overall cost structure. This was a 'one-off' influence on both NSW and Australian EGWWS wages growth, which has now been fully unwound. Nevertheless, Victorian utilities workers also enjoyed relatively higher enterprise bargaining outcomes than their interstate counterparts – which also provided a significant boost because collective bargaining dominates the pay setting arrangements in the utilities sector. However, recent EBA outcomes and formalised agreements have seen a narrowing of the differentials between Victoria and the national average, as NSW and particularly Queensland agreements have improved. With Victoria now 'coming back to the pack', we expect the historical out-performance of Victorian utilities wages to effectively end and for Victoria to match the national average over the next few years.

Another factor which will help the other states effectively catch up to Victoria's utilities wage growth is stronger increases in utilities engineering construction in other states, relative to Victoria. Victoria had very high levels of overall utilities engineering construction over FY19 to FY21, but we now expect to see declines over FY22 to FY24, according to BIS Oxford Economics forecasts – see Figures 5.5 and 5.6 (source: *Engineering Construction in Australia, 2021-36*). This will see stronger demand for utilities-related labour (and for out-sourced labour, usually from the construction sector), which will add to wage demands in NSW, Queensland and Western Australia. Nevertheless, we forecast that Victoria will experience solid growth in utilities related engineering construction over the four years from FY25 to FY28 inclusive, which will see Victoria compete with the other states for similarly skilled labour.

Accordingly, from FY25 there will be strong wage pressures in Victoria, particularly from high and increasing levels of construction activity, while the Victoria utilities sector will face competition for key skilled workers from interstate utilities, construction and mining sectors. With strong competition for similarly skilled labour from the mining and construction industries, firms in the Victorian utilities sector will need to raise wages to attract and retain workers. This is expected to be accompanied by increases in utilities related construction in the state, mining-related investment and construction activity across Australia. The overall strengthening in the labour market, and particularly in the Construction and Mining sectors – which are key competitors to the utilities sector in terms of 'similarly' skilled workers - is expected to result in utilities WPI growth accelerating over the FY3 to FY26 period, and subsequently remain elevated over FY27 before easing.

Figure 5.5 Australia – Utilities Employment, Output, Investment & Productivity

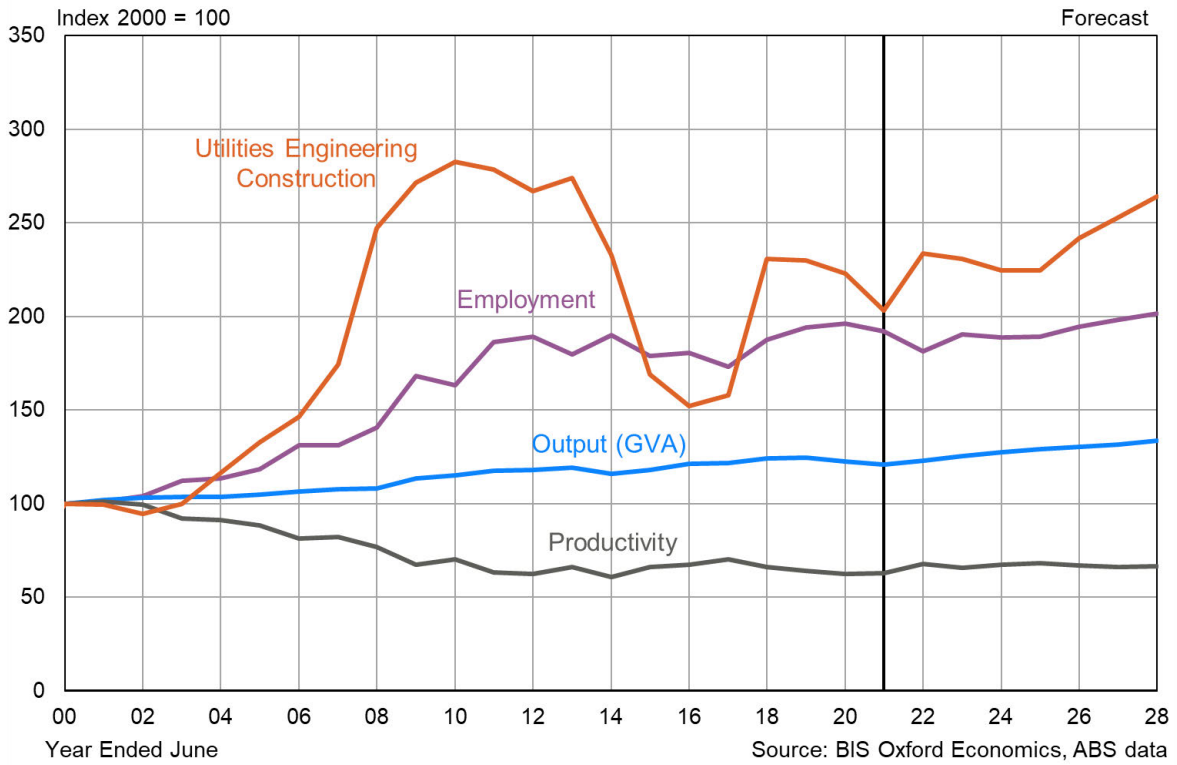


Figure 5.6 Victoria – Utilities Employment, Output, Investment & Productivity

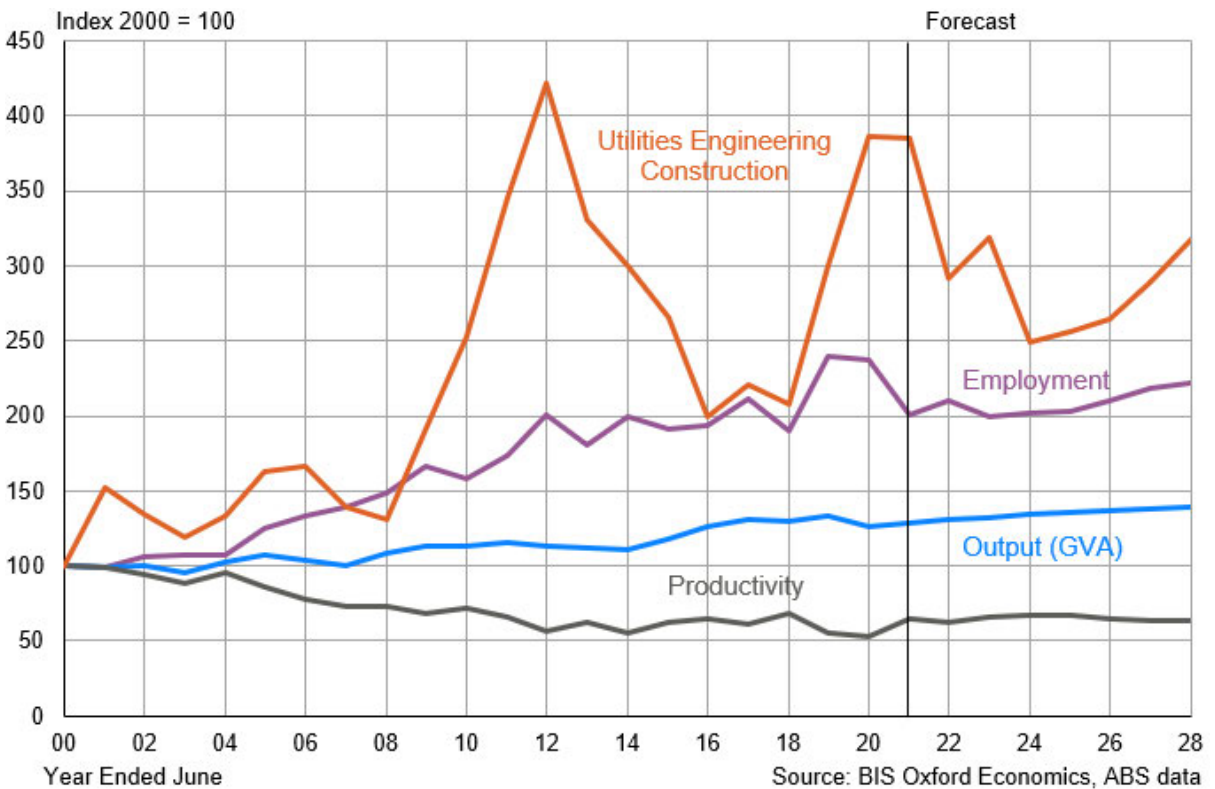
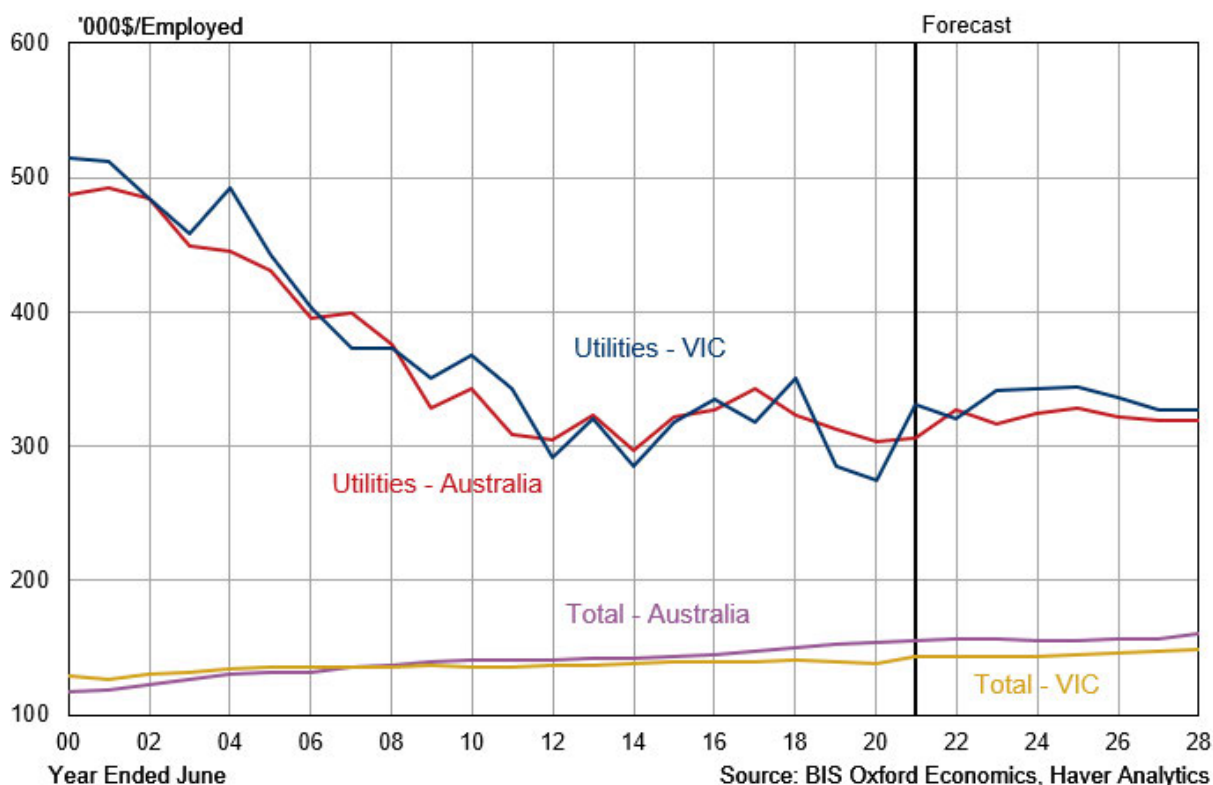


Figure 5.7 Utilities Productivity in Australia and Victoria



5.2 CONSTRUCTION WAGES IN AUSTRALIA AND VICTORIA

This section provides forecasts of ‘out-sourced’ or external labour escalation where there is a significant proportion of out-sourced labour which is contracted to perform construction-type activities in the capital expenditure budget. Accordingly, we proxy external labour cost escalation by wages growth (as measured by the WPI) in the state’s construction industry.

Our research has shown that construction activity (i.e work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year. Hence, our wage forecasts are based on BIS Oxford Economics forecasts of construction activity by state (which includes residential and non-residential building, plus engineering construction) as well as predicted movements in the construction wages at the national level. Forecasts of overall construction activity in Australia and Victoria are detailed in Figure 5.4. and Figure 5.8. The Construction sector wage forecasts for Australia are set out in Table 1.1, while the Victorian Construction WPI forecasts are set out in Tables 1.1 and 5.3.

Our forecast is for the Australian Construction WPI to average 3.1% over the seven-year period to FY28 at the national level, with Victorian construction wages growth forecast to be slightly higher at 3.2% p.a. Over the five-year from FY24 to FY28 inclusive (the Victorian Gas Distributors’ next access arrangement period), Australian and Victorian Construction WPI growth is forecast to be 3.4% p.a. – or 0.7% per annum on average in real (inflation adjusted) terms (see Table 1.1 and Table 5.3). While this is a marked improvement on the past five years, it is still well down on the 4.3% annual national average (nominal terms) of the decade to FY12. Note that these wage forecasts for the Construction WPI include the impacts of the SG increase. In the construction industry sector, we estimate the impacts will be -0.21% for each year of the SG increase, which covers the first 3 years of the next regulatory period. See section 5.3 for the assumptions underpinning this estimate.

Table 5.3. Victoria: Electricity, Gas, Water & Waste Services and Construction Wage Price Indices

Year Ended June	EGWWS Wage Price Index			Construction Wage Price Index		
	Victoria			Victoria		
	Nominal Index	%CH	Real growth %CH (a)	Nominal Index	%CH	Real growth %CH (a)
2009	100.0			100.0		
2010	103.3	3.3	1.0	105.2	5.2	2.8
2011	107.3	3.8	0.7	110.6	5.1	2.0
2012	111.5	4.0	1.7	114.4	3.5	1.2
2013	116.4	4.4	2.1	118.4	3.5	1.2
2014	120.9	3.9	1.2	123.2	4.1	1.4
2015	125.1	3.5	1.8	126.9	3.0	1.3
2016	129.2	3.3	1.9	130.1	2.5	1.1
2017	133.0	2.9	1.2	133.7	2.8	1.1
2018	136.7	2.8	0.9	136.2	1.8	-0.1
2019	140.8	3.0	1.4	139.4	2.4	0.7
2020	145.4	3.3	1.9	142.5	2.2	0.9
2021	148.5	2.1	0.5	143.9	1.0	-0.7
Forecasts						
2022	151.2	1.8	-1.7	148.0	2.8	-0.7
2023	155.8	3.0	-0.1	152.3	2.9	-0.3
2024	160.9	3.3	0.5	157.2	3.2	0.5
2025	166.5	3.5	0.9	162.6	3.4	0.8
2026	172.5	3.6	1.0	168.3	3.5	1.0
2027	178.4	3.4	0.9	174.2	3.5	0.9
2028	184.2	3.2	0.7	179.7	3.1	0.6
	Compound Annual Growth Rates					
2010-2020	3.5		1.5	3.1		1.1
2021-2028	3.1		0.3	3.2		0.4
2023-2028	3.4		0.8	3.4		0.7

Source: BIS Oxford Economics, ABS

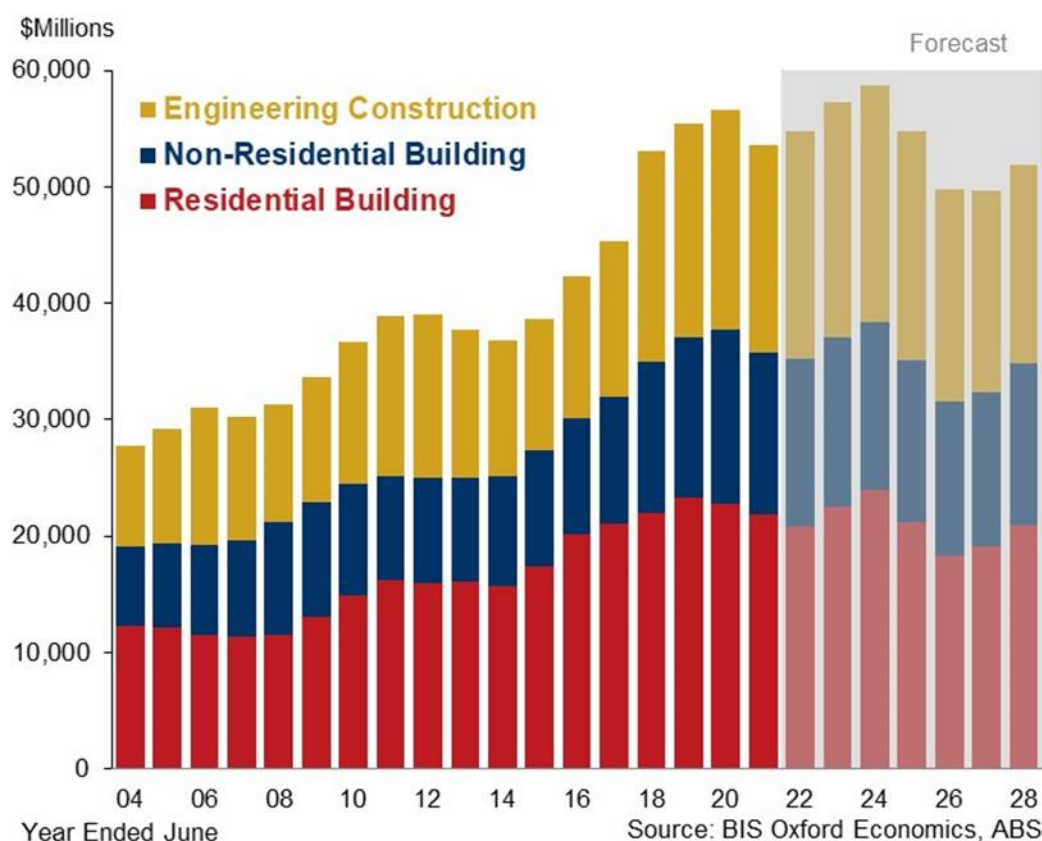
(a) Real price changes are calculated by deducting the inflation rate from nominal price changes.

In Victoria, the state's construction sector has recorded higher growth (in overall work done terms) than the national average over the 6 years from FY15 to FY20 inclusive. This resulted in higher construction WPI outcomes in 5 out of those past 6 years, FY18 being the exception. Not only did higher growth in construction activity drive higher wages growth, but much higher EBA outcomes in Victoria's construction sector also contributed significantly to the comparatively higher wages growth in the state over the past few years.

Australian and Victorian construction sector activity and wages growth were impacted by COVID-19 in 2020. The ABS wage data showed that the Victorian construction WPI recorded zero growth in the

June quarter 2020, but this was a better outcome than the Australian construction WPI, which fell - 0.5% in the June quarter (which was the first quarterly decline since the inception of the WPI in 1997). But wages growth were then much weaker in Victoria than the national average over subsequent quarters (September 2020 to March 2021). This saw the Victorian construction WPI average 1.1% in FY21, below the national average of 1.3%. A larger decline in construction activity in FY21 in Victoria (compared to other states) may have also contributed to the weaker outcome.

Fig. 5.8 Total Real Construction Work Done - Victoria



However, a significant increase in the September 2021 quarter has pushed Victorian wage growth well above the national average, with the outcome for FY22 expected to be 2.8%, 0.4% higher than the national average. Higher construction sector EBAs in the state (compared to the national average) is expected to hold the Victorian construction WPI growth above the national average over FY22 and FY23, with EBAs approved over the past 1 to 3 years averaging 0.3% higher than the national average.

We are forecasting Victoria's overall construction activity to show a small increase in FY22, followed by moderate growth over FY23 to FY24, which will see the level of Victorian construction activity push above previous peaks in FY23 (see chart 6.7). However, given that the growth in activity in the state will lag the national average over FY21 to FY26, we are forecasting Victoria's construction WPI growth lag the national average over FY25 and FY26, before matching or slightly outpacing the national increases over FY27 and FY28, as Victoria's construction activity shows similar growth (see Table 1.1).

Australian and Victorian construction wages are expected to gradually pick up over FY22 and FY23 and then strengthen appreciably over FY24 to FY26, particularly as construction activity levels

surpass the previous highs of FY18 and FY13 - in 2024 for Australia (see Figure 5.4) and for Victoria surpassing the previous high of FY20 in FY23 (see figure 5.8) - and skills shortages begin to manifest. The increases in construction activity from FY23 will be driven by higher levels of residential and non-dwelling building and particularly by strong increases in engineering construction, boosted by a new wave of mining investment and a plethora of publicly funded transport infrastructure projects (particularly in NSW, Victoria and Queensland). The stronger activity will underpin higher wages due to strong labour demand and expected widespread skill shortages in the construction industry.

5.3 SUPERANNUATION GUARANTEE INCREASES & THEIR IMPACT ON LABOUR COSTS

In light of the proposed increases to the Superannuation Guarantee, BIS Oxford Economics researched the treatment of superannuation contributions in regard to how the ABS measures labour costs. The Superannuation Guarantee is proposed to increase from the current 9.5% in the early-to-mid 2020s, rising 0.5% in July each year from July 2021 to 12% in July 2025.

To summarise, the Superannuation Guarantee Charge (SGC) is **not** included in the regular wage measure preferred by the Australian Energy Regulator – the Wage Price Index (WPI). The SGC is in effect **a labour ‘on-cost’**. In terms of escalating wage costs over the regulatory period, the SGC therefore needs to be **added** to the forecast increases in the WPI. The exception to this rule would be where an employer already pays a superannuation amount higher than the legislated minimum (currently 9.5%), *and* chooses *not* to increase the super % until that proportion reaches the legislated minimum.

The basic WPI measures “ordinary time payments”, with the broader measure – total hourly rates of pay - including only overtime payments in addition to ordinary hourly rates of pay. The ABS description of the Wage Price Index categorically states that:

“The following are specifically excluded from ordinary time payments:

- Employer contributions to superannuation funds”¹
- Six other types of irregular payments are also listed as being excluded from ordinary time earnings, such as severance, termination and redundancy payments; leave loading; etc.

In discerning the relationship between superannuation contributions and measures of wages and earnings we must first make some distinctions in the way the ABS considers superannuation contributions. Firstly, we note that the ABS recognises three distinct categories of labour costs in-line with the International Labour Organisation (ILO) International Standard Classification of Labour Costs, and most of these components are measured by the Major Labour Cost survey (cat. 6348.0):

1. Employee earnings – made up of wages and salaries, fringe benefits and termination payments.
2. Items of a social security nature that provides a future or contingent benefit to employees – made up of superannuation contributions and workers’ compensation.
3. Taxes associated with employment – includes payroll tax and fringe benefits tax.

¹ ABS catalogue #6351.0.55.001 ‘Wage Price Index – Concepts, Sources and Methods, 2012’, page 24.

Secondly, the ABS recognises the concept of employer “on-costs”, or equivalently “non-wage labour costs”. These are considered additional costs employers incur beyond direct payments for work done by employees.

Employer on-costs are generally considered as involuntary outlays as they are primarily imposed by statutory requirements or under collective bargaining agreements. Employers have the obligation to pay the minimum amount of Superannuation Guarantee (SG) to employees. The Superannuation Guarantee Charge (SGC) was introduced from 1 July 1992 and increased both the coverage and minimum contribution levels.

In the September quarter 2004, the ABS expanded the scope of its Wage Cost Index (WCI), which was a predecessor of the Wage Price Index (WPI). Prior to the expanded scope, the WCI focussed exclusively on wage and salary rates. The series was renamed to the Labour Price Index (LPI), to reflect the inclusion of four separate non-wage indexes being recorded:

- Employer contributions to superannuation
- Workers' compensation
- Annual leave and Public holidays
- Payroll tax

The ABS discontinued the non-wage and labour price indexes in the September quarter 2012 and this resulted in what we now know as the WPI.

Therefore, we can categorically conclude that WPI in its current form, does not measure employer contributions to superannuation, and therefore will not be directly influenced by any changes to the Superannuation Guarantee.

As for **Average Weekly Earnings (AWE)**, earnings in this context are “broadly defined as current and regular payments in cash to employees for work done” (ABS 2018). Through to 2007, AWE excluded amounts salary sacrificed and this is now considered as a form of wages and salaries in cash. In this context we can conclude, similarly with WPI, that AWE does not include superannuation contributions and will not measure any changes to the Superannuation Guarantee.

Assumptions regarding Superannuation Guarantee Increases & Their Impact on Forecasts Wage Increases and Labour Costs

The superannuation guarantee (SG) as it is currently legislated, has the contributions from employers increasing from the current 9.5% by 0.5% on 1st July each year from 2021 to 1st July 2025. This means that it will increase in each of the first 3 years of the next regulatory period for the Victorian Gas Distributors (i.e. over FY24 to FY26).

As discussed above, the SG increases are not included in the wage price index, but will impact the quantum of the WPI increases in each year from FY22 to FY26 (i.e. 2021/22 to 2025/26). This is based on the notion that a proportion of the costs associated with SG increases will be ultimately borne by employees, via lower wage growth than would be the case if there was no SG increase. The Reserve Bank of Australia has estimated that up to 80% of the increase in non-cash benefits, such as superannuation, are passed on to employees in the form of lower wage increases. This is referred to as the ‘economic incidence’ of the SG increase, whereas the ‘statutory incidence’ of the whole 0.5% annual SG increase falls on the employers. However, the proportion of the cost borne by employees would differ according to the form of pay-setting method and other intrinsic factors. Those employees who have their pay rises set under collective bargaining **and** who belong to a strong union with considerable industrial power are expected to ultimately receive a much higher proportion of their pay

increase than those who receive their pay increase via the annual minimum wage increase (set by the Fair Work Commission) and those employees on 'individual arrangements'.

In terms of overall wage costs, the full 0.5% for the SG increases each year should be added to the forecast WPI increases in each of the years from FY22 to FY26 inclusive, to arrive at the total percentage increase in labour costs. This is in line with advice from Deloitte Access Economics (DAE) to the Australian Energy Regulator in their Superannuation Guarantee paper, that "...taking into account the uncertainty regarding how individual NSPs will respond to changes in the minimum superannuation guarantee, it is recommended that the full 0.5 percentage point annual increase to the superannuation guarantee be added to forecast WPI growth" (page 5 of DAE impact of *Changes to the Superannuation Guarantee on Forecast Labour Price Growth*, July 2020).

In deriving the WPI forecasts, we have made the following assumptions when applying a 'discount' to the WPI in the All Industries and specific industry WPI forecasts:

1. The key underlying assumption assumes that around 49% of the economic incidence of the Superannuation Guarantee (SG) increases are passed on to employees, with employers only paying for the remaining 51% of the cost of the SG increases. This applies to the All Industries wages. This is in line with RBA research, but with adjustments for certain industries, with the incidence much lower for employees in government-dominated industries and in sectors with stronger unions. The incidence is also assumed to be somewhat lower than previous episodes of SG increases, because of the much tighter labour market than in earlier SG increases. This means that All Industries WPI growth is equivalent to 49% less than it would be in the 'alternative' case, where no SG increase occurred. In the context of a 0.5% increase each year, the impact on All Industries WPI is -0.24%.
2. The impact on employees is assumed to be evenly spread in each year, rather than unevenly spread over time. This implies wages are negotiated prior to the SG increase and spread evenly over the whole year - i.e. the impact is the same on the two half-year periods. We acknowledge this is a simplified assumption, given that often the economic incidence is not spread evenly across years, with the ultimate impacts going beyond the period of SG increases.
3. The incidence of the SG increase differs across the three different segments of pay methods. Those 13.1% of employees (full-time adults) who receive their annual pay rise via the Minimum wage case by the Fair Work Commission are assumed to receive 70% less, with those who receive payments via individual arrangements receiving 55% less. At the All Industries level, it assumed that the average of the 38.4% of employees who rely on collective bargaining receive 34% less. However, this percentage for those on collective bargains or EBAs will markedly differ across industry sectors.
4. For employees in the EGWWS sector, the base assumption is that those 64.6% of employees on EBAs will receive 5% less, with employers paying the other 95%. This assumption is based on the strength of the unions covering the EGWWS sector, plus the fact that many on EBAs in the sector have a higher superannuation rate than the base 9.5%, providing added scope to not increase the superannuation rate but pay full wage increases. Overall, the impact on the whole EGWWS WPI will be -0.1% for each of the 5 years from FY22 to FY26 inclusive.
5. In the Construction sector, we are assuming that the discount to wages negotiated by the construction unions covering that industry will also be only 5%. Overall, the impact on the whole Construction WPI will be -0.21% for each of the 5 years from FY22 to FY26 inclusive.



OXFORD
ECONOMICS

Global headquarters

Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK
Tel: +44 (0)1865 268900

London

Broadwall House
21 Broadwall
London, SE1 9PL
UK
Tel: +44 (0)203 910 8000

New York

5 Hanover Square, 8th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Singapore

6 Battery Road
#38-05
Singapore 049909
Tel: +65 6850 0110

**Europe, Middle East
and Africa**

Oxford
London
Belfast
Frankfurt
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Cape Town
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Americas

New York
Philadelphia
Mexico City
Boston
Chicago
Los Angeles
Toronto
San Francisco
Houston

Asia Pacific

Singapore
Sydney
Hong Kong
Tokyo

Email:

mailbox@oxfordeconomics.com

Website:

www.oxfordeconomics.com