Deloitte Access Economics

Forecast growth in labour costs in Victoria

Report prepared for the AER

13 June 2013

Deloitte.

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Paul Harrigan
Assistant Director
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Level 24, 400 George Street
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13 June 2013

Dear Paul,

Report on Victorian utilities sector WPI

Our final report on the Wage Price Index (WPI) for the Victorian utilities sector is attached.

Yours sincerely,

Chris Richardson
Director
Deloitte Access Economics Pty Ltd

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Key conclusions

The Australian utilities sector has been affected by some of the major trends affecting our economy over the past decade:

- **Competition for workers heated up:** The rise of emerging Asia boosted the demand for workers in sectors such as mining and construction. These sectors compete with the utilities for some types of skilled labour.
- **A rise in the $A and relatively high interest rates hurt some customers:** An accompanying increase in Australia's currency and our interest rates relative to the rest of the world proved problematic for trade exposed sectors such as manufacturing (itself a notable user of the utilities). Similarly, relatively high interest rates kept housing construction on a short leash, limiting new connections to electricity, gas, waste and water services.
- **A change in regulatory burdens affected productivity:** A series of mandatory renewable energy targets (MRET) meant that these environmental-related goals led to a shift towards 'less productive' methods of energy generation, while the imposition of a carbon tax affected profitability and expansion plans.
- **A rise in prices hurt demand:** Partly due to the operation of MRET and the carbon tax, partly by way of catch up, and partly due to the need to underwrite capacity expansion, prices leapt – especially for electricity. In turn, that generated a hit to electricity demand.
- **The record on new investment has been patchy:** Many owners of utilities companies have been loath to invest in new capacity amid political and other uncertainties. That said, other owners – and especially government enterprises – have been more willing to add to capacity (including some desalination plants in the water sector).

Many of these trends have been negatives for Australia's utilities sector – demand growth softened, regulation added to the need for workers, yet wage competition was strong. On the other hand, **population and income growth was good**, keeping overall sectoral outcomes reasonable despite this list of negatives.

Some of these factors are now changing, bringing both positive and negative implications:

- **A 'construction cliff' looms:** The mega mining construction projects spawned by the rising of emerging Asia supported Australia's economic growth at a time when families were being cautious with their spending, with housing construction in the doldrums and State and Federal Governments amid a phase of cost cutting. However, they will soon peak as a share of the economy. That means Australia's economy will lose a key driver of recent growth. Private business investment generated a contribution of 90% of all the growth in Australia's economy in 2011-12, but that share fell to an estimated 60% in 2012-13. Our projections have this share falling to less than 30% in 2013-14, and then have private business investment spending generating a mild drag on the economy as soon as 2014-15. Other things equal, that will generate a more modest business backdrop for the utilities.
- **Mining and engineering construction will compete less vigorously for workers:** Similarly, those sectors which saw their employment levels surge won't do the same in coming years. As a share of total employment, construction may have peaked in late 2011, though

an increase in housing work may keep this sector's employment share high until early 2015. And mining's (small) share of total employment may now flatline. The upshot is that demand growth among key competitors for workers with skills also used in the utilities sector will lose momentum.

- **The damage wrought by $A strength has become notable:** In some cases, demand by big electricity users such as aluminium smelters is under threat as the 'sweetheart deals' of the former come up for renewal. And in one large and known negative for Victoria, Ford has flagged it will cease car-making in Australia from 2016. That poses considerable 'critical mass' risks for the State's manufacturing sector. In turn, it also says that another key competitor for workers with skills also used in the utilities remains in the doldrums. We project further job losses in manufacturing in 2013-14 and 2014-15, with a number of those centred in Victoria.
- **The big lift in electricity prices should level off:** This will be a positive, albeit a slow moving one. Both businesses and households are still adjusting to the considerable price increase of recent years, so the demand negatives of the earlier surge in electricity (and to some extent water) prices will linger, but the worst should soon be past.
- **Population growth should be solid, but income growth may not be flash:** There has been a partial recovery in population gains of late, though the latter may be threatened by a more restrictive approach to the 457 visa migrant intake (as well as an increase in costs for this group). However, overall employment gains may be modest, as may wage growth, with both already experiencing only modest momentum.

In brief, Deloitte Access Economics has long forecast a slowdown in the construction phase of the resources boom, and recent developments confirm our past forecasts more than they change them. However, where our view was previously more negative than the consensus on the Australian economic outlook, it is now more positive than the consensus view, with the latter increasingly responding to the approach of a 'construction cliff'.

National wage growth

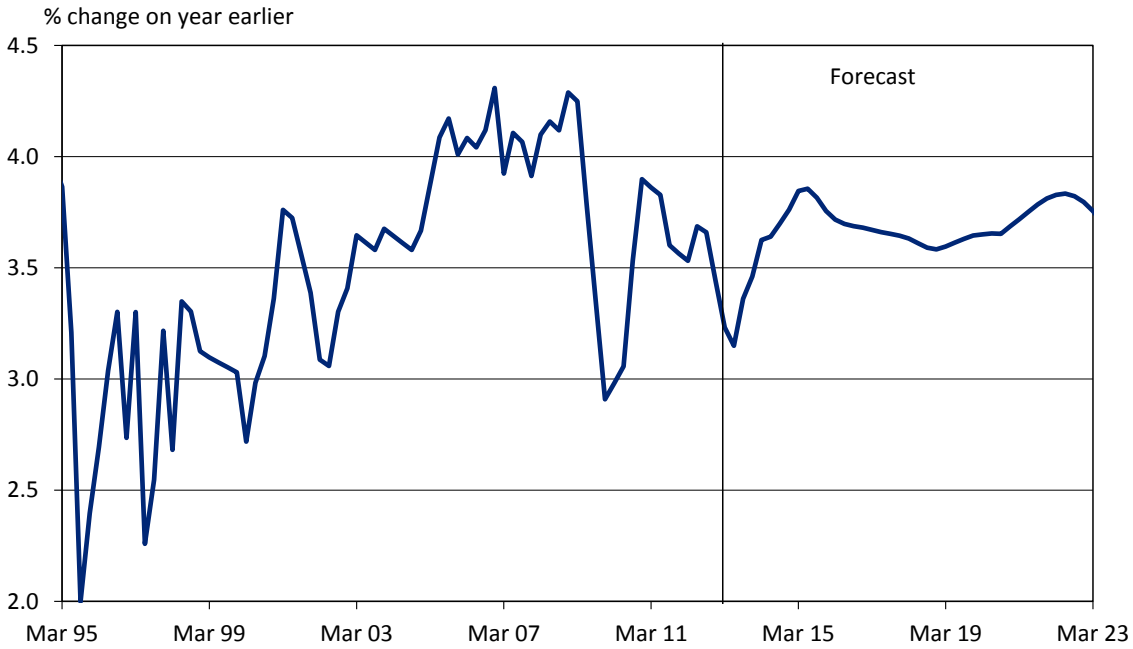
With the sole exception of the global financial crisis, the current pace of growth in earnings is the lowest in a decade. The best general indicator of wage pressures, the Wage Price Index (WPI), grew by just 3.2% in the past year. That's a pretty modest outcome, with wage growth ebbing away amid weak job markets and a fall in consumer price inflation.

There is still relative strength in wage gains in mining and in WA, while there's weakness in wage growth in accommodation and food, in retail, and in SA and Queensland. Yet these patterns are moving. For example, weak wage growth in Queensland helps underscore the latter's fall from grace on the State growth leader board. And in part the patterns are moving for the same reasons that the total is too – wage growth is relatively modest because now even some of the stronger bits of Australia's economy have lost momentum.

Yet it will be hard for wage growth to stay low for long. And nor will it require much extra strength in job gains to generate faster wage rises. After all, boomer retirement is now happening fast while, partly thanks to the latest round of roadblocks to be placed in front of temporary skilled migrants (those on 457 visas), overall migrant numbers are projected to stay well shy of their 2008 peaks. Add in the expectation that lower interest rates may prompt some slightly better news on the job front – especially from 2014 if the $A also eases – and wage gains may lift in 2014 and beyond.

Yet, as the chart below shows, that lift will be a modest one, and overall wage growth is projected to remain on a relatively tight leash in the next few years.

Chart i: Overall Wage Price Index forecasts



Source: ABS, Deloitte Access Economics' macroeconomic model

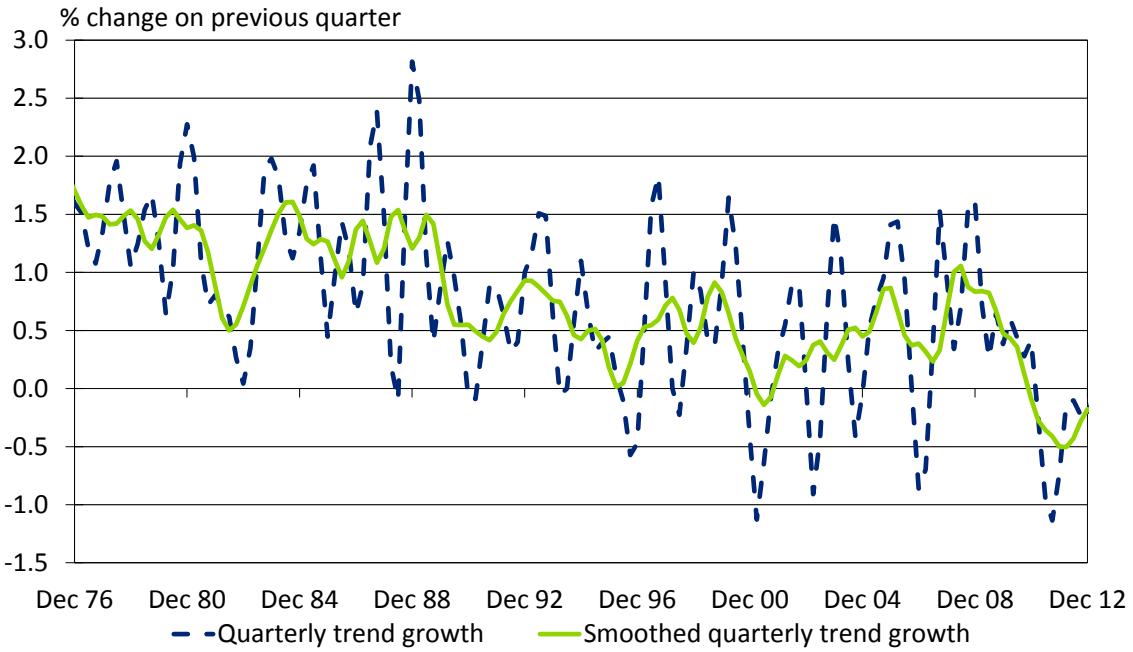
Conditions in the Australian utilities sector

As is true of many industries, the utilities are under pressure. Most notably, electricity output has fallen to where it was just ahead of the GFC, and the short term outlook is modest. In trend terms, there is at present no growth in the output of the utilities sector as a whole, or in its water and waste management component. Falling electricity production is roughly being offset by rising gas production. The recent lack of growth is due to a wide set of factors, but the essential theme common to those factors is that the services sold by the utilities have become relatively more expensive, and hence both families and businesses (who are firmly in cost cutting mode) have been scrimping and saving on their use of energy and other utilities.

Electricity generation, which accounts for 60% of the sector as a whole, has a lot on its plate. The sector's output is back to where it was when the GFC hit. At least higher prices are helping to finance an expansion of capacity, with $18 billion in work underway, and another $26 billion in the pipeline. Then again, those numbers are now falling fast, and private sector investors – understandably enough – are worried about an uncertain policy environment. The current Federal Labor Government has already changed the rules a lot, while a Coalition Government would change some of those back again, while State Governments are also moving the dial.

Using trend data, the electricity sector is amid its longest and sharpest contraction in output since records began on a consistent basis in the mid-1970s. Partly in response to rapid price increases, electricity output levels have been falling since late 2010 – and are currently 4% below their peak – whereas the other components of the utilities sector have seen their output increase over this period. Indeed, gas output has grown 16% across the same period.

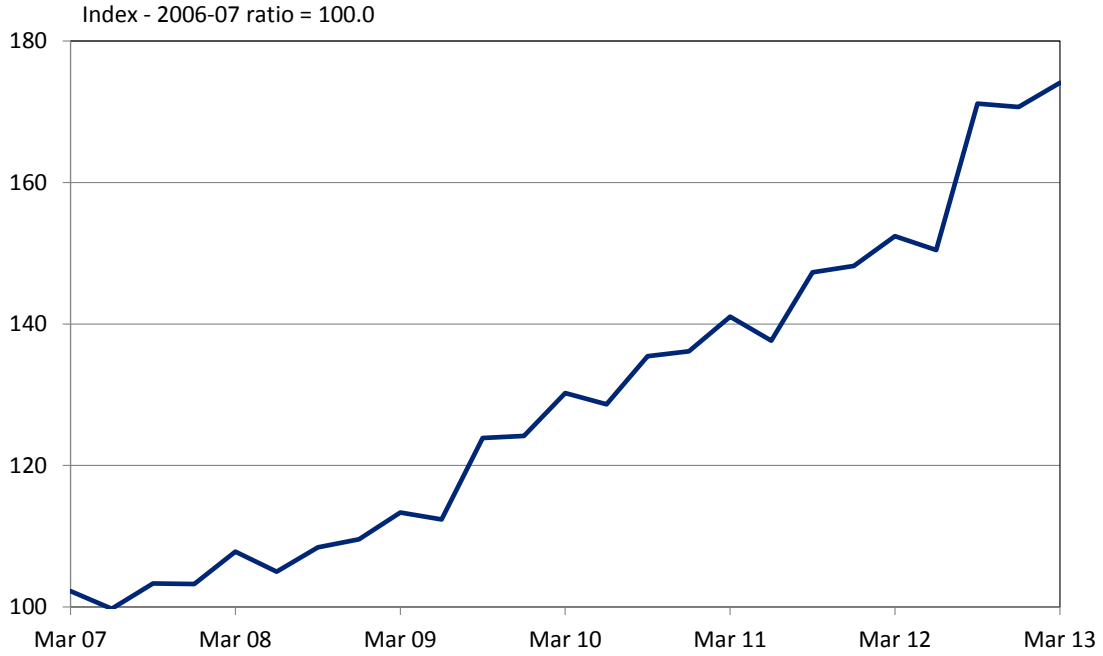
Chart ii: Electricity sector output



Source: ABS

Much of the bad news is related to the fact that electricity prices have soared. Indeed, as the chart below shows, in the past six years electricity prices have risen 74% more than consumer prices more generally. The carbon tax is partly to blame, as (rather more so) is a system which delivers little likelihood of blackouts.

Chart iii: National electricity prices relative to the total CPI



Source: ABS

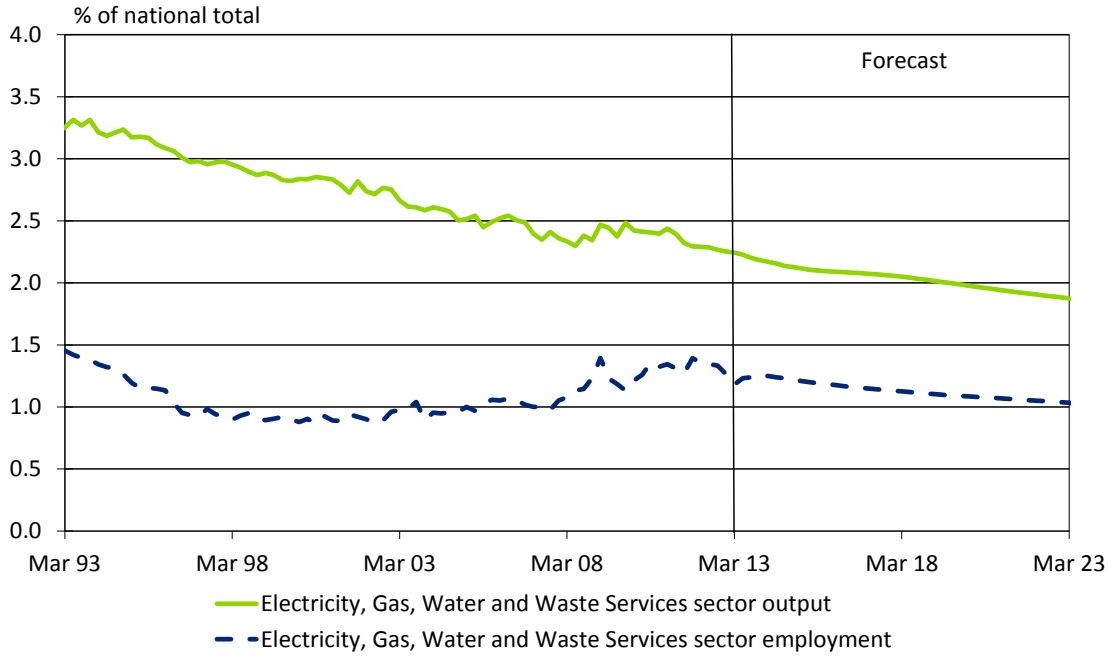
As Australia doesn't charge customers peak prices at times of peak demand (on sweltering summer afternoons), that has led to some gold plating of basic infrastructure – at a flow on cost to retail pricing. The other big issue here is linked to Mandatory Renewable Energy Targets (MRET). Because Australia has a carbon price, it would make rather more sense to let the latter do the heavy lifting, but for the moment policy is forcing this sector to change its production profile as a result of mandates rather than markets.

There are other challenges for the utilities to handle too, including reduced output and a less certain future among metal refineries and smelters, which eats into electricity-intensive demand. On the other hand, improving population growth and a projected lift in new housing starts should increase basic connections of power and water to those new homes.

Or, more broadly, times may well change for the better in the utilities sector. The pain of past price rises will fade, population and industry growth will add to demand, and some investment will add to capacity.

On balance, however, with weakness in the wider economy and with electricity demand still responding to recent relatively rapid price increases, this sector is expected to grow more slowly than the Australian economy and its workforce as a whole.

Chart iv: The utilities sector as a share of Australia



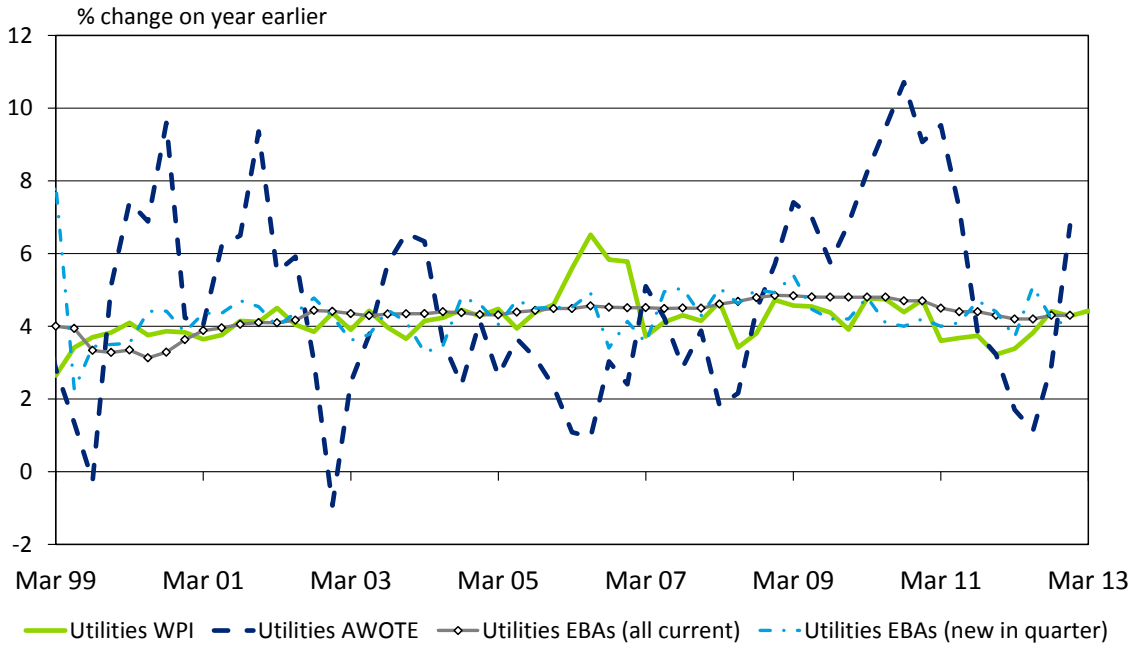
Source: ABS, Deloitte Access Economics' macroeconomic model

Wage growth in the Australian utilities sector

That said, wage growth in the utilities sector nationally and in Victoria remain ahead of the national pace of wage growth. Wages in the utilities sector WPI grew by 4.4% in the year to March 2013 (5.1% in the private sector, 4.1% in the public sector).

Those growth rates are comfortably ahead of the national average growth rate of 3.2%.

Chart v: Measures of utilities sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

As the above chart shows, the latest utilities WPI result is in line with the growth implied in 'all current' utilities EBAs, though the latest round of EBAs are a little weaker, at 4%. (As usual, the swings in AWOTE imply little.)

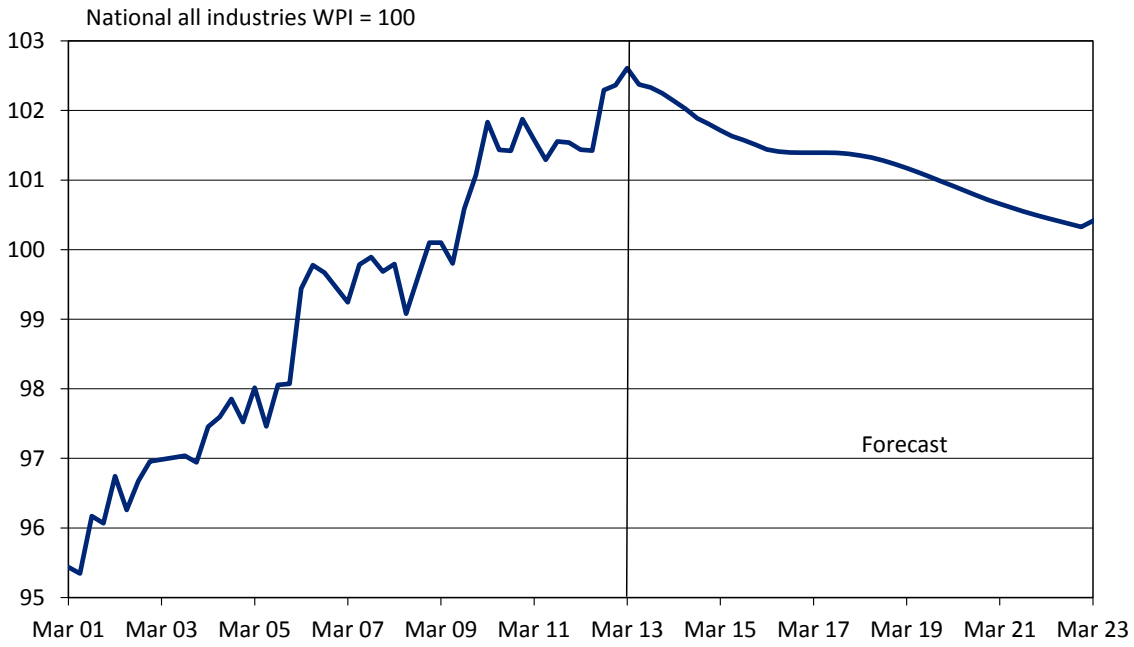
With the peak of the mining construction boom almost here and manufacturers continuing to struggle, these two sectors will soon fade as a driver of wage competition in the utilities. And the utilities sector itself is treading water – output has shrunk in the past two years, and notably so in electricity, while overall employment levels are similar to where they were just ahead of the global financial crisis more than four years ago.

Moreover, although housing construction will pick up further, the weakness in manufacturing is pervasive – meaning not merely that manufacturing is less of a competitor for skilled workers, but also less of a customer for the utilities sector itself.

Add in the ongoing demand adjustments occurring in response to the enormous lift in the price of utilities services, and it is hard to be too optimistic. Or, as the discussion of the sector's prospects above concluded, "this sector is expected to grow more slowly than the Australian economy and its workforce as a whole". Under those circumstances, it is difficult to do anything other than expect the same to be true of utilities sector wages.

That said, mining construction activity remains at a very high level, and wage growth determined in new EBAs for the utilities sector remains solid. That suggests a degree of relative strength in wage growth in the utilities will remain until about mid-2013, before declining below the national average from about 2014 – a picture painted in Chart vi below.

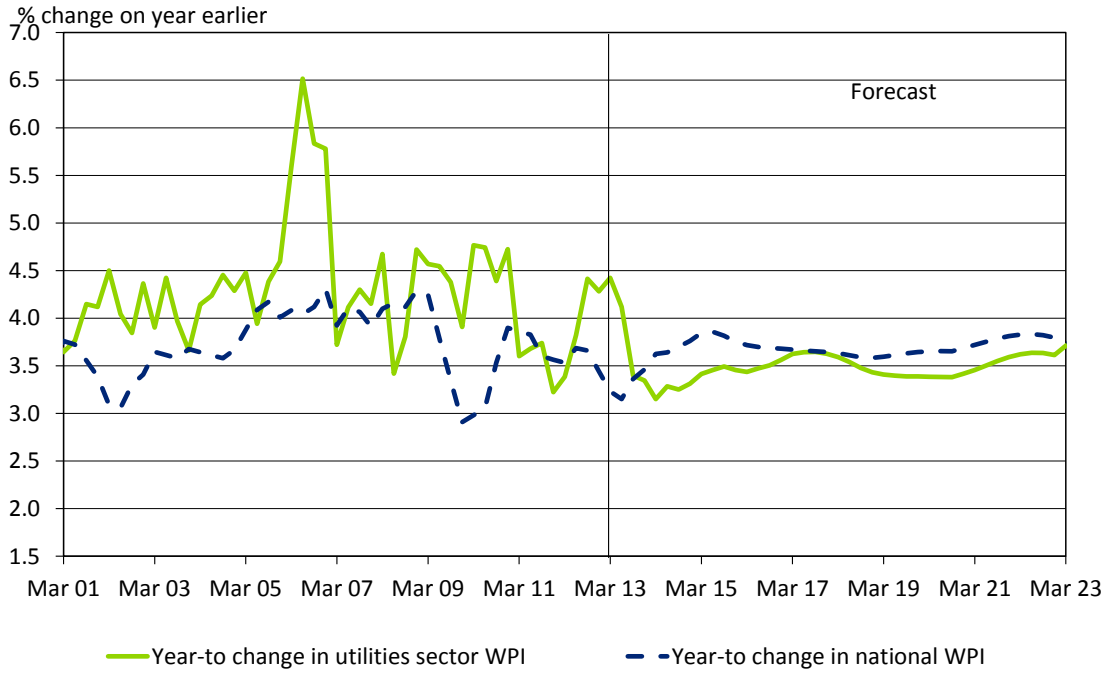
Chart vi: The utilities WPI relative to the national WPI



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Looking ahead, utilities wage growth is projected to remain above average wage gains through 2013, before lagging broader national wage growth over the medium term (see Chart vii).

Chart vii: Utilities Wage Price Index forecasts



Source: ABS, Deloitte Access Economics labour cost model

As Chart vi above shows, Deloitte Access Economics projects a peak in relative utilities wages. This easing partly reflects some unwinding of previous gains, as well as weakness in utilities

sector output and employment. In addition, with the outlook for some competitor sectors for workers in the utilities either still very weak (as is true of manufacturing) or at risk of easing beyond a peak in resource-related construction in late 2013 (as is true of construction itself), some of the factors that drove a relative increase in utilities sector wages over the past decade are likely to weaken or partly unwind over the next decade.

The outlook for Victoria

Victoria's economic growth remains modest, while its demand growth is easing. The $A is exerting major pressure on key sectors where this State has a high exposure relative to other States. Manufacturing is at the centre of these impacts, with job losses continuing as the high $A leads more firms to shut their doors – Ford has recently announced it will shut down its Victorian operations in 2016, making about 1200 workers redundant, the equivalent of roughly 5% of the State's total car manufacturing workforce.

International education and tourism are also hurting. This State had an above average share of the foreign student market. Yet despite recent improvements, $A pressure is hurting foreign student numbers. Fewer foreign students and a drag from the $A on international tourist visitors mean occupancy rates for the State's hotels have been edging down over the past year. And those pressures have also been the source of bad news elsewhere in the State's economy. Most crucially, job gains have been held back, job vacancies are continuing to fall, and the unemployment rate has crept higher since mid-2011, to now be above the national rate. That has led to weakness in retail, which is running below national gains.

The coming peak in resource-related investment spending is less of an issue for Victoria – it has fewer resources, so its engineering construction pipeline is less at risk from a resource-related slowdown. Yet while NSW is better seen as an 'interest rate dependent' State, Victoria is more accurately characterised as a 'dollar dependent' State. Hence, the Reserve Bank's interest rates cuts are better news for New South Wales than they are for Victoria, with this State's outlook more reliant on the rather more open question of what may happen to the $A. On balance, we see Victoria losing some of its share of Australia's economy in the next few years.

General labour cost growth in Victoria

Victorian wages have edged down relatively to those nationally for over a decade. In the main that has represented strength in the resource sector States – mining and mining-related construction has been good news for some regions, thereby swinging wage relativities in Australia as a whole. More recently, however, the relative downswing in Victorian wages versus their national counterpart has had more to do with the $A and its impact on Victoria. In effect, the loss of wage relativities of late has been less to do with 'good news elsewhere' and more to do with 'challenges on the home front'.

The key factor here is that the $A remains high – higher than it usually would be given interest rates have already been cut a fair way and that commodity prices are rather lower than they were. Given its industry strengths in the likes of manufacturing, foreign students, wine and dairy, that currency strength is hurting Victoria more than other States. In effect, Victoria's economy is relatively more 'dollar dependent' than other States.

Accordingly, Victorian wage growth may continue to underperform its national equivalent through to 2016 (albeit by a very modest margin), before maintaining pace with the nation

thereafter. In part this reflects the State's industrial make up: three of the State's top four industries are likely to see slower wage growth than the national WPI over the forecast period.

Table i: State WPI forecasts

Year to March changes in nominal Wage Price Index forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6	3.7
Victoria	3.4	3.2	3.6	3.6	3.7	3.7	3.5	3.6	3.7

Year to March changes in real Wage Price Index forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	1.4	0.7	0.9	1.0	1.0	1.1	1.2	1.2	1.0
Victoria	1.5	0.4	0.7	1.1	1.1	1.0	1.0	1.1	0.9

Source: ABS, Deloitte Access Economics labour cost model

Wages in the Victorian utilities sector

Whereas – at least in relative terms – Victorian wage growth may modestly underperform in coming years, the opposite may be true of wages in the Victorian utilities sector.

Wage gains in Victoria's utilities sector have been gradually accelerating from around 3½% during 2010 to 4½% in early 2013, marginally outpacing general wage growth in Victoria, and gradually moving ahead of the national average for utilities as the Victorian sector begins to catch up some of the ground lost to other States during the mining boom years.

Yet this growth is not all "catch-up". Across this period the State's utilities sector has been increasing its share of Victorian employment, suggesting strengthening underlying demand for workers in the sector has contributed to the increasing rate of wage growth. Investment in key infrastructure projects such as the recently completed Wonthaggi desalination plant, and Melbourne Water's $220 million main sewer replacement from Swallow Street (near Beacon Cove) to Wurundjeri Way at Docklands has underpinned a lot of this increase in demand.

Those trends will continue through 2013 and 2014, supported by further expansion in the utilities sector, such as the upgrade the Eastern Treatment Plant at Carrum. In the energy sector, works continue on the $450 million, 52 turbine wind farm at Bald Hills near Inverloch. Yet weak prospects for output in the utilities will continue to hamper employment prospects in the sector, particularly if recent trends toward reduced electricity demand are maintained.

At the same time further pressures on manufacturing – the announcement by Ford that it will cease local car making in 2016 is a good example – suggest that the manufacturing sector will both (1) free up workers with relevant skills and (2) fall away as a customer of electricity, gas, water and waste. Yet, despite that, Victoria's utilities WPI is expected to make minor gains relative to its national counterpart, as seen in Chart viii below.

In the chart below the national utilities index at any point in time is set to a value of 100 and the index for Victoria is expressed relative to that value.

Chart viii: Victoria utilities sector WPI relative to national utilities WPI

Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Summary results

The summary tables of results follow.

Table ii: Summary results – key variables

Year to March changes in key variables

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
Output	3.1	3.1	2.7	2.8	3.0	3.4	3.3	3.1	3.0
Consumer price index	2.9	2.0	2.3	2.8	2.7	2.7	2.6	2.4	2.4
Wage Price Index	3.6	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6
Average weekly earnings	4.2	4.2	4.7	3.7	3.8	3.7	3.6	3.6	3.6

Source: ABS, Deloitte Access Economics macroeconomic model

Table iii: Summary results – economic variables

Year to March changes in key Economic variables

Annual % change (unless noted)	2012	2013	2014	2015	2016	2017	2018	2019	2020
Consumption									
Private sector	3.2	2.8	2.1	2.3	2.7	2.9	3.1	3.2	3.3
Public sector	2.8	2.0	-1.1	3.3	3.4	2.4	1.7	1.4	1.4
Private sector investment									
Non-business housing	-1.4	-2.6	9.9	10.5	8.4	7.3	2.3	-1.4	0.5
Non-business real estate	-4.3	0.2	10.3	9.4	7.5	6.7	2.0	-1.4	0.3
Non-residential building	8.5	10.5	0.4	-2.9	3.3	3.8	2.8	1.7	2.2
Engineering construction	43.4	31.6	5.2	-3.2	-0.7	-0.6	-1.5	-2.5	-2.0
Machinery and equipment	13.0	3.2	10.5	3.3	2.6	4.1	2.6	1.2	1.6
IP and livestock	4.9	4.6	-0.2	4.9	-1.9	4.0	0.9	0.0	0.4
Public investment									
General Government	-4.4	-10.1	-3.6	0.9	1.2	2.0	2.0	2.0	2.0
Public enterprises	-12.8	11.1	15.4	1.0	0.3	1.9	0.5	-0.6	-0.2
Domestic final demand	4.6	3.9	3.0	2.6	2.8	3.0	2.3	1.9	2.2
Private sector	5.9	4.9	4.0	2.4	2.7	3.1	2.5	2.0	2.4
Public sector	0.7	0.3	-0.4	3.1	2.9	2.3	1.6	1.3	1.4
Gross national expenditure	5.1	3.6	2.9	2.5	2.7	3.0	2.4	1.9	2.2
International trade									
Exports	2.0	6.2	7.1	5.8	1.7	6.3	8.8	7.6	6.9
Imports	11.5	5.2	9.4	4.2	0.7	4.7	4.9	2.9	3.7
Net (% additon to growth)	0.7	-1.1	0.5	0.2	0.4	1.0	1.1	0.8	0.3
Total output (GDP)	3.1	3.1	2.7	2.8	3.0	3.4	3.3	3.1	3.0
Non farm output	2.9	3.3	2.6	2.9	3.0	3.4	3.3	3.1	3.1
Employment	1.3	1.3	1.2	1.4	1.4	1.6	1.8	1.6	1.4
Unemployment rate (%)	5.2	5.2	5.7	5.5	5.4	5.4	5.3	5.3	5.4

Source: ABS, Deloitte Access Economics macroeconomic model

Table iv: Summary results – wages and prices

Year to March changes in national wage and prices variables

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
Consumer price index (CPI)	2.9	2.0	2.3	2.8	2.7	2.7	2.6	2.4	2.4
Wage Price Index (WPI)									
Nominal	3.6	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6
Real	0.7	1.5	1.1	0.9	1.0	1.0	1.0	1.2	1.2
Average weekly earnings (AWE)									
Nominal	4.2	4.2	4.7	3.7	3.8	3.7	3.6	3.6	3.6
Real	1.2	2.2	2.3	0.9	1.0	1.0	1.0	1.1	1.2
Average weekly ordinary time earnings (AWOTE)									
Nominal	4.6	4.1	4.5	4.2	4.3	4.2	4.1	4.2	4.2
Real	1.6	2.0	2.1	1.3	1.5	1.5	1.5	1.7	1.8
Unit labour costs									
Nominal	3.7	0.9	1.9	2.6	2.7	2.4	2.6	2.5	2.4
Real	0.7	-1.0	-0.5	-0.2	-0.1	-0.3	0.0	0.1	0.0

Source: ABS, Deloitte Access Economics macroeconomic model

Table v: Summary results – National sectoral wages

Year to March changes in nominal national industry sector WPI

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6	3.7
Utilities	4.2	3.5	3.3	3.5	3.5	3.6	3.5	3.4	3.4
Construction	3.6	3.2	3.3	3.6	3.6	3.7	4.1	4.2	3.9
Administration services	3.5	3.4	3.4	3.7	3.7	3.7	3.6	3.6	3.7

Source: ABS, Deloitte Access Economics labour cost model

Table vi: Summary results – State utilities sector

Year to March changes in nominal utilities sector WPI

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	4.2	3.5	3.3	3.5	3.5	3.6	3.5	3.4	3.4
Victoria	4.3	3.9	3.3	3.5	3.7	3.8	3.6	3.6	3.6

Source: ABS, Deloitte Access Economics labour cost model

Deloitte Access Economics

13 June 2013

1 Background

The Australian Energy Regulator (AER) commissioned Deloitte Access Economics to provide forecasts for labour cost growth for the electricity, gas, water and waste services (utilities) industry to 2017-18 for Victoria, as well as for Australia as a whole.

Specifically, AER requested:

- an analysis of forecast labour costs for the utilities industry in Victoria;
- a comparative analysis of forecast labour costs for the utilities industry with other industries that compete for utilities workers (mining, construction and administration services);
- an analysis of forecast general labour cost growth in Victoria; and
- a discussion of how market conditions are expected to affect the labour forecasts.

Deloitte Access Economics' report:

- **Discusses the economic outlook**, starting with Australia as a whole (see Chapter 2), then looking at Victoria (see Chapter 3), and then at the utilities sector (see Chapter 4), as well as the outlook for sectors which compete with the utilities sector for workers (notably, mining, construction and administrative services – see Chapter 5).
- **Discusses the outlook for wages**, starting with Australia as a whole (see Chapter 6, which also discusses the related outlook for prices), followed by **overall rates of WPI growth at the State level** (see Chapter 7), and then an examination of wage growth in Australia's utilities sector (see Chapter 8), as well as wage growth in key sectors which compete with the utilities sector for workers (construction and administrative services – see Chapter 9).
- The report then discusses **detailed forecasts at the State level of wage growth in the utilities and competitor industries** (see Chapter 10).
- **The Appendices** cover regional wage and price variations, as well as an outline of the methodology used in the Deloitte Access Economics macro model and the Deloitte Access Economics wage model, and a discussion of different wage measures.

2 The Australian economic outlook

2.1 The global backdrop

The world economy is an important backdrop to Australia's prospects. Importantly, the rise of emerging Asia generated big price gains in industrial commodities such as coal and iron ore over the past decade. In turn, that underwrote a surge of resource-related investment in Australia. And both those higher commodity prices and the boost to resource-related investment have contributed notably to Australia's economic experience being rather different over the past decade than for many other developed economies.

As a group, the latter have been rather more affected by the global financial crisis (GFC). The latter may have begun amid a surge in private sector debt in the US and Europe, but the latter partly morphed into increased public sector debt as banks failed and economies weakened.

More recently, with many governments around the world keen on winding back public sector debts and deficits, governments have contributed little to boosting still weak economies. In response, the latter task has now largely passed to central banks.

With their official interest rates at record lows, central banks have turned to quantitative easing. So far the rapid release of liquidity by big central banks has helped sharemarkets more than it has economies. Yet the latter are looking better too – partly because the debate around austerity has yet to do any real damage in the US, partly because the Bank of Japan has become much bolder, and partly because China's leadership is spending on infrastructure (which, while largely unwarranted, is probably the best news of all for Australia's 2013 outlook).

So although global growth won't surge in 2013 or 2014, it should be a positive for Australia (rather than the drag on growth it has been for a while).

As usual though, the global figures belie some very important differences in our key trading partners. Deloitte Access Economics' view on several key nations follows.

In the **United States,** the Congress has been threatening to derail the nascent recovery. To be fair, government spending usually drops in recoveries. But this recovery remains rocky, the potential pace of fiscal tightening is large, and it would come at a time when US Government spending is already shrinking at its fastest rate since the post-Vietnam war demobilisation.

Yet to date the worst outcomes have been avoided, and these forecasts assume that continues. If so, then the outlook for the US is becoming increasingly good. Much of the good news for the US economy in 2013 and 2014 may come from housing. New housing starts have been rising for the better part of a year, while house prices are now edging up.

It's true that both still face all sorts of obstacles – a backlog of homes in foreclosure, and banks who are cautious about potential customers. Yet both construction and prices are low, and so both have a way to go once they do recover. And, in turn, good news in housing construction and prices may then spill over into good news for retailers, meaning that growth will be supported by a volatile sector (housing) and also by the biggest sector (retail). That mix wouldn't guarantee a strengthening US recovery, but it would be a substantial help.

Japan's latest PM saw his country's poor growth, identified the yen's strength as part of the problem, and looked to more unorthodox ways to find a solution. That rapid shift in approach, talking about the need for more spending by the world's most indebted government, and the need for the Bank of Japan to get radical in taking on deflation, was aimed at devaluing the yen and changing market expectations. So far it has worked, with the yen down and Japan's prospects up. In fact more stimulus is what Japan needs, though admittedly the size of its public sector debt puts some pretty big limits on what can be done via government spending.

Equally, although Japan's outlook has improved, it remains poor. And there remains next to no domestic discussion of much needed economic reforms. Absent the latter, the switch to smarter macro policies may merely end up just rearranging the deckchairs on Japan's demographic destiny. With its working age population shrinking, Japan's growth will still struggle to get much traction in the foreseeable future.

The ECB, **Europe's** central bank, has successfully stood behind Europe's banking system, notably reducing the risk of bank failures – the defining characteristic of the 2008 global financial crisis. Better still, the ECB has also successfully stood behind the borrowing capacity of the Continent's wounded nations. So whereas spiralling government borrowing costs looked like generating an imminent crisis at various times since the Greek difficulties became clear, that is now rather less true than before.

However, the impact of austerity is continuing to do notable short term damage to economies. Neither businesses nor families are particularly keen on spending, sapping momentum from economic growth. And nor is it just the private sector cutting back – government spending is also being cut. While austerity is needed, slower would have been better – much better in fact. To date the medicine has hurt the patient more than it has helped.

The two major drivers of **China's** economy – infrastructure spending by state owned enterprises and housing construction – have generated some momentum. Both are important for Australia, as both underpin iron ore and coking coal prices. The uplift in housing is flowing through into other parts of the economy, including areas where risks have been developing, such as local government finances. And, although it isn't yet evident in the statistics, it has also allowed the authorities to backpedal a bit on their earlier infrastructure push.

That combination cements a solid outlook for Chinese growth in 2013. In turn, that's great for the world and for Australia, reducing the risk that China upsets 2013 prospects for global growth.

Yet other areas of China's economy remain less robust – consumer spending and industrial production have both disappointed relative to expectations. And the return to strength in real estate and, (for the moment) infrastructure, both contain worrying elements. For real estate, it is worth remembering that housing prices are too high and that there's already been considerable over-construction of new housing, with empty apartments common. Were the Chinese investors who've bought these and left them empty to ever decide they'd made a bad investment, the subsequent rush of sales could turn today's re-acceleration in housing construction into a very large downturn.

The return to health in China is both (1) symbolic of and (2) contributing to a rebound in other emerging economies. There is evidence of gathering strength everywhere from **Taiwan** (where growth is accelerating rapidly) to **the Philippines**. Forecasters are pushing up their estimates of

growth in a number of nations as a result, including in **Thailand** and **Hong Kong**. That said, the news is broadly better among lower income Asian Tigers than it is among higher income Asian Tigers, with the relatively modest progress of **South Korea** in recent times a reminder that some key challenges remain evident across the region.

The important exception to the rule (better news at the lower income end of the scale) is that there's not yet much to get excited about in **India**, where the pace of economic growth remains disappointing. Businesses aren't investing, consumers are cautious, the rest of the world isn't buying much (not helped by the toing-and-froing on India's iron ore exports), while the politicians are still busily creating more problems than they are generating solutions.

2.2 Implications for Australia

The faster growing parts of Australia's economy are cooling, with resource-related construction soon set to peak. And although the Federal Government has slowed its push towards a Budget surplus, earlier cuts have combined with those of the States to see the public sector add to short term troubles. At the same time a range of 'dollar dependent' sectors, while less sick than they have been, won't return to health any time soon.

The upshot is that economic growth in 2013 will be dogged by negatives associated with the $A, while 2014 will be dogged by negatives from the passing of the peak in resource-related construction.

That combination will keep overall growth in Australia's economy to average rates. Yet 'average' is better than it sounds. Deloitte Access Economics doesn't project a major pothole in growth as the mining boom's impact on construction spending winds back, in part because low interest rates will be supporting other parts of the economy. And we expect interest rates to stay low for a couple of years – long enough, in fact, to stimulate both retail and housing construction, and keep overall growth in the economy on a relatively even keel.

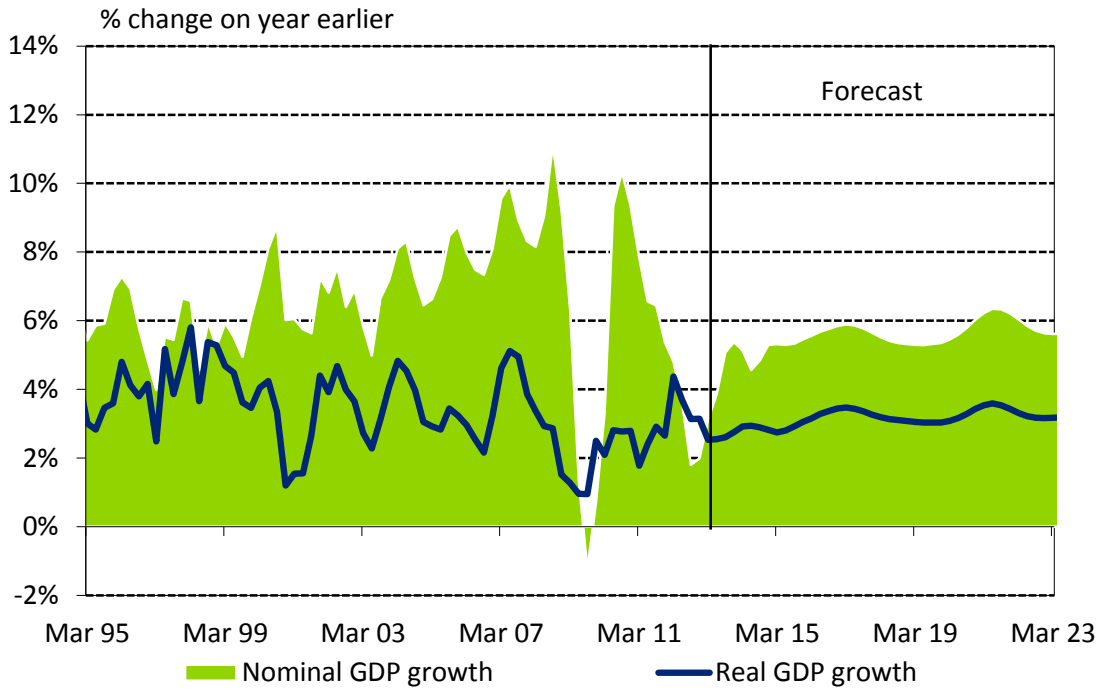
That said, Australia is in cost cutting mode. Families have been cautious ever since the GFC, and that's been broadly true too of businesses on the wrong side of Australia's two speed economy.

Moreover, there's now more businesses on the 'wrong side' of the divide, because while commodity prices are off their peaks, the $A isn't. In particular, coal miners are cutting back (cheap shale gas in the US has sent American thermal coal on to world markets), and the surge in costs means the next big round of global resource investment decisions is unlikely to be as positive for Australia as times past.

While the latter may not mean a rapid fall off in construction awaits, we continue to view a calendar 2014 slowdown in the spending on mega-mining projects with concern. And private sector cost cutting isn't the only threat to the short term economic outlook. Although the Federal Government has abandoned its quest for a surplus and announced a $19.4 billion deficit in 2012-13, the Budget included both spending cuts and tax increases.

Besides, risks remain in the global outlook – everything from what the US Congress could still do to the accelerating recovery there, through to what unexpected election results or bad bailout deals could do to the delicate tightrope still being walked in the Eurozone.

Chart 2.1: Growth in real GDP and in nominal national income



Source: ABS, Deloitte Access Economics macroeconomic model

Yet a quick glance at Chart 2.1 above shows we see Australia's momentum as solid. That's not true of the traditional barometer of economic health: the pace of production growth. As Chart 2.1 shows, real GDP may merely chug its way through the next few years, with some 2013 negatives (the relative strength of Australia's exchange and interest rates, Federal and State cost cutting) and some 2014 negatives (resource construction dropping back) both seen as problematic.

Yet there's a bunch of good news out there too, even on the production front. Housing construction is already showing signs of responding to the stimulus provided by lower rates, while retail spending can also be expected to eventually pick up in the face of lower rates.

Or, in other words, those sectors sensitive to interest rates are or will be turning from negatives to positives for the growth outlook. And so too will resource exports. These are already climbing, but the pace of ascent will quicken as the big bucks of recent investments show extra export dividends.

Hence our forecasts still don't show much by way of a slowdown in growth in 2014. More importantly, they suggest the slowdown in national income is now behind us. China's slowdown in 2012 had its counterparts in the likes of India, Brazil and Turkey, and it came atop a less than impressive rich world recovery. The result was a big fall in commodity prices, with that made sharper still due to the impact of cheap shale gas in the US (as noted earlier).

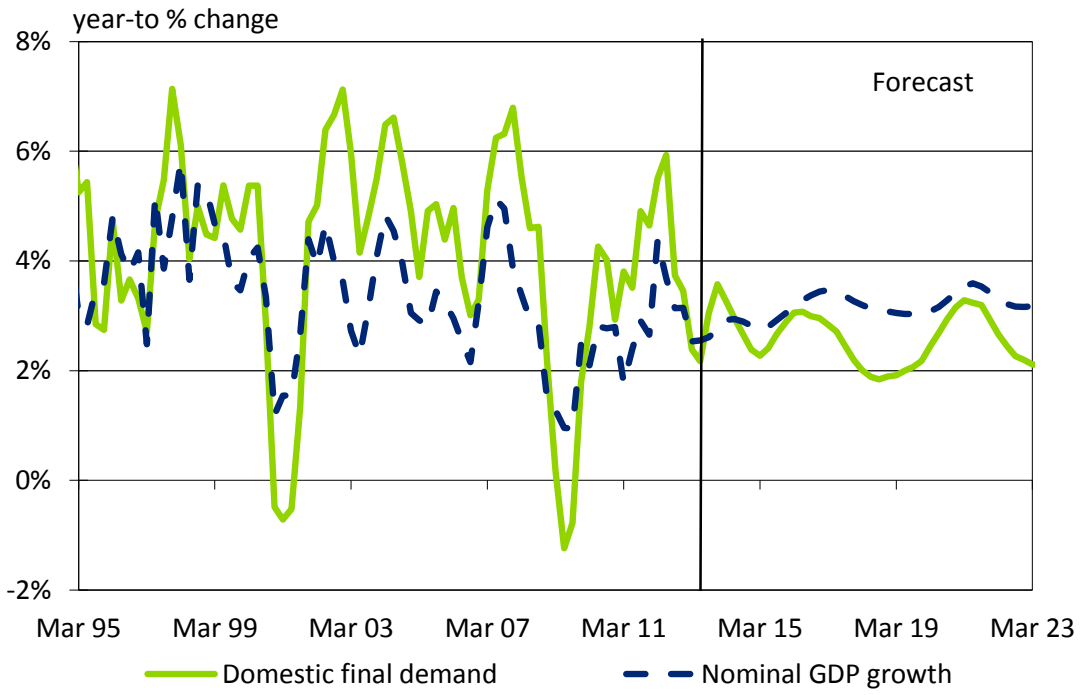
Because our incomes are now very much at the mercy of commodity prices, the forecast for national income seen in Chart 2.1 is consistent with the view that commodity prices will retain at least some of their recent rebound for a while longer yet. That's enough to generate better news on the terms of trade for 2013, and hence for Australian national income growth this year.

Australian national income growth has averaged $80 billion dollars a year since 2006 – about 6% a year. But slower growth in emerging economies and continuing weakness in rich economies hit commodity prices and hence national income growth, with the latter slipping to $57 billion in calendar 2012.

The good news is that we project better times ahead, with national income growth lifting to some $63 billion through the course of 2013, and then a further $73 billion through 2014. That's still below the trend of the past decade, but it's rather better than Australia had to deal with through 2012.

That's not to say we don't see further commodity price falls ahead. We do. Commodity prices are already below their early 2013 levels, and we retain our long held view that the supply side – more miners digging deeper – will bring down prices further over time. But a positive aspect of the disappointing growth seen in emerging economies in late 2012 was that it means the world's miners are pulling back on their expansion plans – not just in Australia, but in Africa and South America and elsewhere as well.

Chart 2.2: Domestic demand and supply (GDP)



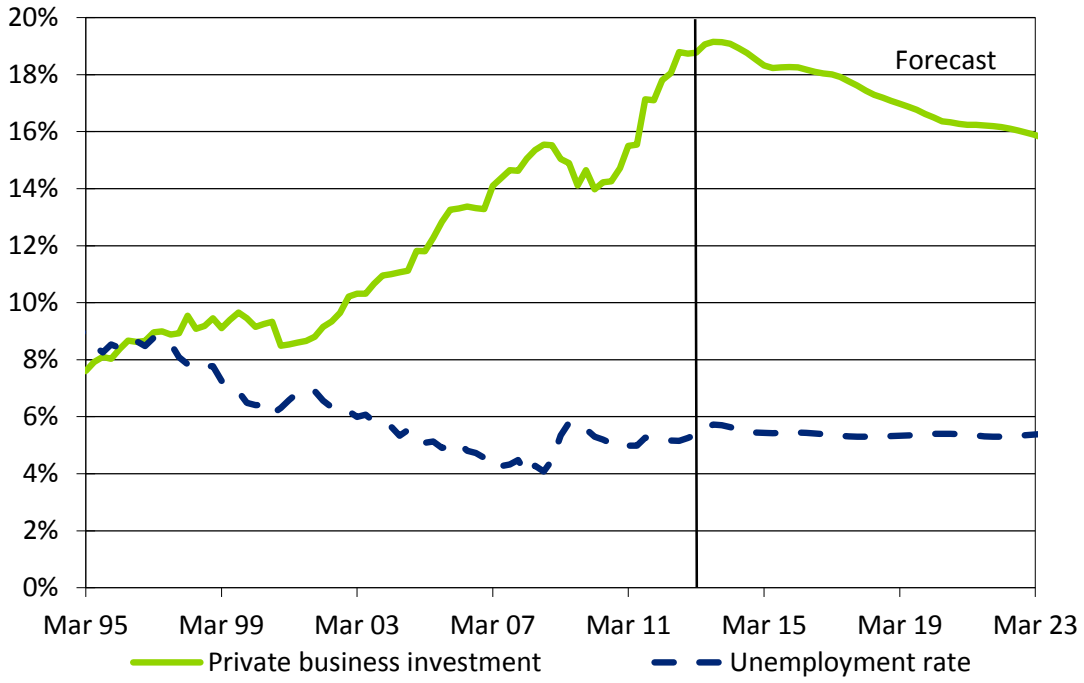
Source: ABS, Deloitte Access Economics macroeconomic model

And the slower the supply side runs, the more likely it will be that industrial commodity prices will gradually decline over time, rather than suffer from a sudden crash. Or, in other words, spot iron ore prices briefly fell to $US 87 a tonne in 2012, but despite a recent fall to $US 113 a tonne we hope not to see the $US 87 mark again in either 2013 or 2014.

That slow pace of falls in commodity prices will afford the economy some much needed breathing space. More broadly still, the resources boom remains in transition. Commodity prices have peaked, and the boost to engineering work via mega-mining projects will soon peak. However, the stimulus provided by the Reserve Bank's interest rate cuts will hopefully ensure interest rate sensitive sectors such as housing construction and retail will lift.

That won't stop growth outcomes being relatively modest, with slowing engineering construction helping to explain why demand growth will ease back even faster than supply (output) growth in the next couple of years – a picture portrayed in Chart 2.2 earlier and in Chart 2.3 below.

Chart 2.3: Business investment and the unemployment rate



Source: ABS, Deloitte Access Economics macroeconomic model

The implications of Chart 2.3 are considerable. In particular, it means the fastest part of Australia's two speed economy – business investment spending on new capacity – is set to switch from being a growth driver to being a drag on forecast growth.

That won't be evident immediately. We see the weakness evident in late 2012 as minor – for the moment, at least – with more good news yet to come thanks to big gas projects.

And although the interest rate sensitive sectors will lift and resource exports will grow, the other side of the scale will see engineering work slide and dollar dependent sectors (including the likes of manufacturing, farming tourism and international education) continue to struggle.

Yet, as Chart 2.1 showed earlier, the net effect is a relatively modest downturn through 2014, with some of that 'modesty' due to the fact that, as the investment boom has matured, it has also become more import-intensive. It has done so partly because, by their nature, the mega-gas projects of the moment are relatively more import intensive than the projects seen in previous years, and partly as local content has priced itself out of much of the running in construction at the moment.

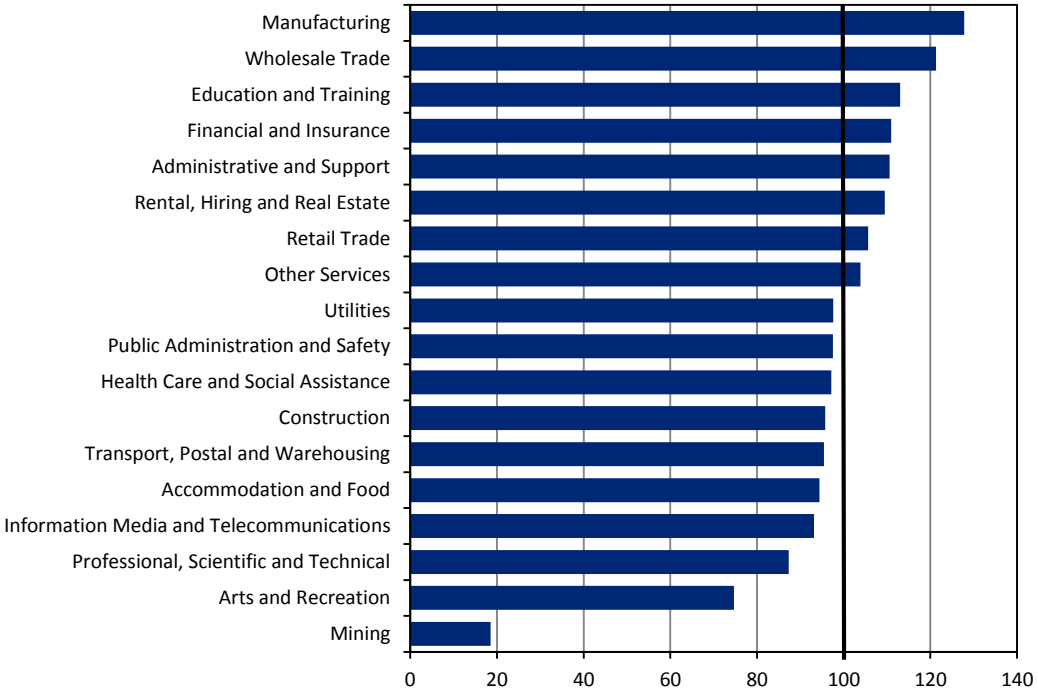
Hence some of the loss in investment momentum will also show up as a loss of import pressure, thereby limiting the downside for growth in the wider Australian economy.

3 Victorian economic outlook

3.1 The structure of Victoria's economy

Chart 3.1 ranks the relative intensity of employment in Victorian industries against that seen nationally.[1] If an industry ranks above the 100% line, it accounts for a relatively higher share of the State employment base compared to nationally.

Chart 3.1: Ratio of Victorian to national employment shares



Source: ABS, Deloitte Access Economics

Sectors which stand out for their relatively strong representation in Victoria include:

- **Manufacturing**, which while taking a battering in recent years still accounts for a relatively larger share in Victoria than in other States. Automotive manufacturing has had a particularly bad run – with the end of production at Ford's Geelong and Broadmeadows plants meaning about 5% of its current workforce faces redundancy in late 2016. However, a more favourable outlook for the $A in the coming year should provide some welcome relief for Victoria's larger than average manufacturing sector.
- **Wholesale trade**, which has been perhaps the standout industry in terms of jobs growth this past year, in part due to a better year for agriculture and in part due to the high $A which has been propping up import trade through the Port of Melbourne.

[1] These figures, like the WPI, exclude agriculture from the measure of employment.

- **Education and training**, which has gained ground in its Victorian employment share recently, in part due to poor performance of other sectors (in particular arts and recreation), but also in part due to a long awaited pick up in international student arrivals.
- **Financial and insurance services**, where Melbourne's finance sector has made considerable ground at Sydney's expense – finance employment in Victoria grew by nearly 9% in the year to March, while in New South Wales it declined by nearly 7%.

Sectors which stand out for their relative lack of representation in Victorian employment include:

- The **mining** sector. Victoria has relatively few mining projects compared to the States in the north and west; and
- **Arts and recreational services**, which is usually a key strength for Victoria, but in the past year has shed over 10% of its workforce. The sector as a whole has shrunk in the past year, due to continued cost cutting by both businesses (meaning less spending in hotels, restaurants and bars) and families (with the high $A limiting domestic travel).

Victoria's industrial structure is important in determining the effect of Australia's current economic pressures – those of relatively high interest rates and a high $A – on the State's outlook. It suggests that Victoria's economy has been relatively more exposed to the 'two speed economy' pressures of recent years than has been true of the Australian economy as a whole.

The strength in the $A and in interest rates (or, more correctly, interest rates here versus those in other developed nations) **have been a greater negative for Victoria than for Australia as a whole**. **Yet expectations for a fall in the value of the $A should equally be better news for Victoria than for Australia as a whole.**

For now, however, the continuing strength of the $A (even though industrial commodity prices and interest rates have fallen) places the State's manufacturing, tourism and international education sectors under pressure.

Victoria has an unfair share of industries adversely affected by a strong $A (manufacturing, agriculture, higher education) and by relative strength in interest rates (housing construction and the retail sector).

3.2 The State's economic outlook

Despite some falls in recent weeks, the $A remains very high by historical standards – and higher than it usually would be given interest rates have already been cut a fair way and that commodity prices are rather lower than they were. Given its industry strengths in the likes of manufacturing, foreign students, wine and dairy, that currency strength is hurting Victoria more than other States. In effect, Victoria's economy is relatively more 'dollar dependent' than other States, whereas New South Wales' economy is more interest-rate sensitive.

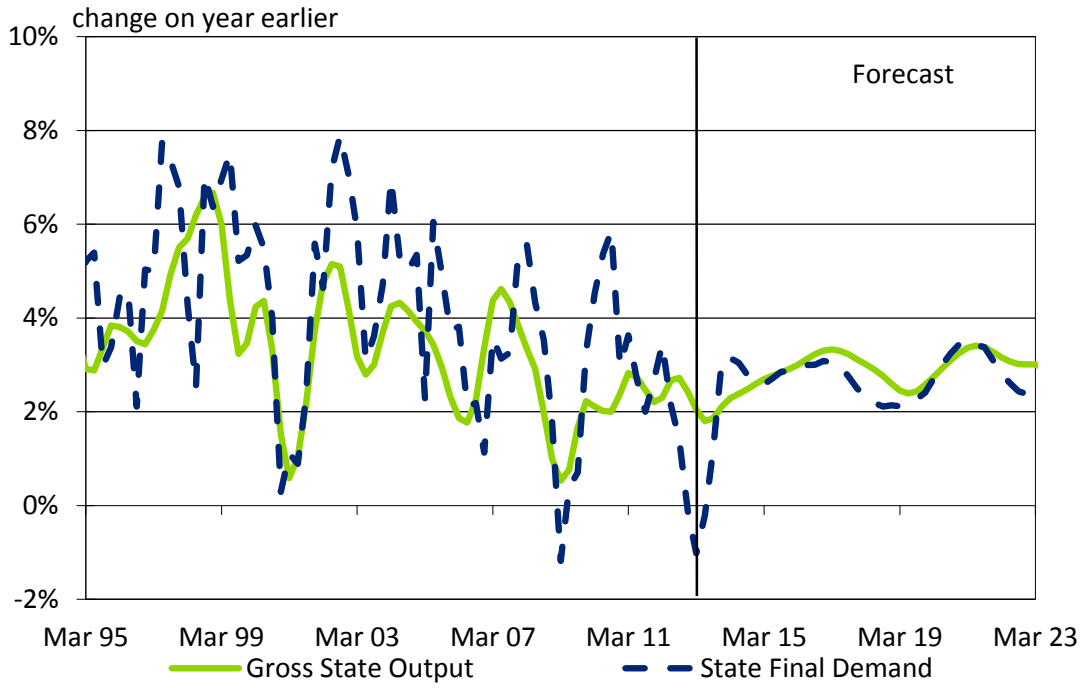
Indeed, the $A is now a major pressure on key sectors where this State has a high exposure relative to other States. Manufacturing is at the centre of these impacts, with job losses continuing as the high $A leads more firms to shut their doors. But international education and tourism are also hurting. This State had an above average share of the foreign student market, especially Indian students. Yet despite recent improvements, the pressure of the $A is

hurting foreign student numbers. Fewer foreign students and a drag from the $A on international tourist visitors mean occupancy rates for the State's hotels have been edging down over the past year.

And those pressures have also been the source of bad news elsewhere in the State's economy. Most crucially, job gains have been held back, job vacancies are continuing to fall, and the unemployment rate has crept higher since mid-2011, to now be above the national rate. That has led to weakness in retail trade which is running below national gains.

Meanwhile, manufacturers as well as other businesses haven't been investing as they used to, while the State Government has been embarking on some cutbacks of its own. The car industry in particular has felt the brunt of a high dollar – Ford has recently announced it will shut down its Victorian operations in late 2016, making about 1,200 workers redundant, the equivalent of roughly 5% of the State's total car manufacturing workforce. Factor in the workers who are dependent on those plants (everyone from suppliers, truck drivers, to coffee shop workers), and the potential impact could be rather larger.

Chart 3.2: State output and demand (change on year earlier)



Source: ABS, Deloitte Access Economics macroeconomic model

Amid such events, perhaps it's no surprise that the headlines have been referring to a State in recession. Yet that's a simplistic conclusion. The Bureau of Statistics only publishes GSP on an annual basis, but we at Deloitte Access Economics do our own estimates using the available data. On our estimates (seen in Chart 3.2), the State's economy is slowing, but it hasn't been shrinking. In other words, although the State is hurting, our measures suggest the State isn't in recession.

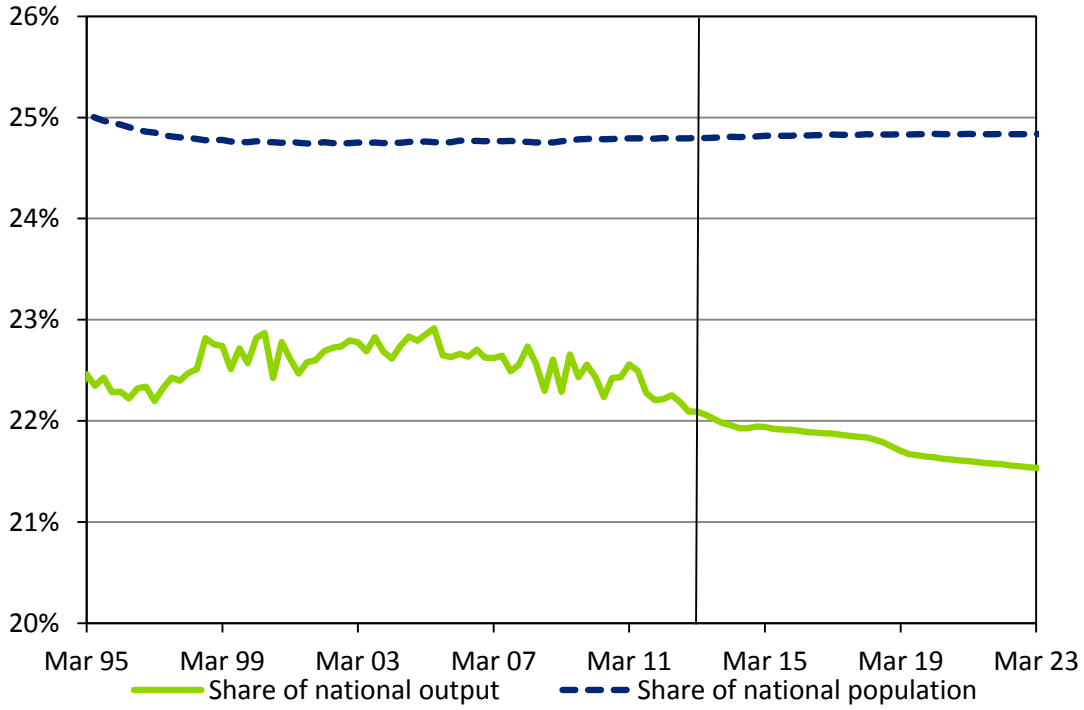
That said, with all of the negatives of late, it's no surprise that investment in the State by business and government is also falling. (Latest official data were influenced by the completion and transfer of the Wonthaggi desalination plant from private to public hands, but

total investment across both the public and private sectors has fallen.) All other things equal, a lower rate of investment today means that the State's productive capacity in the future will be less.

However, there are some good signs for the outlook. Population gains remain very solid, and are rising in line with national gains. That will help to underpin economic activity, not least in the housing market. On that note, lower interest rates are improving affordability, and housing prices are starting to stir, although rental vacancies are rather high. Yet there is likely to be better news to come on housing construction (as well as retail) from lower rates. Moreover, car sales have been strong, and sentiment among families and business is now lifting.

As Chart 3.3 shows, the pain of a high $A on the State's dollar dependent sectors may combine with further outperformance by the resource sector States to lead to further losses of Victoria's share of Australia's economy, albeit by a lesser margin, as the resource construction boom passes.

Chart 3.3: Victoria as a share of national totals



Source: ABS, Deloitte Access Economics macroeconomic model

Table 3.1 below sets out Deloitte Access Economics' current forecasts for Victoria's economy.

Table 3.1: Victorian demand and output forecasts

Year to March changes in Victoria key economic variables

Annual % change (unless noted)	2012	2013	2014	2015	2016	2017	2018	2019	2020
Consumption									
Private sector	2.7	0.6	1.8	2.8	2.9	3.0	2.6	2.1	2.4
Public sector	2.4	-0.2	-0.7	4.1	4.1	3.0	2.1	1.7	1.7
Private sector investment									
Dwelling investment	5.2	-0.9	2.3	4.2	4.1	4.2	0.0	-2.9	-0.5
Non-residential building	-3.0	11.2	2.8	0.9	2.6	2.7	2.9	0.6	0.5
Engineering construction	-1.4	-4.2	20.0	10.7	3.4	0.9	2.5	-0.9	-1.4
Machinery and equipment	6.3	1.5	3.1	1.8	0.4	3.6	3.8	1.9	2.4
IP and livestock	1.9	7.9	4.8	-1.7	-2.3	2.9	1.0	0.8	0.7
Public investment									
General Government	0.6	-28.7	-0.7	3.5	2.1	2.4	2.1	1.9	1.9
Public enterprises	-11.2	-19.1	9.2	10.1	2.4	2.4	0.7	-0.5	-0.2
Real final demand	2.7	0.6	1.8	2.8	2.9	3.0	2.6	2.1	2.4
Private sector	3.9	1.1	1.5	2.6	2.8	3.2	2.9	2.3	2.7
Public sector	-1.2	-1.3	2.7	3.4	3.1	2.5	1.8	1.4	1.4
Gross State output	2.6	1.9	2.4	2.8	3.2	3.2	2.8	2.5	3.0
Employment	1.0	1.1	0.9	1.1	1.2	1.5	1.7	1.5	1.3
Unemployment rate (%)	5.3	5.5	5.9	5.7	5.7	5.6	5.5	5.4	5.5

Source: ABS, Deloitte Access Economics macroeconomic model

4 The utilities sector outlook

The utilities sector (technically the electricity, gas, water and waste services industry, which is division D of the Australian and New Zealand Standard Industrial Classification, 2006) covers economic units engaged in the provision of:

- electricity;
- gas through mains systems;
- water;
- drainage; and
- sewage services.

The Australian Energy Regulator (AER) is principally concerned with the regulation of the electricity and gas markets.

4.1 The policy backdrop for the utilities sector

Regulation of the electricity market has been a topic of considerable policy interest in recent months. While the much anticipated introduction of the carbon price resulted in a 5 – 13% increase in retail prices nationally (AER 2012), policy attention at the Federal level has since shifted to examining the role played by capital investment in distribution networks in raising electricity prices.

4.1.1 Gas extraction and supply

While demand for gas for electricity generation is likely to grow in the longer term, the existence of major LNG export projects in Queensland and Western Australia has seen increases in production focused largely on export markets.

With large long term contracts to supply foreign markets in the Asian region becoming the norm, major domestic consumers are complaining of difficulty securing supply contracts from 2015, raising the spectre of gas shortages despite a booming export market for LNG.

Indeed, a range of gas users including major electricity generators and manufacturers have been calling for reserving policies aimed at ensuring sufficient domestic gas supplies. While such a policy is highly unlikely to prove the most efficient response, the current debate does highlight some complex issues emerging in the Australian gas market over coming years.

Development of coal seam gas reserves may provide a way to ease pressures on local gas supplies. Expansion in gas production in the east coast States, particularly New South Wales and Queensland, has the potential to secure rapid growth in gas supplies and keep the cost of natural gas low for domestic users.

However, such development has been hampered to date by community opposition and political influence on the planning process. Recent moves to amend the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to grant the Federal Environment Minister powers to prevent developments on the basis of impacts on water resources (a so

called ‘water trigger’) highlight the regulatory uncertainty facing the coal seam gas industry in the short term.

If such regulatory hurdles continue to hamper the expansion of the industry, the domestic gas market may find a more constrained growth in coming years.

4.1.2 The carbon price and Renewable Energy Target

While the debate has shifted away from the carbon price in recent months, it continues to have important policy implications for the sector. Electricity generation accounts for approximately 35% of Australia’s carbon emissions (Garnaut 2011), meaning the sector is a key target of the carbon price arrangements.

At present the carbon price (introduced in July 2012) is set at a fixed price of $23 per tonne, but will be replaced by an emissions trading scheme in July 2015. Under the emissions trading scheme the price of carbon in Australia will be linked to the price of EU carbon allowances.

Yet the expectations about the effects of the scheme after the shift to emissions trading are changing rapidly. A number of domestic carbon permits made available to emissions intensive industries as part of the compensation arrangements, and the price of carbon permits on the European carbon market fell to record lows in recent months. That combination will limit the impact on domestic emitters, including electricity generation.

Over time, the carbon price and emissions trading scheme is intended to shift the sources of power used by electricity generators from brown coal to less emission intensive sources. Brown coal-fired generators have a carbon footprint that is approximately one and a half times that of black coal-fired power stations and more than twice that of gas-fired stations.

This has had a noticeable impact on new investment in generators already. Currently, 41% of new generators being developed will use wind power, 37% will be gas-fired and 17% will use black coal (BREE 2012). No generators which use brown coal are currently under construction.

However, with the effective price of carbon set to halve (or perhaps even fall more sharply) from 1 July 2015, the carbon price pressures on the industry look to be less pressing than expected – at least in the short term.

That is likely to place further pressure on other policy levers designed to achieve reductions in carbon pollution, such as the Renewable Energy Target (RET). The RET requires electricity retailers to source a certain proportion of their power from renewable sources, with 20% of Australia’s energy required to come from renewable sources by 2020. The scheme currently extends out to 2030.

While the carbon price is a more economically efficient way of reducing greenhouse gas emissions and significant concerns continue to be raised about the cost of RET, the Climate Change Authority has recently recommended that the RET be continued at current levels given the risk to investor confidence associated with any changes to current targets (Climate Change Authority 2012).

At present, the costs of the RET, mandatory solar feed in tariffs and energy efficiency schemes are responsible for around 5% of total retail electricity costs (AER 2012), although

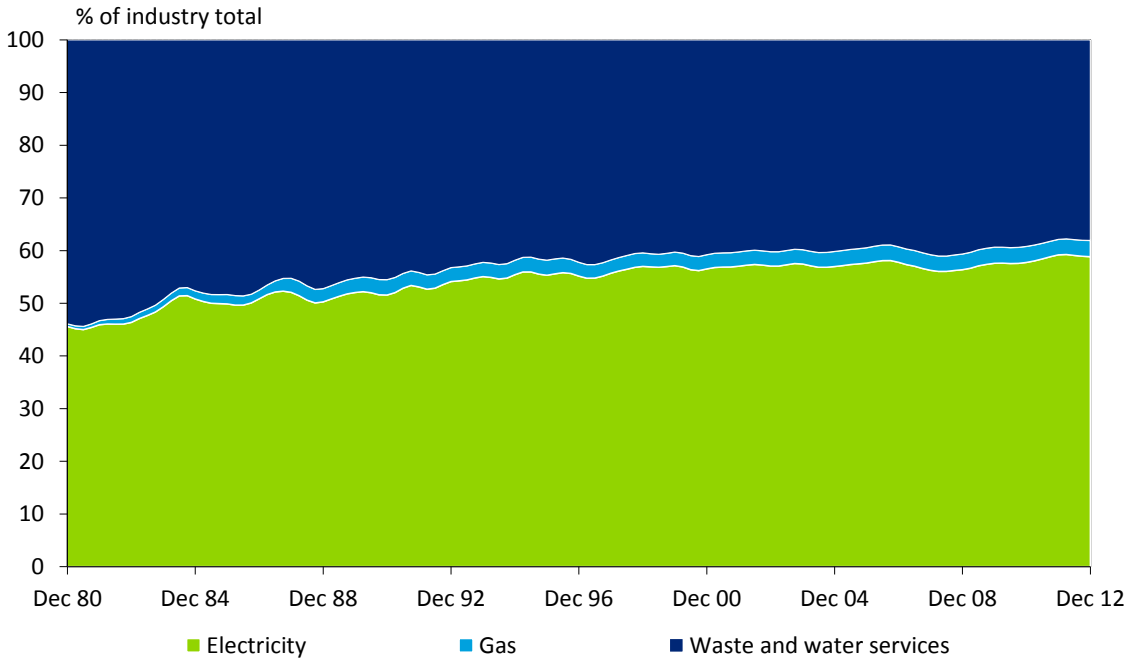
responsibility for solar feed in tariffs and energy efficiency schemes rests with State governments.

4.2 The outlook for the utilities sector

As Chart 4.1 below shows, electricity has accounted for a rising share of the sector over time while water has made some notable inroads in recent years. However, since the GFC, the share of the utilities sector accounted for by electricity has been falling.

The recent decline in electricity demand has continued this trend.

Chart 4.1: Composition of output in the utilities sector



Source: ABS

While the utilities sector at the national level has generally experienced growth in recent years, that growth has lagged national output growth and hence the sectors share of overall output and employment has fallen. Chart 4.2 indicates that utilities output has been declining as a share of national output since 1995.

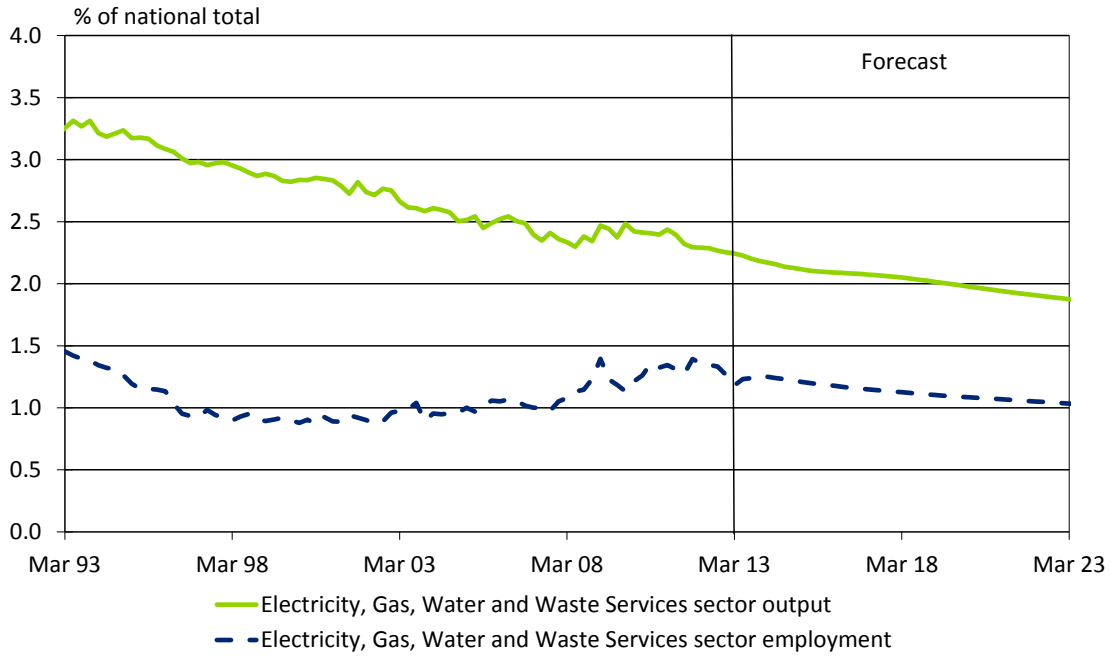
Recently, the Australian utilities sector has been affected by some of the major trends affecting our economy over the past decade:

- **Competition for workers heated up:** The rise of emerging Asia boosted the demand for workers in sectors such as mining and construction. These sectors compete with the utilities for some types of skilled labour.
- **A rise in the $A and relatively high interest rates hurt some customers:** An accompanying increase in Australia's currency and our interest rates relative to the rest of the world proved problematic for trade exposed sectors such as manufacturing (itself a notable user of the utilities). Similarly, relatively high interest rates kept housing construction on a short leash, limiting new connections to electricity, gas, waste and water services.

- **A change in regulatory burdens affected productivity:** A series of mandatory renewable energy targets (MRET) meant that these environmental-related goals led to a shift towards 'less productive' methods of energy generation, while the imposition of a carbon tax affected profitability and expansion plans.
- **A rise in prices hurt demand:** Partly due to the operation of MRET and the carbon tax, partly by way of catch up, and partly due to the need to underwrite capacity expansion, prices leapt – especially for electricity. In turn, that generated a hit to electricity demand.
- **The record on new investment has been patchy:** Many owners of utilities companies have been loath to invest in new capacity amid political and other uncertainties. That said, other owners – and especially government enterprises – have been more willing to add to capacity (including some desalination plants in the water sector).

Many of these trends have been negatives for Australia's utilities sector – demand growth softened, regulation added to the need for workers, yet wage competition was strong. On the other hand, **population and income growth was good**, keeping overall sectoral outcomes reasonable despite this list of negatives.

Chart 4.2: The utilities as % of Australia's economy and jobs



Source: ABS, Deloitte Access Economics' macroeconomic model

Indeed, utilities employment as a share of national employment actually began to rise over the past decade in contrast to the decline in the utilities sector's share in national output. These opposing trends of falling output and rising employment have combined to create a large fall in measures of productivity in the utilities sector over the last decade.

Notably, that trend has reversed of late, with employment in the utilities declining as a share of the national total since 2011.

And the future economic environment will bring both positives and negatives to the utilities sector. For instance:

- **The 'construction cliff' looms:** The mega mining construction projects spawned by the rising of emerging Asia supported Australia's economic growth at a time when families were being cautious with their spending, with housing construction in the doldrums and State and Federal Governments amid a phase of cost cutting. However, they will soon peak as a share of the economy. That means Australia's economy will lose a key driver of recent growth. Private business investment generated a contribution of 90% of all the growth in Australia's economy in 2011-12, that share fell to an estimated 60% in 2012-13. Our projections have this share falling to less than 30% in 2013-14, and then have private business investment spending generating a mild drag on the economy as soon as 2014-15. Other things equal that will generate a more modest business backdrop for the utilities.
- **Mining and engineering construction will compete less vigorously for workers:** Similarly, those sectors which saw employment levels surge won't do the same in coming years. As a share of total employment, construction may have peaked in late 2011, though an increase in housing work may keep this sector's employment share high until early 2015. And mining's (small) share of total employment may now flat-line.
- **The damage wrought by $A strength has become notable:** In some cases, demand by big electricity users such as aluminium smelters is under threat as the 'sweetheart deals' of the former come up for renewal. And in one large and known negative for Victoria, Ford has flagged it will cease car-making in Australia from 2016. That poses considerable 'critical mass' risks for the State's manufacturing sector.
- **The big lift in electricity prices should level off:** This will be a positive, albeit a slow moving one. Both businesses and households are still adjusting to the considerable price increase of recent years.
- **Population growth should be solid, but income growth may not be flash:** There has been a particle recovery in population gains of late, though the latter may be threatened by a more restrictive approach to 457 visa migrants (as well as an increase in costs for this group). However, overall employment gains may be modest, as may wage growth, with both already experiencing only modest momentum.

One issue still looms large is the rapid increase in electricity price in recent years.

In the last five years the retail cost of electricity has risen five times faster than the CPI. As discussed earlier, there have been many factors driving that, including the carbon tax and mandatory renewable energy targets, neither of which is as effective as it could be in reducing emissions at minimal cost. The very high reliability standards imposed by State Governments are also a significant driver of rises in electricity prices as it encourages over investment in infrastructure. The need for such investment is exacerbated by the absence of peak pricing in most jurisdictions.

As a result, the electricity system is only rarely used at its full capacity even though that capacity was very expensive to build in the first place.

The impact of these policy issues has slowed output growth in the sector considerably (see Chart 4.5 later). Price increases of the magnitude experienced in the last five years have an impact even when demand is relatively inelastic.

While demand has fallen from residential properties, most electricity use is by businesses, who have also begun to cut back on electricity use.

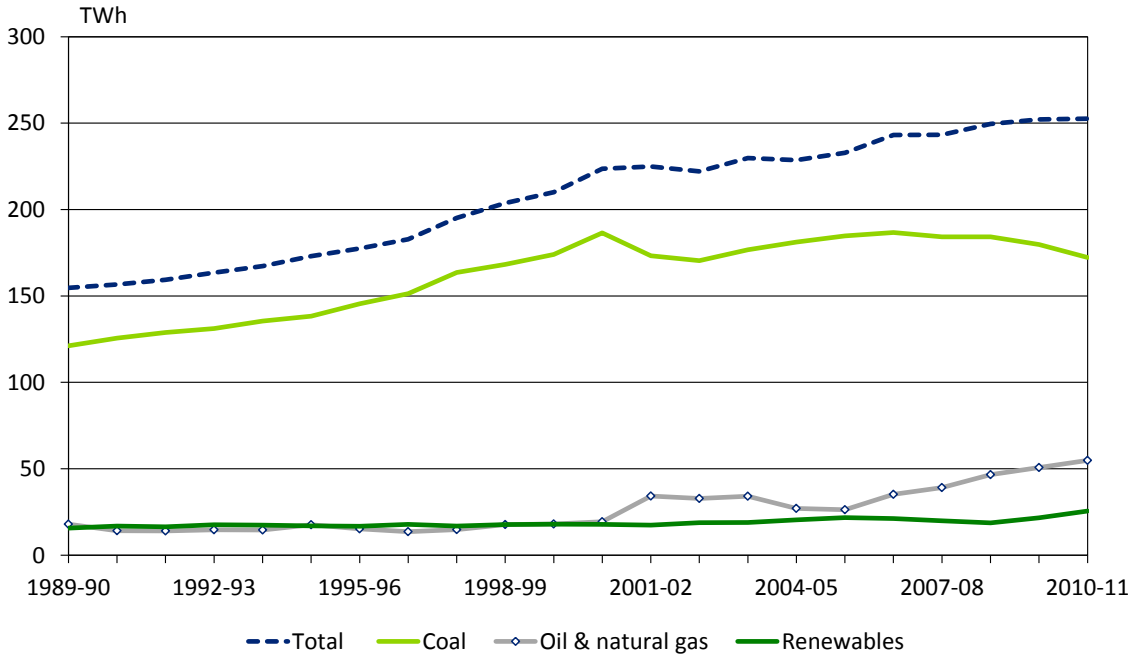
One of the major users of electricity is the manufacturing sector, who account for 31.7% of total electricity demand (IBISWorld 2012). Growth in manufacturing (especially non-ferrous metals refining which is a major user of electricity) has been weak and is likely to remain so over the next few years, partly as a result of the high Australian dollar.

In trend terms, there is at present no growth in the output of the utilities sector as a whole, or in its water and waste management component. Falling electricity production is roughly being offset by rising gas production.

The recent lack of growth is due to a wide set of factors. However, the essential theme common to those factors is that the services sold by the utilities have become relatively more expensive, and hence both families and businesses (who are firmly in cost cutting mode) have been scrimping and saving on their use of energy and other utilities.

Electricity generation accounts for 60% of the sector as a whole. The sector's output is back to where it was when the GFC hit, although its prices aren't back at 2008 levels. At least those higher prices are helping to finance an expansion of capacity, with $18 billion in work underway, and another $26 billion in the pipeline.

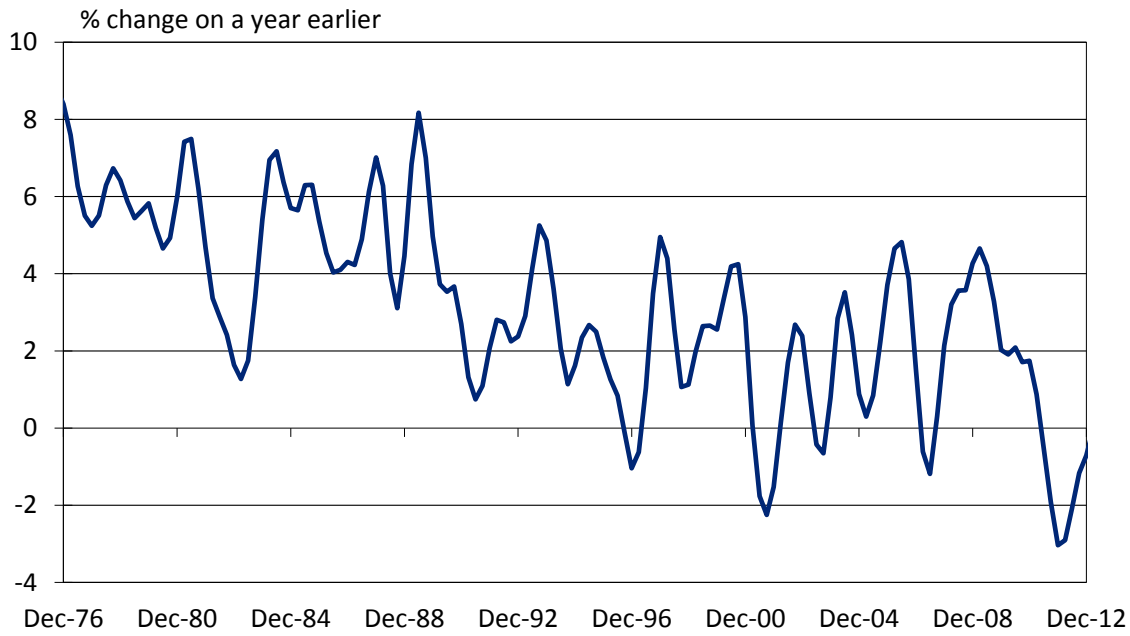
Chart 4.3: Australian electricity generation, by fuel type



Source: BREE

Then again, those numbers for the investment outlook are now falling, with private sector investors – understandably enough – worried by the policy environment.

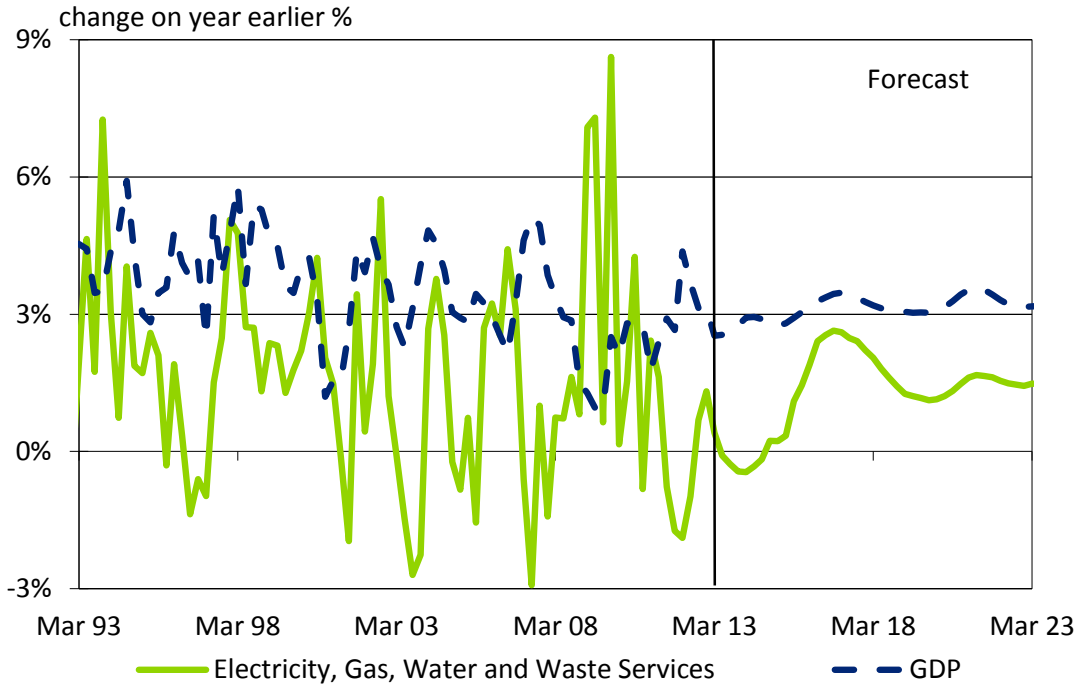
Chart 4.4: Growth in trend electricity output



Source: ABS

Consequently the short term outlook for demand remains modest, as seen in Chart 4.5.

Chart 4.5: Utilities output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

On the supply side, the combination of the carbon price and flatter demand has resulted in some shift in the sources of electricity generation, with all the generators brought offline in

2012 being coal fired power stations. Nevertheless, the decline in electricity demand has meant that there is unlikely to be a need for new investments in baseline capacity for at least four years. This will delay a substantial shift towards gas-fired power plants, which are expected to account for 24% of total electricity demand in the eastern States until around 2025 (AER 2012).

Other parts of the utilities sector outside electricity and gas have been attracting considerable investment recently. However, the completion of some major water projects in recent years (including some large desalination plants) means it is likely that investment may move down in that sector over the coming years.

5 The competitor industry outlook

Individual sectors can be expected to see their wage cycles differ from the average:

- Longer term wage outcomes by occupation and by sector tend to reflect developments in labour productivity and inflation.
- Shorter term outcomes also reflect the pace of demand and the availability of supply among relevant types of skilled labour.

This chapter discusses the industries which compete most heavily for labour with the utilities sector – the mining, construction and administrative services sectors.

5.1 Mining

Despite the well-publicised peak in resources investment which is due to occur in coming months (if it isn't here already), the pipeline of past and present work remains huge, especially so in LNG, and the production payoff from it will be similarly large. However, there is speculation around the level and rate at which the nation is able to get these major resource projects off the ground.

The Government's official commodity forecaster, the Bureau of Resource and Energy Economics (BREE) is of the view that:

> *"… the stock of committed investment has peaked and is projected to decline over the next five years as a result of fewer high value projects progressing through the investment pipeline to offset the completion of the LNG projects that are currently under construction.*
>
> *… BREE estimates that around $150 billion of high value projects have been delayed or cancelled since April 2012, while cost increases to committed projects currently account for 11% of the stock of committed investment."*[2]

There are a few reasons for that scenario of a peak then a fall in Australia's investment spending:

- First, the nation (and its resources sector) has already spent a lot on resource-related investment. Engineering construction (where most of the resource-related work shows up) is currently 6% of the economy, versus an average of just 1% in the 1980s and 1990s.
- Second, not only is there a very large pipeline of production in resources in Australia and around the world well on its way, analysts are beginning to question the size of future growth in commodity demand. Because China's development model has been so overweight in infrastructure and housing, it has been equally overweight in its demand for the likes of coal and iron ore. (For example, China accounts for 60% of the world's iron ore usage.) Yet it is clear the pace of steel output growth in China is slowing, and that although there are notable future gains to be made, they may still fall well shy of the more

[2] See http://www.bree.gov.au/media/media_releases/2013/20130522-investment.html

optimistic predictions made for Chinese and global commodity demand. That reassessment of medium term prospects says there is less of a need for a new round of resource investment – the pipeline of coming supply is already large, and the demand it seeks to fill may grow more slowly than some imagined.

- Third, Australia's share of global resource investment is already falling. A large reason is what has happened to relative costs in recent years. Many of these (new taxes, exchange rates, interest rates, environmental and native title and other approvals, the lift in wage rates for given occupations, and the like) aren't in the control of individual businesses. And while some cost levers are under the control of individual businesses in the resources and mining services sectors, it definitely doesn't help that recent times saw the $A stay strong even though commodity prices fell.

The ABS' capital expenditure survey indicates that mining investment is nearing its peak while other commentators are suggesting that mining investment has already peaked and is facing a sharp decline. While on some measures (such as new project commencements) the peak has already been seen, there still continues to be a very large mining investment pipeline at present, and the long construction periods associated with mining investment mean that many of the current projects underway will continue to be in their construction phase for some time yet.

Nevertheless, there is definite pressure on the current pipeline. While large LNG projects continue to dominate the investment program, the economic parameters underlying these and other mining investments are rapidly weakening. The Bureau of Resources and Energy Economics (BREE) believe that $150 billion of high value projects at the feasibility stage have been delayed or cancelled since April 2012.

Deloitte Access Economics' view sees mining investment peak as a share of GDP in late 2013. Thereafter, we project mining investment will begin to decline, though it will remain at historically high levels in the years ahead.

Whatever happens, production and exports of resource commodities will increase. BREE's forecasts are for energy commodities production to lift by more than 50% over the next six years, while output for mineral commodities should lift by more than 20%.

Meanwhile export volumes for iron ore**,** coking coal and thermal coal are to lift by 75%, 50% and more than 90% respectively between now and 2018, while LNG export volumes are expected to jump by more than 350% over the next six years.

That said, these forecasts may prove to be too optimistic – a surge in costs recently has made Australian coal mines far more marginal relative to their counterparts in competing nations such as South Africa and Colombia.

That doesn't mean coal output won't continue to go up over the coming years: decisions to invest were taken a while back, and a lot of those mines are still to be commissioned and sit on financially viable deposits. But it does mean that investment in new coal mining projects in Australia is likely to dry up over the next few years as existing projects are completed and not replaced.

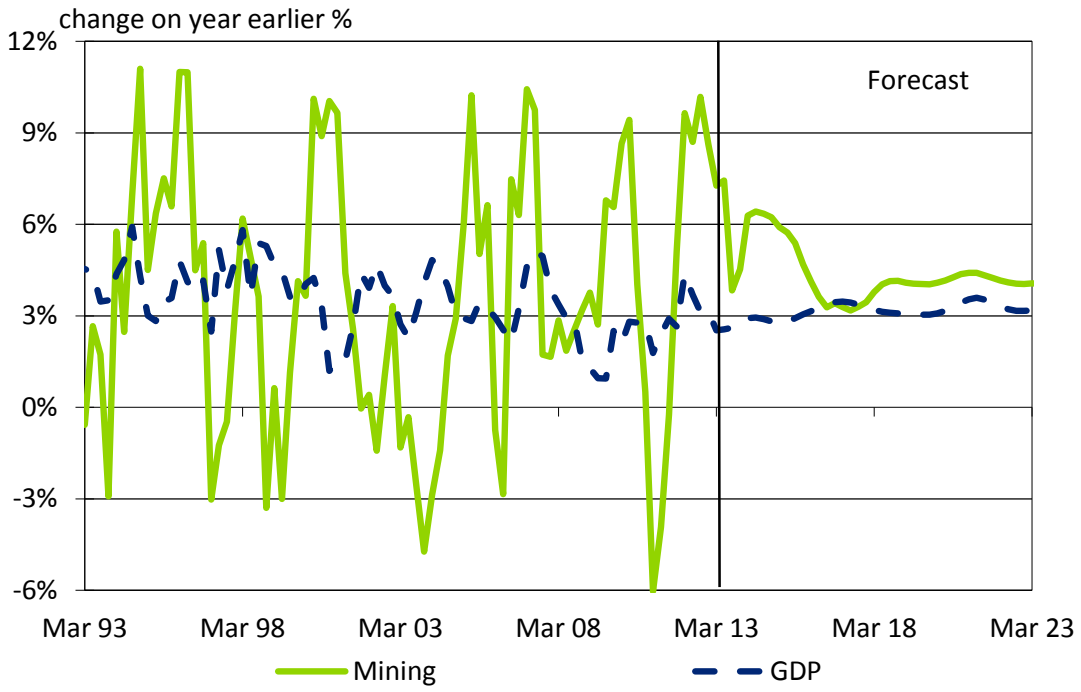
Given that Victoria's mining sector consists almost solely of brown coal mines which face enormous pressures not only from international competition but also from policies such as the

carbon price, as well as ever expanding competition from renewable forms of energy, it is reasonable to assume a relatively bleak outlook for the mining sector in Victoria.

That said, Victoria does have one major project to call its own: the Kipper-Tuna-Turrum oil and gas projects off the coast of Bass Strait that will provide mining output of the State for years to come.

Looking back to the national story, output growth in the mining sector is projected to gradually ease in the coming years – but that is coming off an incredibly high base and as such is still expected grow faster than any other sector we forecast over the next five years – beating even the inexorable growth that Deloitte Access Economics expects to see in health care.

Chart 5.1: Mining output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

Yet we'd be remiss if we left you with the thought that the Australian mining and energy sector didn't face some important challenges. It certainly does. For many minerals, markets are down and relative costs are up. And, by the latter, we mean Australian costs relative to those in other major mineral provinces.

That cost disadvantage will be slow to unwind. Indeed, the future could be already under threat from cost blowouts.

But the bigger question mark lies over LNG markets. If cheap US gas prices spill over into world markets, then that would notably undercut the case for further investment in Australia, as well as notably undercut future export revenues (though the extent of the latter risk would hopefully be contained to new rather than existing contracts).

5.2 Construction

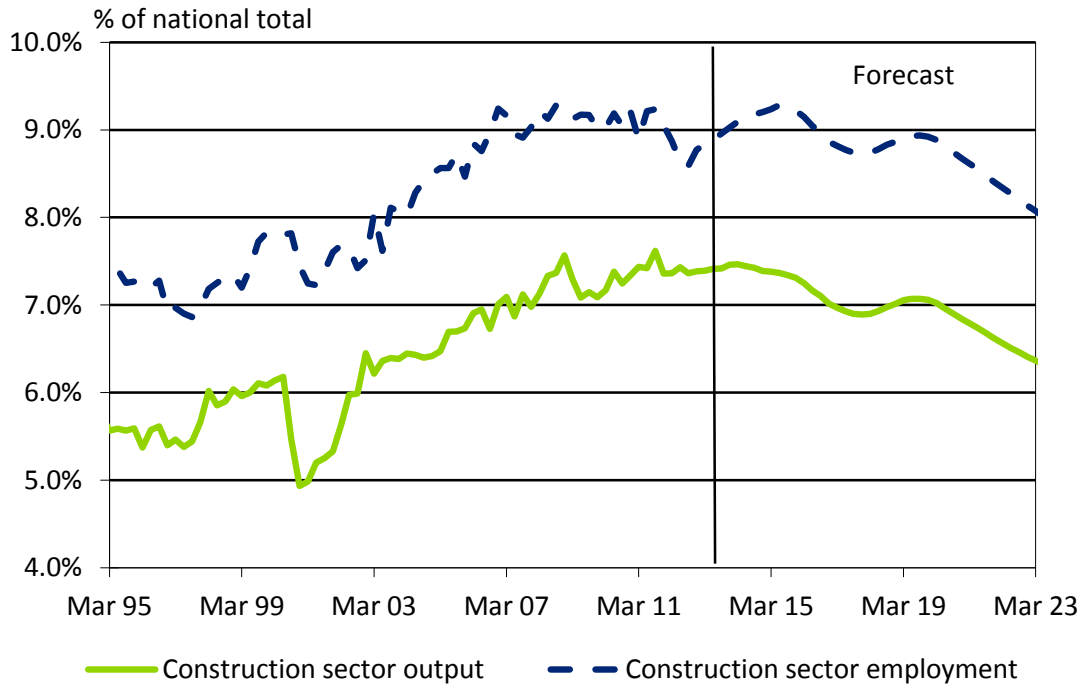
While the mining sector can look forward to relatively rapid expansion over the next five years, the same can't be said for Australia's construction sector. The latter was a big and early beneficiary of the boom in resources – the emerging economies were experiencing unprecedented levels of growth that drove world prices for industrial commodities to record heights, and the scramble to increases our mining production capacity played into the hands of the parts of this sector that was exposed to the resource sector.

A decade ago, the three components of construction – engineering, residential and commercial – were all roughly equal in size. Today the work being done in engineering is double the dollars of the other two added together.

As noted in the above discussion on the mining sector, there will be some key decisions around major projects coming soon that could give an extended lifespan to the current boom in engineering construction. However, as we also note in that discussion, the real chances of those projects going ahead is currently being challenged by rising costs in projects underway and falling commodity prices.

Rather, our view is that engineering work will soon peak and then ease back, causing construction as a share of national output (and employment) to subside in the coming years (Chart 5.2).

Chart 5.2: Construction as a share of national totals



Source: ABS, Deloitte Access Economics' macroeconomic model

Three key factors weigh heavily on the outlook for **engineering construction:**

- **The level of building has been substantial.** Engineering construction is currently 6% of the economy, versus an average of just 1% in the 1980s and 1990s. Hence, even a significant slowdown in spending on resource-related investment will still leave us spending a multiple of what we used to. It may be a slowdown, but it's still a slowdown to massive levels of spending by the standards of the past.
- **Future global growth in commodity demand may not be as good as some thought.** Because China's development model has been so overweight in infrastructure and housing, it has been matchingly overweight in its demand for the likes of coal and iron ore. Yet the pace of steel output growth in China is slowing, and although there are notable future gains to be made, they may still fall well shy of some of the more aggressive predictions made for Chinese and global commodity demand. That reassessment of medium term prospects says there is less of a need for a new round of resource investment – the pipeline of coming supply is already large, and the demand it seeks to fill may grow less rapidly than some had imagined.
- **Australia's share of global resource investment is already falling.** A large reason is what has happened to relative costs in recent years. Many of these (new taxes, exchange rates, interest rates, environmental and native title and other approvals, the lift in wage rates for given occupations, and the like) aren't in the control of individual businesses. And while some cost levers are under the control of individual businesses in the resources and mining services sectors, it definitely doesn't help that recent times saw the $A stay strong – unmoved, in fact – even though commodity prices fell.

Table 5.1: Commercial construction projects (level and change over year to March 2013)

	Definite		Planned		Total	
Sector	$m	% change	$m	% change	$m	% change
Trade	7,154	-11.0%	2,958	-0.2%	10,112	-8.1%
Business parks	2,819	-5.1%	1,975	47.3%	4,794	11.2%
Hotels and Resorts	370	20.9%	4,004	125.3%	4,374	110.0%
Offices	1,582	-47.8%	3,814	345.6%	5,396	38.8%
Education	3,483	-83.1%	797	55.7%	4,280	-79.8%
Health and community services	20,125	3.5%	1,514	-58.1%	21,639	-6.2%
Culture, recreation & other	7,472	63.6%	4,524	10.0%	11,996	38.2%
Business services	941	76.2%	3,715	-1.1%	4,656	8.6%
Government	1,639	-5.2%	130	-75.6%	1,769	-21.7%
Mixed use	15,733	66.7%	695	-78.8%	16,482	29.6%
Total other commercial	**61,318**	**-13.3%**	**24,126**	**6.1%**	**85,498**	**-8.5%**

Source: Deloitte Access Economics *Investment Monitor, March 2013*

And nor is the bad news on projected levels of engineering work much offset by better news in **commercial construction**. The latter never rose to the heights seen in engineering work, because the big drivers of commercial work – the construction of office blocks and shopping malls – haven't been travelling well since the GFC first arrived back in 2008.

That's not just because of the GFC itself, though the latter certainly thinned the pipeline of construction work in these areas. Rather, it is because white collar employment growth has been relatively restrained in the past couple of years, and the same has been true – across an even longer timeframe – for retail spending, with the nation's bricks and mortar retailers now suffering from the additional pain that comes with digital disruption. (Other things equal, the latter reduces the demand for bricks and mortar themselves, and hence has an impact here.)

Some of these negatives were masked once the Federal Government released its *Building the Education Revolution* stimulus package, but have become more obvious now the impact of the latter is already passing into the history books.

Looking ahead, there are only modest signs of better news for commercial construction on the horizon. Interest rates are lower, and that is a powerful plus, but less powerful than it used to be.

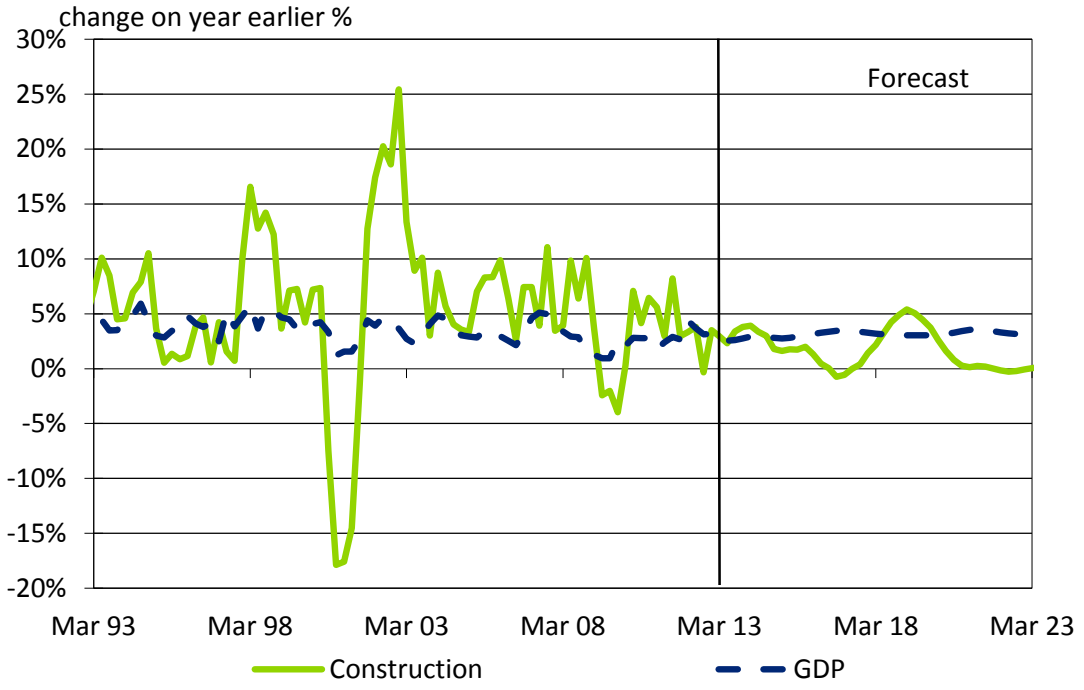
Table 5.2: Engineering construction projects (level and change over year to March 2013)

	Definite		Planned		Total	
Sector	**$m**	**% change**	**$m**	**% change**	**$m**	**% change**
Manufacturing	1,689	-82.3%	22,043	-9.4%	23,732	-29.9%
Transport	66,247	-21.2%	209,870	4.2%	276,117	-3.3%
Communication	44,716	21.7%	175	0%	44,891	22.2%
Mining	258,341	15.9%	192,307	1.4%	450,648	9.2%
Power & water	17,888	-22.5%	27,255	-16.2%	45,143	-18.8%
Rural and forestry	520	14.3%	700	0%	1,220	168.1%
Total engineering	**389,401**	**3.4%**	**452,350**	**1.0%**	**841,751**	**2.1%**

Source: Deloitte Access Economics *Investment Monitor, March 2013*

Accordingly, the hopes for the wider construction sector are now increasingly pinned on the chest of **residential construction**. And, in the main, that is good news. Lower interest rates and solid population growth would usually do the trick all by themselves.

Chart 5.3: Construction output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

And indeed we have few doubts that, although housing demand remains relatively low today, it will pick up relatively solidly in the next two years. Where our doubts lie is with the extent to

which the pace of land release by State Governments and local councils will enable that higher demand to show up in increased construction rather than increased prices.

As always, it may well be a bit of both. Even so, that combination (flat commercial construction, falling engineering work, rising housing activity) should be enough to keep the overall construction sector growing at about the same pace as the Australian economy as a whole through 2013 and 2014.

However, and as Chart 5.3 above also shows, there is greater risk of a cyclical downswing by the time 2015 and 2016 roll around.

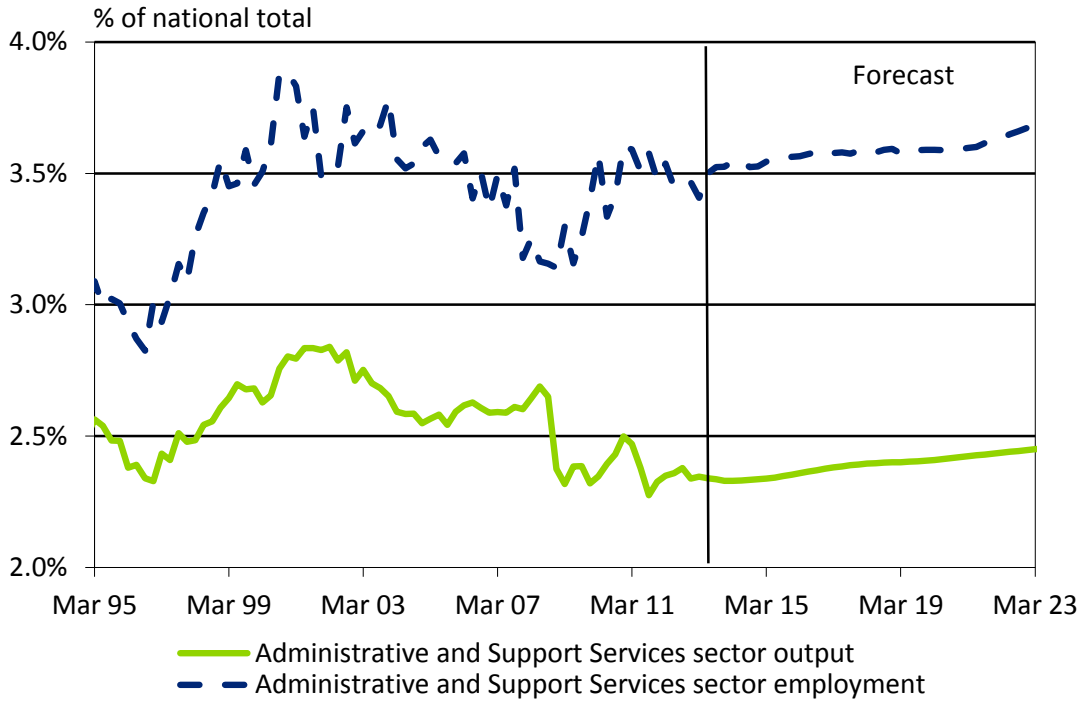
5.3 Administrative services

The administrative services is quite a small sector, accounting for just over 2% of national output, and 3.5% of national employment (see Chart 5.4).

This sector can be broken into two broad areas:

- Administrative services, of which the largest component is employment services (including employment and recruitment services and labour supply services); and
- Building and pest control services.

Chart 5.4: Administrative services share of national



Source: ABS, Deloitte Access Economics' macroeconomic model

Profits in this sector continue to be squeezed as competition increases – shown above by the recent divergence between sectoral output and employment. However, some of the decline in the share of national output as shown in Chart 5.4 above can be attributed to faster growing levels of output in other sectors.

That has caused the administrative service sector to lose output share since around 2007.

Moreover, Chart 5.5 clearly shows the level of volatility in the sector has increased dramatically since around 2007. The GFC had a significant impact on the sector as businesses sought cost savings and productivity gains rather than growth through additional employment.

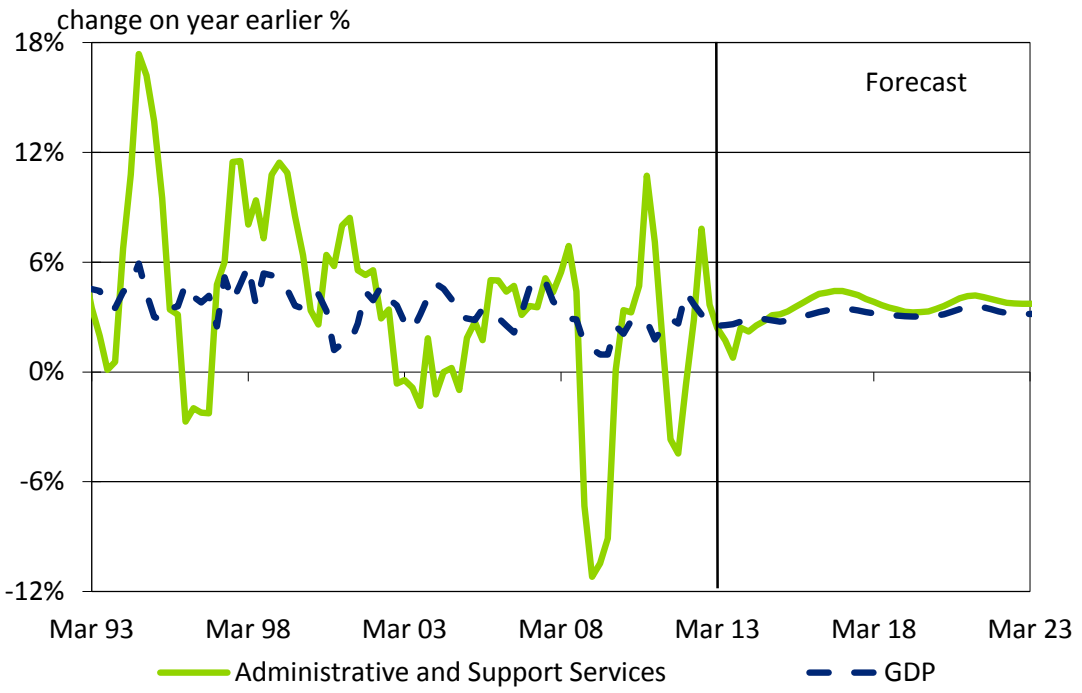
That played havoc with the recruitment and human resource service sectors.

More recently, the decline seen in Chart 5.5 around 2011 was a result of the continuing volatility in the Eurozone, as the financial position of a number of national governments in the region was brought into question.

These movements illustrate the degree in which the administrative services sector is subject to the conditions of the wider economy – as much as it affects the spending decisions of businesses. Generally, business will, where possible, reserve expenditure on services such as recruitment, cleaning contracts, and building maintenance when revenues are good and confidence is up. The last couple of years have been some of the toughest for business revenues (for those outside the mining sector) and business confidence.

Chart 5.5 shows a projected decline in the level of output from the administrative support services sector leading up to 2016. It is expected that the sector will continue to be adversely affected by cost cutting measures by business, as the retail and financial services sectors continue on a low growth path, while an expected decline in the size of the public sector workforce over the next few years will reduce demand from the public sector.

Chart 5.5: Administrative services output growth



Source: ABS, Deloitte Access Economics' macroeconomic model

However, some public sector workers that lose their jobs may utilise recruitment services in order to seek employment in the private sector.

Over the long term the outlook for growth in this sector remains solid. The rate of baby boomer retirements will increase over time, increasing the need for recruitment services, while cleaning services are likely to experience strong growth as the rate of households with both parents working increases, and time poor individuals seek to outsource cleaning services.

6 The national outlook for wages and prices

This chapter considers a series of related issues affecting the national wage outlook, with the wage outlook then discussed in section 6.3 below.

6.1 Shifts in wage and cost relativities are rarely permanent

Over a long enough time period, growth rates in the costs of materials and labour across different regions should not differ too much at all.

That is because, if prices or wages became too different over time, then there would be money to be made in shipping products or people moving home so as to limit those divergences once more.

Similarly, there are some natural limits to the extent or period to which wages and prices can be notably higher or lower in one State or region versus another. For example:

- Workers can move between and within States ("we'll leave Hobart and try our luck in Brisbane").
- Workers can move to Australia from other nations.
- Permanent and temporary (visa 457) migration may be bureaucratically slow to move, but has the potential to ease a transition period.
- As do shifts by permanent residents.
- Shifts by New Zealanders (who face less restrictions on migration than do those from other nations).
- Shifts in wages can and will see people substitute into growing areas related to their existing skills ("I'll leave construction and try my luck in mining").
- Ditto shifts in relative wages can delay retirements or exits ("We'll have a baby next year"), as well as encourage new entrants ("I'm going to study electrical engineering, because wages in that occupation are good").
- Shifts in the use of labour due to changes in relative costs ("We'll use more Enrolled Nurses and less Registered Nurses because wages for Registered Nurses have risen relative to those for Enrolled Nurses").

Many of these 'equilibrating factors' can be very slow to operate, meaning that divergences in wages across States (and, for that matter, across sectors and occupations within a State) can persist for long periods.

6.2 The outlook for the CPI in Australia

It's hard to see immediate dangers to the inflation outlook. **Demand growth** is only strong outside suburban malls, meaning the strength of Australia's economy as a whole masks modest retail price pressures. And not only is wage growth subdued, a recent lift in productivity also reduces inflation risks. Finally, the $A is riding high, so import prices for the moment, continue to dampen overall price growth.

Not all these positives for the inflation outlook will last. Retail may look healthier in the next year or two amid an extended period of low interest rates, and that could restore some of its lost pricing power (but only some). Wage gains may gather speed and productivity growth may lose it, also adding to the risks. And a flat to falling $A will stop providing additional protection to import prices.

That said, it looks like 2014 at least before inflation risks force their way back to centre stage in Australia's economic debate.

For now, interest rates are low and, as usual when money is cheap, asset prices are rising – sharemarkets have been on the front foot for almost a year, and Australia's housing prices are now following suit.

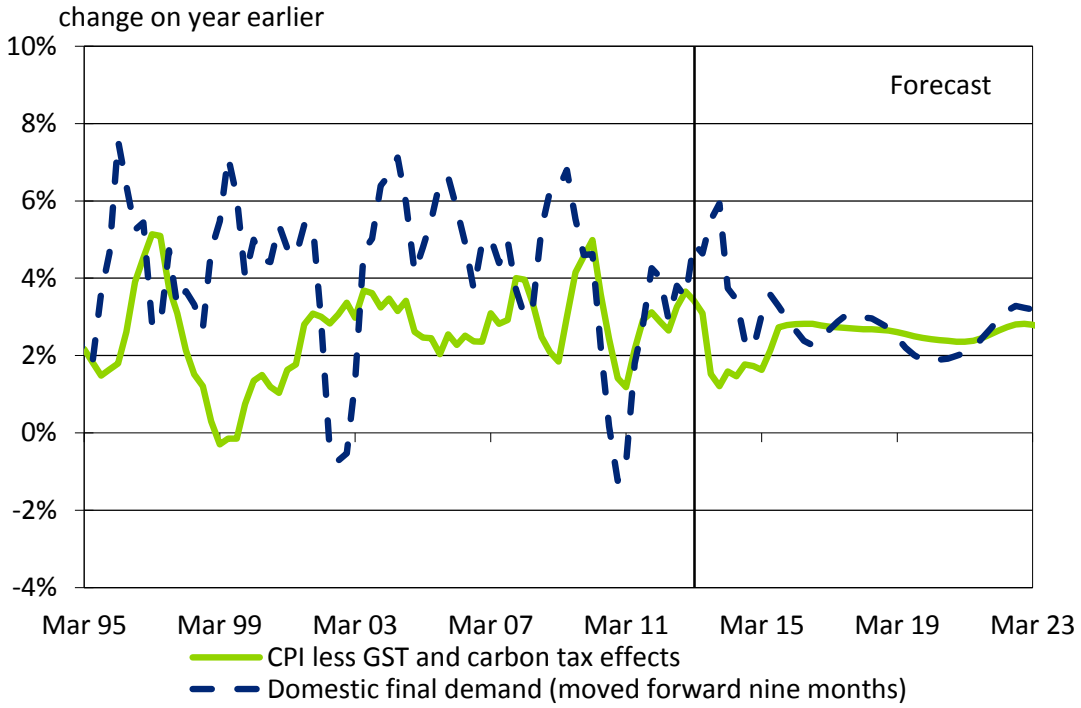
Yet Deloitte Access Economics still sees little risk for that price growth to spill over into **retail prices** – wage growth is too weak and the $A is too strong. It is true that some big one offs have added to inflation in Australia in recent times: the carbon price has begun and so too has means testing of private health insurance (PHI) rebates.

Yet an economy which has been struggling with the deadly duo of relative strength in exchange and interest rates is one that hasn't been generating too much by way of price pressures.

Taking account of those one offs that have boosted the price levels, underlying inflation is still in the groove, sitting roughly in the 2¼ to 2½% range. That said, and although it has been bulked up by the carbon and PHI effects mentioned earlier, it has to be said that there remains a stubborn core to inflation in sectors which are well removed from the price dampening pressures imposed by world competition. Inflation among these "non-tradables" products continues to sit very close to 4% over the past year, as indeed it has done – year in and year out – for some time now.

Nor will the projected sharp falloff in **domestic demand** growth hold many implications for the inflation outlook (see Chart 6.1 below). Just as the pace of the moment is due to mega mining projects, the passing of the peak in spending on these will also push down domestic demand growth, but hold few implications for demand-driven inflation pressures as it does so.

Chart 6.1: The lagged impact of output on prices



Source: ABS, Deloitte Access Economics' macroeconomic model

Rather, the demand most relevant in terms of its flow on implications for retail pricing – the pace of retail sales – remains in the doldrums. Or, to be more exact, although the pace of retail spending lifted back to trend in late 2012, that follows an extended period of outperformance. In addition, even though sales growth may have lifted, that was not met by a lift in pricing power. That is because much retail pricing in Australia remains well above its currency-adjusted equivalent in the rest of the world, while the rise of technology, online buying opportunities, more frequent overseas travel and the $A's robust strength means that pricing power lies increasingly with the consumer.

That's not true for all of retail. The bigger the service component within a product, the more that pricing power for it lies with the business rather than with the buyer. However, suffice to say that the strength of Australia's economy is unlikely to lead to too many problems for the inflation outlook in the next year or so.

That said, the projected return to strength in housing construction is a reminder that, even if current inflation risks from the pace of demand is low, that's not going to be a permanent state of affairs

The recent rebound in **productivity** growth has kept **labour costs** relatively subdued. That much needed improvement in productivity has two causes. First, the nation is finally getting more of an export dividend from past investment to increased mining production capacity. Moreover, that is a gift which will keep on giving for some time yet. Second, and more importantly in terms of recent productivity performance, the squeeze on profits means that line managers are now similarly squeezing out efficiencies with a passion that hasn't been seen for a few years. Or, as we've noted before, it is often the case that productivity picks up when profitability falls back.

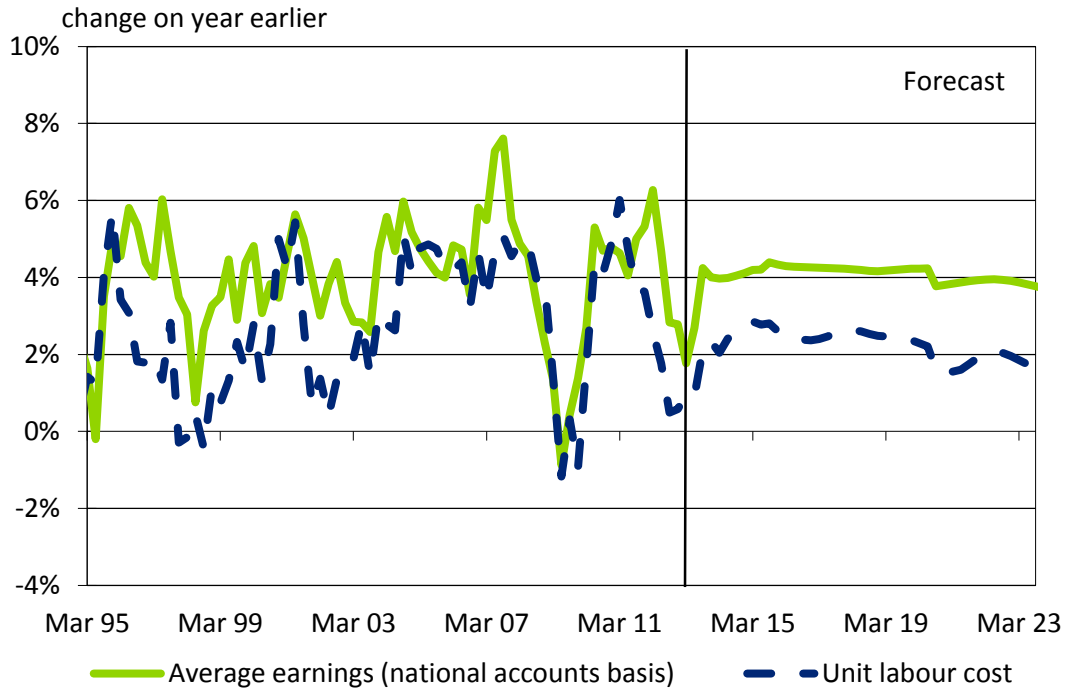
Import prices are falling – yet again. Indeed regular bouts of deflation in the price of imported products, are currently common place, with the level of import prices today the same as they were in late 1985.

Indeed, the average imported product costs the same today as it did way back in 1985. If it cost $100 then, it costs just $100 now. To be more exact, many things are cheaper than in 1985 (notably hi tech products) while many are more expensive (such as metals and oil), but the net is zero, with no net import price inflation in almost three decades.

Not only are some of the technological trends which have cut key prices in decades past still in evidence, but the $A is still riding high. As most people just watch our currency versus the $US, that may not be as evident as it could be. But measured against a bunch of currencies – for example, the Reserve Bank uses a Trade Weighted Index – the $A is the strongest that it has been since 1985.

That means import prices – which can and do sometimes throw a spanner into the inflation outlook – aren't doing that at the moment. Rather, they are still playing a dampening role on prices pressures generally through Australia's economy.

Chart 6.2: Wages and labour costs



Source: ABS, Deloitte Access Economics' macroeconomic model

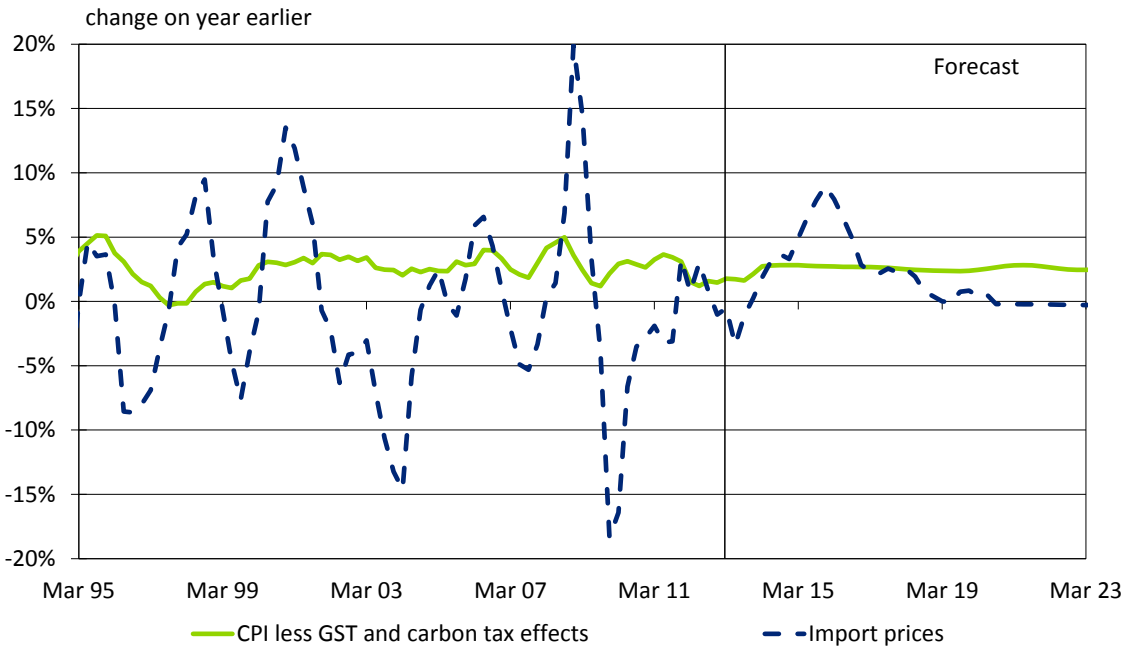
However, the past few weeks have seen the value of the $A fall dramatically, particularly against the $US. Looking further ahead, as we often stress, the $A can only keep dampening import prices if it keeps on rising. And because we don't forecast the latter, it's not surprising to see that we project a turnaround in import prices, shown in Chart 6.3 below.

If our forecasts are right on the $A – and they may not be – then as Chart 6.3 shows, import prices may start to add to overall inflation pressures in Australia from late 2014. If so, that

would be an important change in direction, and one that the Reserve Bank will be paying close attention.

Upstream prices are looking reasonable too. For example, construction prices grew rapidly ahead of the GFC, then took a hit and saw a partial recovery. However, with large parts of the construction sector currently either slow or slowing, those upstream prices are currently flat to falling in both commercial and housing construction.

Chart 6.3: Import prices and inflation



Source: ABS, Deloitte Access Economics' macroeconomic model

On balance, then, it is hard to see many immediate dangers to the inflation outlook. It is likely that a falling $A over 2014 will add to import prices, and lower interest rates will provide impetus for retail spending growth that could restore some of the sectors pricing power. Wage gains could increase faster than expected and productivity growth may decline as the mining sector shrinks. That said, it looks like 2014 at least before inflation risks force their way back to centre stage in Australia's economic debate.

Table 6.1: Forecasts for economic growth and inflation

Annual % change	2012-13	2013-14	2014-15	2015-16	2016-17
GDP					
RBA	2.5	2 – 3	2½ – 4	na	na
Deloitte Access Economics	1.9	2.2	2.1	2.5	2.6
Year-to % change	**Dec-12**	**Jun-13**	**Dec-13**	**Jun-14**	**Dec-14**
CPI (ex. carbon tax)					
RBA	2¼	2 – 3	2 – 3	2 – 3	2 – 3
Deloitte Access Economics	1.9	2.6	2.6	2.7	2.7

Source: Reserve Bank of Australia, Deloitte Access Economics

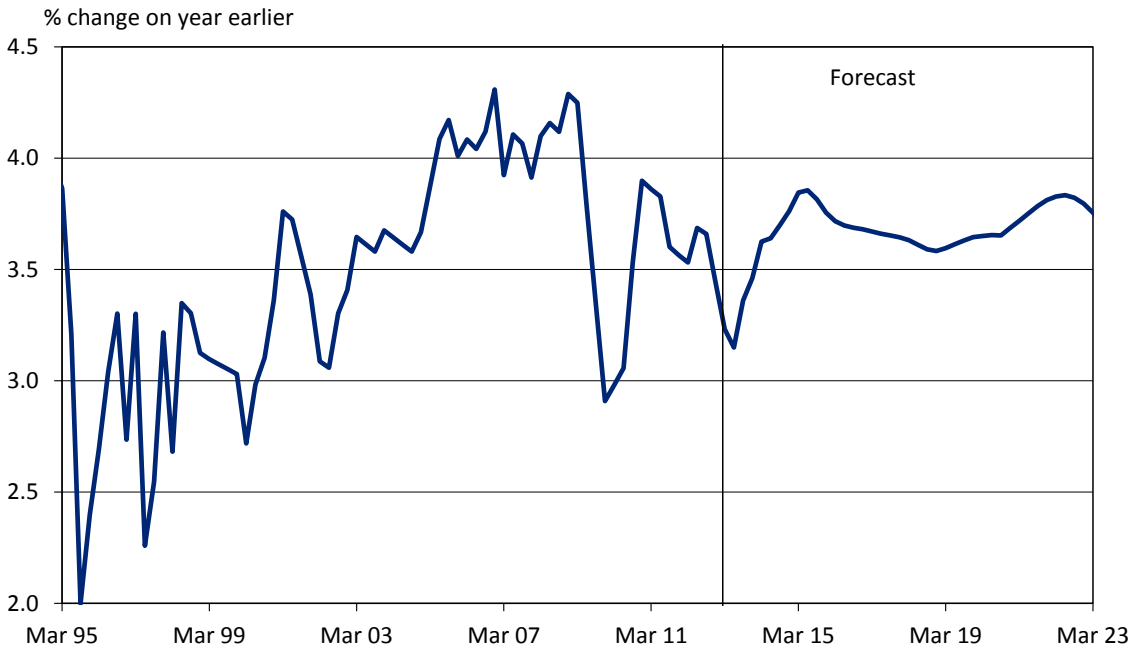
6.3 The outlook for wage growth in Australia

Take away the hit to **wage** growth during the global financial crisis, and the current pace of growth in earnings is the lowest seen in a decade. The best general indicator of wage pressures, the Wage Price Index (WPI), grew by just 3.2% in the past year. That's a pretty modest outcome.

As has been true for a while, there is still relative strength in wage gains in mining and in WA, while there's weakness in wage growth in accommodation and food, in retail, and in SA and Queensland.

However, these latter patterns are themselves moving. For example, the weakness in wage growth in Queensland helps underscore the latter's fall from grace on the State growth leader board. And in part the patterns are moving for the same reasons that the total is too – wage growth is relatively modest because now even some of the stronger bits of Australia's economy have lost momentum.

Chart 6.4: WPI forecast growth



Source: ABS, Deloitte Access Economics' macroeconomic model

Yet it will be hard for wage growth to stay low for long. And nor will it require much extra strength in job gains to generate faster wage rises. After all, boomer retirement is now happening fast while, partly thanks to the latest round of roadblocks to be placed in front of temporary skilled migrants (those on 457 visas), overall migrant numbers are projected to stay well shy of their 2008 peaks.

Add in the expectation that lower interest rates may prompt some slightly better news on the job front – especially from 2014 if the $A also eases – and wage gains may lift in 2014 and beyond.

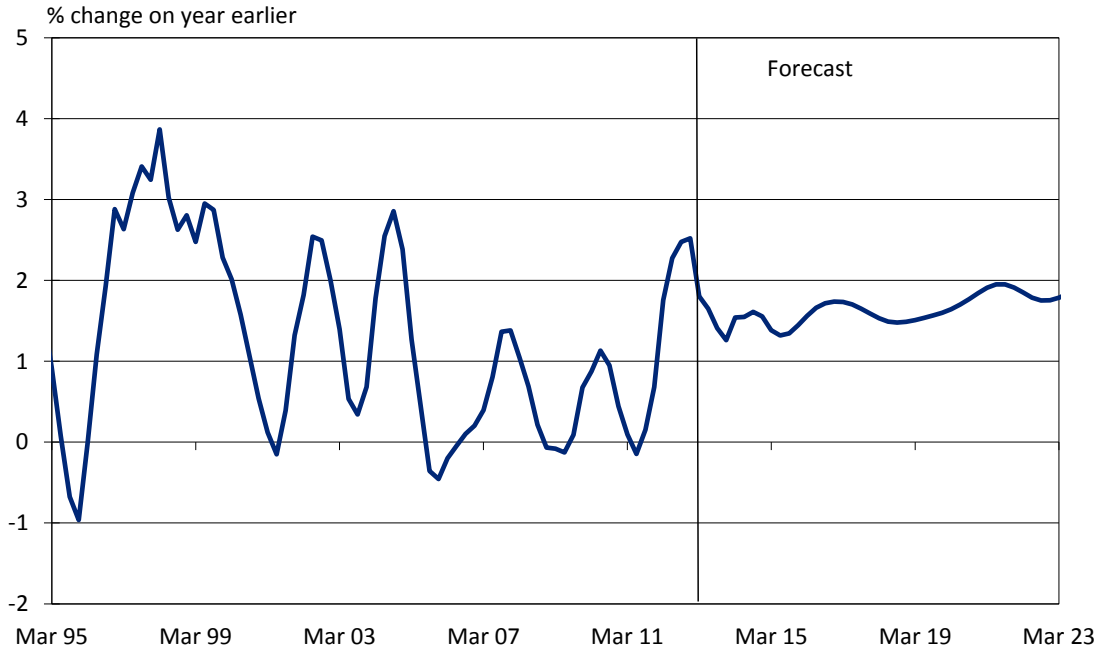
Moreover, the recent lift in labour productivity is helping to alleviate what has been the most concerning component if the inflation outlook – labour costs.

And that improvement in productivity gains is likely to have the Reserve Bank heaving a sigh of relief. It isn't that better productivity gains rule out inflation risks, but they do notably reduce them.

You can see the impact of lifting productivity on **labour costs** already. Labour costs were rising strongly in 2010 as Australia's economy was recovering from the GFC – with unemployment falling, wage gains on the rise and productivity busily going backwards. But fast forward to now, and the opposite holds true: economic conditions have lost momentum, the resultant profit pressures have fired up productivity gains, and wage growth has been edging down.

The upshot is labour costs are travelling at their slowest rate since the GFC itself. These forecasts do see something of a return to normality through the course of 2013 – the pace of wage growth picks up amid the boost provided by lower interest rates, while the recent surge in productivity growth also eases back. However, that merely returns labour cost growth to rates that don't notably threaten the outlook for inflation – higher than current lows, but not scarily so.

Chart 6.5: Productivity growth (change on a year earlier)



Source: ABS, Deloitte Access Economics' macroeconomic model

Table 6.2: National wage forecasts

Year to March nominal wages forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wage Price Index	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6	3.7
Average weekly earnings	4.2	4.2	4.7	3.7	3.8	3.7	3.6	3.6	3.6
Ordinary time earnings	4.6	4.1	4.5	4.2	4.3	4.2	4.1	4.2	4.2
Unit labour costs	3.7	0.9	1.9	2.6	2.7	2.4	2.6	2.5	2.4

Year to March real wages forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wage Price Index	1.4	0.7	0.9	1.0	1.0	1.1	1.2	1.2	1.0
Average weekly earnings	1.2	2.2	2.3	0.9	1.0	1.0	1.0	1.1	1.2
Ordinary time earnings	1.6	2.0	2.1	1.3	1.5	1.5	1.5	1.7	1.8
Unit labour costs	0.7	-1.0	-0.5	-0.2	-0.1	-0.3	0.0	0.1	0.0

Source: ABS, Deloitte Access Economics' Labour Cost model

7 General labour cost growth in Victoria

Victorian wages have edged down relative to those nationally for over a decade. In the main that has represented strength in the resource sector States – mining and mining-related construction has been good news for some regions, thereby swinging wage relativities in Australia as a whole.

More recently, however, the relative downswing in Victorian wages versus their national counterpart has had more to do with the $A and its impact on Victoria. In effect, the loss of wage relativities of late has been less to do with 'good news elsewhere' and more to do with 'challenges on the home front'.

As a result, wage growth through 2012 turned out to be lower than expected, both nationally and in Victoria, and this has driven a downward revision in our forecasts for most of the projection period.

The underlying story, however, is much the same, with two negatives compounding to make Victorian projected wage growth lag behind its national counterpart for the foreseeable future.

- First, Victoria is not a resource State and so it has not benefitted from the strong wage growth driven by the mining boom. And as noted above, though the resources boom is beginning to turn down, it is not completely over, so strong demand for resources workers into the projection period will continue to haunt Victorian wage prospects.
- Second, Victoria is dependent more on dollar driven sectors such as manufacturing and wholesale than on interest rate driven sectors such as construction and finance. The recent announcement by Ford that it intends to shut its Victorian car making operations by 2016 are a case in point.

That said, there are two potential bright spots on the horizon. First, the dollar will not stay high forever, and this will eventually provide some much needed relief for export driven (and import competing) sectors. Second, there is an ongoing shift within Australian manufacturing to become more capital intensive. So while there may be fewer workers overall, the workers that remain will generally be highly skilled, which should provide some space for wage growth over the medium term.

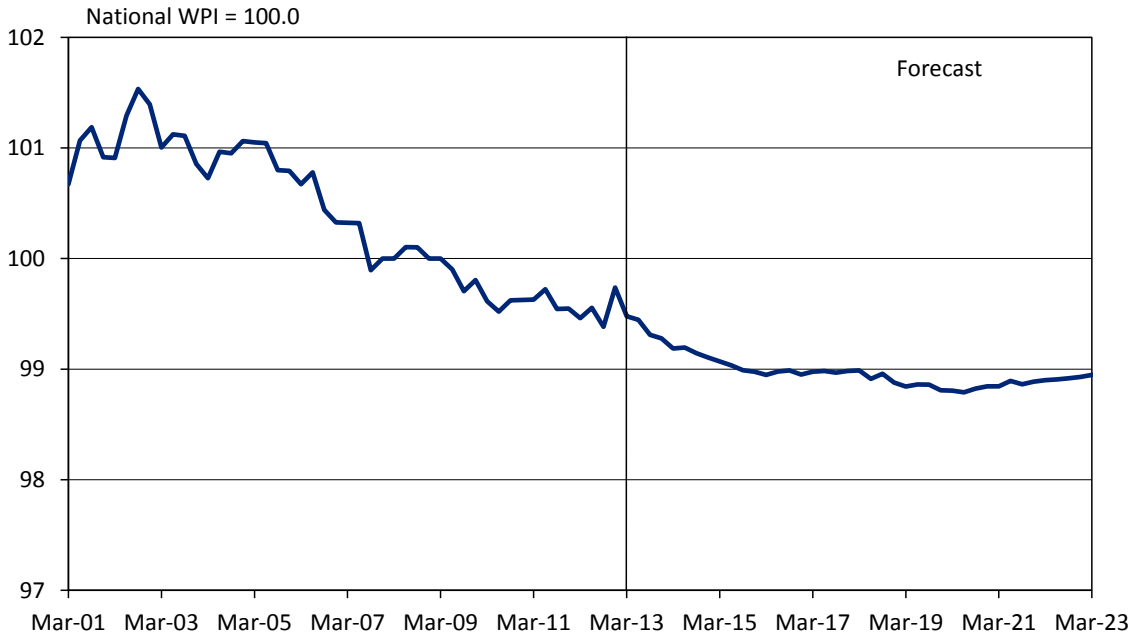
These factors will take some time to feed through, with Victorian wage growth not expected to match the national average until around 2017.

Deloitte Access Economics' estimates of Victorian economic growth relative to the matching national figure for Australia have seen a consistent erosion of this State's 'market share' of the nation.

A similar pattern of erosion has been evident in relative wages as well. Chart 7.1 maps Victoria's WPI relative to that for Australia as a whole. As is true of consumer prices, wages in Victoria have risen more slowly than they have in Australia as a whole over the past decade.

That trend reflects the relative concentration of economic strength in the resource States, which has added to both price and wage pressures in those jurisdictions relative to Victoria.

Chart 7.1: Victorian WPI relative to national WPI



Source: ABS, Deloitte Access Economics' macroeconomic model

Although the decade long slide in Victoria's relative WPI is expected to continue for the next five years or so, there was a slight uptick in recent quarters. Part of this may be union driven – two of the industries shown in Chart 3.1 for which Victoria's workforce is relatively over represented (administrative and rental services) have seen a strong rise in EBA driven wage growth over the past year.

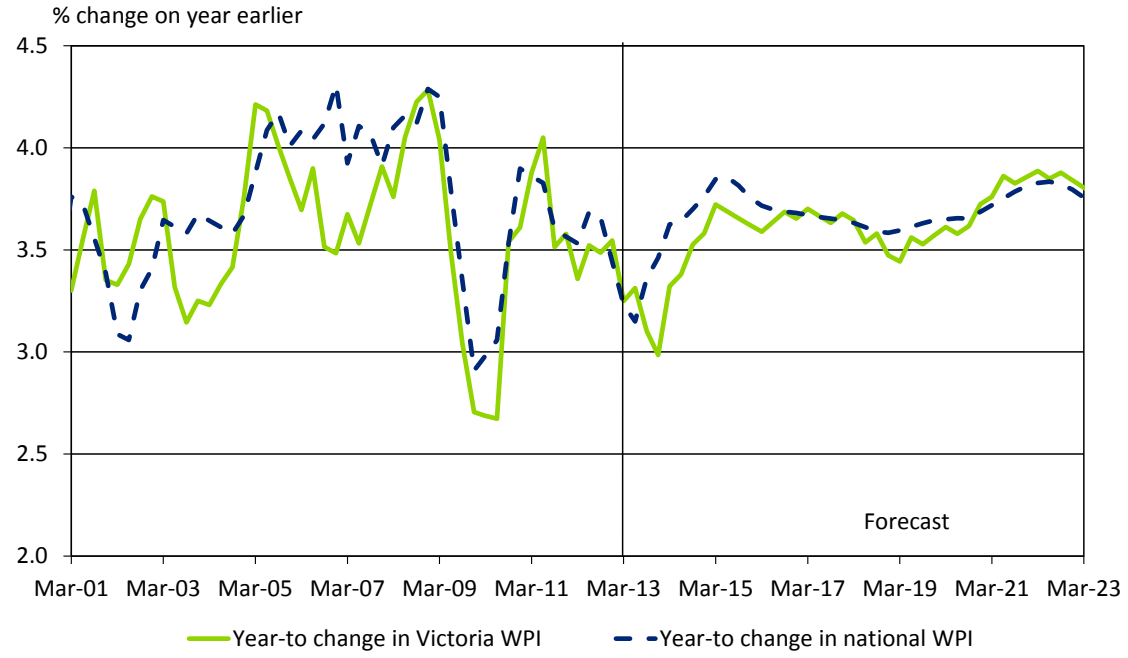
That said, a more likely explanation is simply that the downturn in wage growth nationally of late has been more severe than that seen in Victoria. Year-to growth in national WPI in March 2013 was 0.3 percentage points lower than the corresponding rate in March 2012, while year-to growth in Victoria's WPI in March 2013 was only 0.1 percentage points lower than the corresponding rate in March 2012.

Beyond 2017 the relativity is expected to settle. In general this reflects the slowing of the resources boom, which to date has seen wage growth in mining States such as Queensland and Western Australia well outpace that in non-mining States such as Victoria.

Importantly though, Victorian wage growth is expected to be below the national average throughout the projection period. This reflects the State's industrial make up: three of the state's top four industries shown in Chart 3.1 are likely to see slower wage growth than the national WPI over the projection period.

Further, while the mining boom is slowing, the sector's wages are still expected to grow faster than the national WPI over the next decade or so (just at a progressively lower rate).

Chart 7.2: Victoria general labour cost growth



Source: ABS, Deloitte Access Economics' macroeconomic model

Table 7.1 provides a summary of State WPI forecasts to through to 2020 in real and nominal terms. Additional measures showing expected wage growth after allowance for productivity growth are also given.

Table 7.1: State WPI forecasts

Year to March changes in nominal Wage Price Index forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6	3.7
Victoria	3.4	3.2	3.6	3.6	3.7	3.7	3.5	3.6	3.7

Year to March changes in real Wage Price Index forecasts

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	1.4	0.7	0.9	1.0	1.0	1.1	1.2	1.2	1.0
Victoria	1.5	0.4	0.7	1.1	1.1	1.0	1.0	1.1	0.9

Year to March changes in nominal productivity adjusted Wage Price Index

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	1.5	1.6	2.5	2.3	2.0	2.1	2.0	1.9	1.7
Victoria	2.2	2.0	2.1	1.9	1.8	2.1	2.3	2.1	1.7

Year to March changes in real productivity adjusted Wage Price Index

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
National	-0.6	-1.1	-0.2	-0.4	-0.7	-0.5	-0.4	-0.4	-0.9
Victoria	0.2	-0.8	-0.7	-0.6	-0.8	-0.5	-0.2	-0.3	-1.0

Source: ABS, Deloitte Access Economics' macroeconomic model

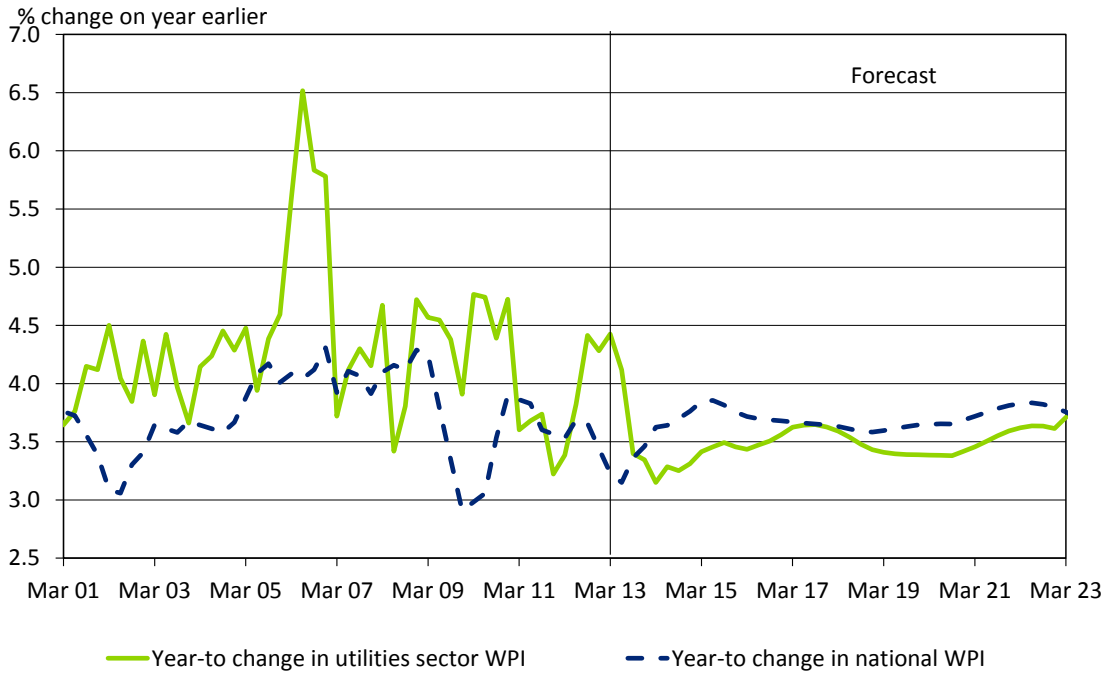
8 The national outlook for wage growth in the utilities sector

This chapter discusses the wage growth outlook for the utilities sector for Australia as a whole.

8.1 Strength in relative wages in the utilities in recent years

The small size of the utilities workforce means wages in the sector are subject to greater volatility than sectors that employ a large workforce. Chart 8.1 indicates that utilities WPI generally runs above the national average rate of increase, or at least has done since 2001.

Chart 8.1: Wage growth nationally and in the utilities



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

However, we project that utilities WPI will more broadly follow the national story in the future.

The strong wage growth shown over the past decade is particularly impressive when considering that the national rate of WPI growth was in fact accelerating. Moreover, utilities wages held up over the course of 2009, despite a significant correction in the national WPI at that time in response to the GFC.

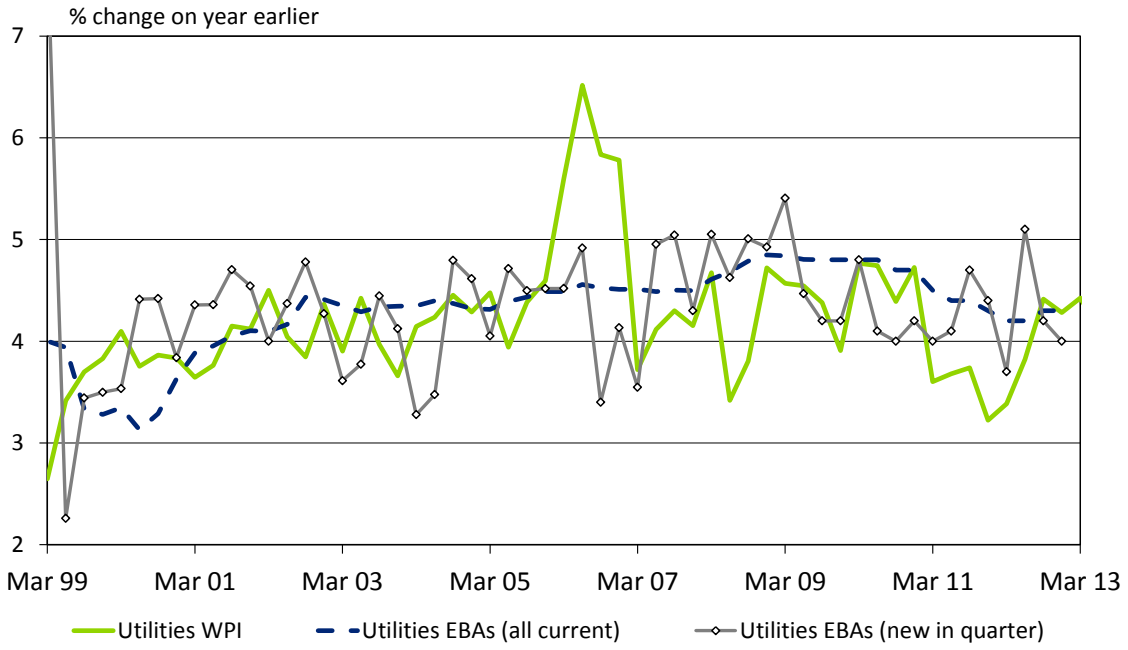
That said, recent years have not been as kind to WPI growth in the utilities. 2011 saw a significant fall and for a moment, national WPI growth exceed that in the utilities. That didn't

last long, wage growth in the sector has since lifted and in recent months and has in fact managed to increase while growth in national wages has been falling.

As a result, wage growth in the utilities sector remains ahead of the national pace of wage growth. Wages in the utilities sector WPI grew by 4.4% in the year to March 2013 (5.1% in the private sector, 4.1% in the public sector).

Those growth rates are comfortably ahead of the current national average growth rate of 3.2%.

Chart 8.2: Measures of utilities sector wage growth



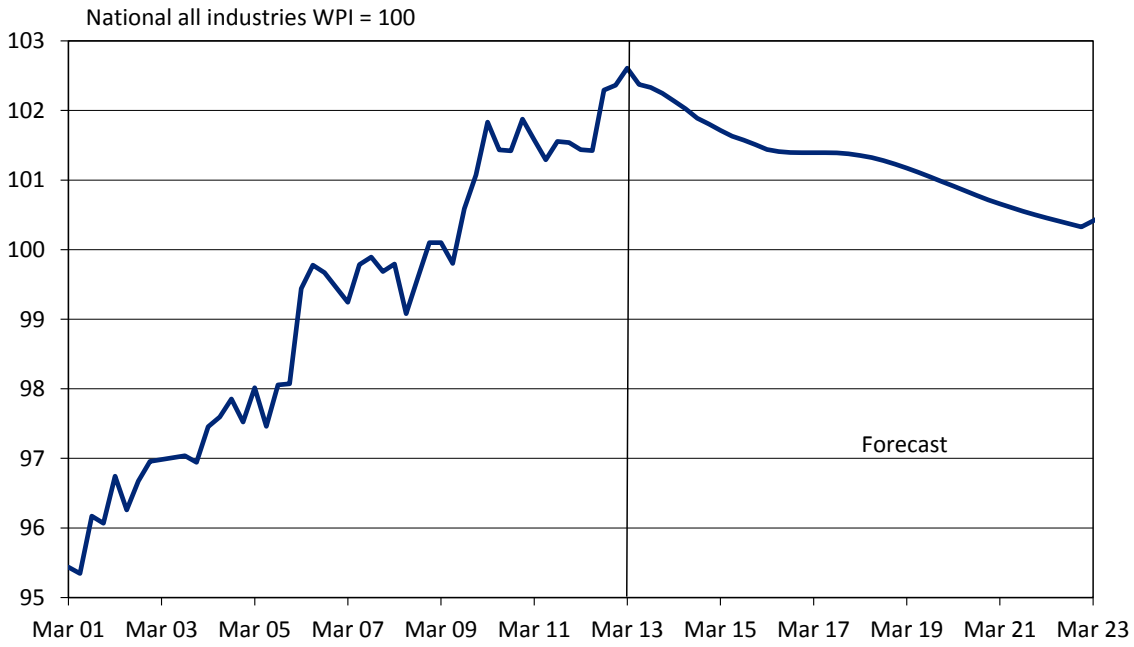
Source: ABS, Department of Education, Employment and Workplace Relations

As the above chart shows, the latest utilities WPI result is in line with the growth implied in 'all current' utilities EBAs, though the latest round of EBAs are a little weaker, at 4%.

Chart 8.3 below illustrates the relative strength of utilities wages more clearly by comparing the level of the utilities WPI to the overall WPI.[3] Over the decade to 2010 the utilities WPI grew by 6 percentage points more than overall wages, with a very consistent level of relative increase over much of that period.

[3] Note this is a comparison of two indexes both set to equal 100 in 2008-09 – it does not mean wage levels are much the same in the utilities as the national average.

Chart 8.3: Utilities WPI relative to national WPI



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Since the resources boom began Australia has been flush with cash – or, at least, has enjoyed rather healthier economic outcomes relative to other developed nations, with a key factor being the relative strength of commodity prices such as coal and iron ore across this period.

Against that backdrop the national economy has been running at close to full employment for a number of years, with labour shortages becoming a challenge in many sectors in some years. That helped wage growth over the past decade to easily outpace wage growth through the 1990s.

This story has been even more evident in the utilities sector, as the composition of the boom placed additional demand on the types of labour used in the utilities sector. Although the sector employs a mix of blue and white collar workers, it is interesting to note that a report by Suncorp Bank done in 2012 found that, on average, wages for blue collar workers exceed those for white collar workers (Suncorp, 2012). [4]

Very high wage growth in the competing sectors of mining and construction pushed up wages in other sectors, including in the utilities. As a result, and as discussed in detail in Chapter 4, utilities operators found themselves competing for labour with the likes of mining and construction sectors, causing occasional skill shortages in the utilities sector.

Yet that dynamic is about to change as the resource-related construction boom peaks (probably in late 2013, though many commentators are arguing that the peak has already passed).

[4] Note this report does not represent the views of Deloitte Access Economics and applies a very broad, industry based definition to what is a blue or white- collar worker.

As such Deloitte Access Economics' view is for wage growth in the utilities sector to be relatively more subdued over the next couple of years as:

- the competition for workers eases and
- output growth in the sector remains modest (particularly in electricity).

With the peak of the mining construction boom almost here and manufacturers continuing to struggle, these two sectors will soon fade as a driver of wage competition in the utilities.

And the utilities sector itself is treading water – output has shrunk in the past two years, and notably so in electricity, while overall employment levels are similar to where they were just ahead of the global financial crisis more than four years ago.

Moreover, although the pace of housing construction will pick up further over the next two years, the weakness in manufacturing is pervasive – meaning not merely that manufacturing is less of a competitor for skilled workers, but also that it will be less of a customer for the utilities sector itself.

Add in the ongoing demand adjustments occurring in response to the enormous lift in the price of utilities services, and it is hard to be too optimistic. After all, this sector is expected to grow more slowly than the Australian economy and its workforce as a whole. Under those circumstances, it is difficult to do anything other than expect the same to be true of utilities sector wages.

That said, mining construction activity remains at a very high level, and wage growth determined in new EBAs for the utilities sector remains solid. That suggests a degree of relative strength in wage growth in the utilities will remain until about mid-2013, before declining below the national average from about 2014.

But why won't wages in the utilities keep rising faster than wages in other sectors – as Chart 8.3 shows has been broadly true over the past decade?

There are a number of reasons behind our view that utilities sector wages will grow at less than the national average for much of the next decade.

First, **skill shortages are temporary – they don't drive permanent wedges in wage relativities**. The higher wages on offer as a result of skill shortages lead, over time, to reactions on both the demand and supply side of labour markets as each move toward an equilibrium level. To assume skill shortages as a permanent factor – and to use them to justify further widening in wage relativities – is wrong and defies both economic theory and observed historical trends in wages movements.

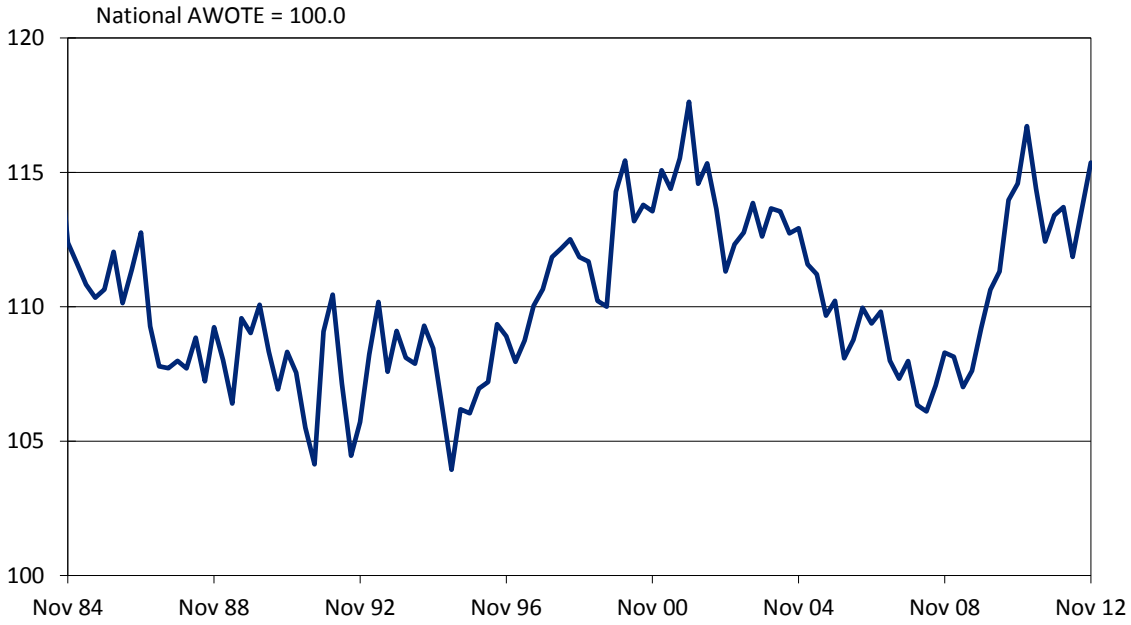
Indeed, as argued above, the skill shortages which underpinned the outperformance of wage growth in the utilities in the past decade are about to reverse, with engineering construction work set to fall back notably in coming years (in contrast to its sharp climb over the past decade).

Second, as is true of many industries, the utilities are under pressure. Most notably, **electricity output has fallen to where it was just ahead of the GFC**, and the short term outlook is modest.

Chart 8.4 is drawn from AWOTE data, and hence can draw on a longer run of history than does the WPI. (The latter has only been in existence since the late 1990s, and hence largely coincides with the period of the resources boom.)

Importantly, Chart 8.4 supports the 'business cycle' view of wage relativities in the utilities sector rather than the 'permanently increasing' view.

Chart 8.4: The utilities AWOTE relative to the national AWOTE[5]



Source: ABS, Deloitte Access Economics

8.2 Demand pressures on the utilities sector and its competitors

Chart 8.5 below shows vacancies data compiled by the Federal Department of Education, Employment and Workplace Relations (DEEWR), and focuses on vacancies in the trades. Several relevant trades are noted – engineers, metal workers and mechanics, construction workers, and electrical and telecommunications workers.

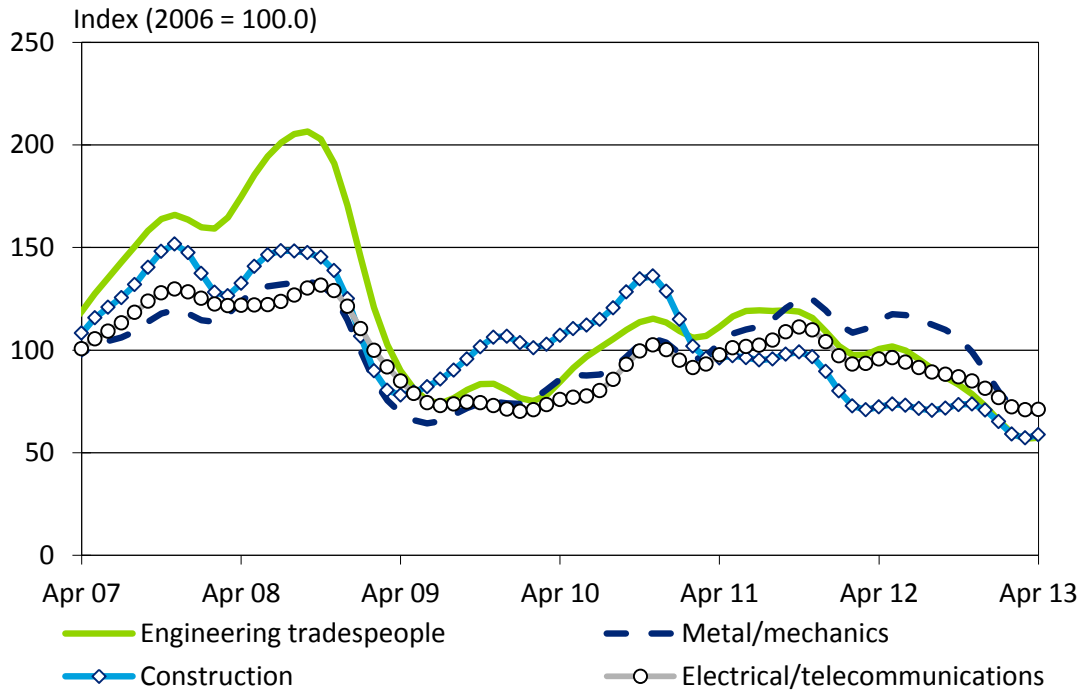
The impact of the GFC is marked, as is the upshot to vacancies in construction since then as new mine construction provided additional demand for labour for construction workers.

More recently weakness in the residential housing market has taken the construction sector from top to the bottom of the pile in terms of job vacancies, while a more broad contraction was felt in other sectors – a good indication that labour demand in the mining-related construction sector is beginning to taper off.

[5] Data before August 1994 has been spliced using the previous definition of the utilities sector.

It is expected that job vacancies will continue to decline over 2013 and into 2014 as the rate of construction in the mining sector eases over the year.

Chart 8.5: Trades vacancies



Source: DEEWR Vacancy Report

Note: In December 2011 the previous indices, based mainly on newspaper ads, were discontinued and replaced by new indices based on popular job search websites. Data are only available from 2006 for these new indices.

Vacancy numbers for electrical/telecommunications and metalworkers and mechanics are generally more stable since they are driven more by whole economy factors rather than by the cyclical fortunes of the housing or mining sectors.

Managerial and professional vacancies in building and engineering (the white collar jobs) have shown broadly the same movements as the trades. Essentially they are driven by the same factors.

However, movements in professional vacancies in the building and engineering sectors tend to be more volatile. That is shown in Chart 8.6 below as a more pronounced upturn leading up to the GFC but also a sharper decline post GFC and more recently since around mid-2012.

Movements in demand for professional engineers have displayed stronger demand during periods of strength than have trades vacancies, but recently that has also worked the other way. This is likely because the professional category displayed above is more heavily oriented toward the mining sector, whereas the trade category contains a greater share of non-mining workers.

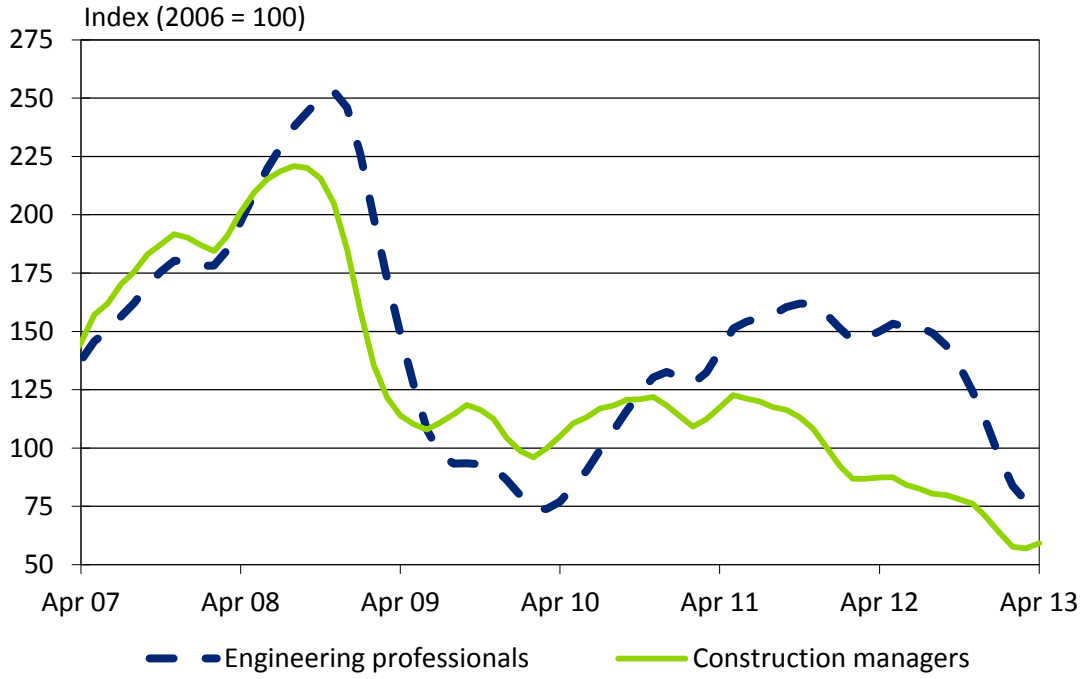
The same can be said for the relative movements between trades workers and managers in the construction sector with vacancies for managers being generally more tied to the business cycle.

Looking ahead, recent interest rate cuts and an expectation for the potential for more to follow over the year should bring good news on the residential building front.

However, this will not be enough in itself to offset the decline in labour demand from the resources sector.

All other things equal that should mean a slight easing in labour demand in trade intensive industries, and manifest as lower job vacancies in fields of potential relevance to the utilities sector for at least the next 12 months.

Chart 8.6: Managerial and technical vacancies in building and engineering



Source: DEEWR Vacancy Report

Note: In December 2011 the previous indices, based mainly on newspaper ads, were discontinued and replaced by new indices based on popular job search websites. Data are only available from 2006 for these new indices.

8.3 Comparison with results from enterprise bargaining agreements

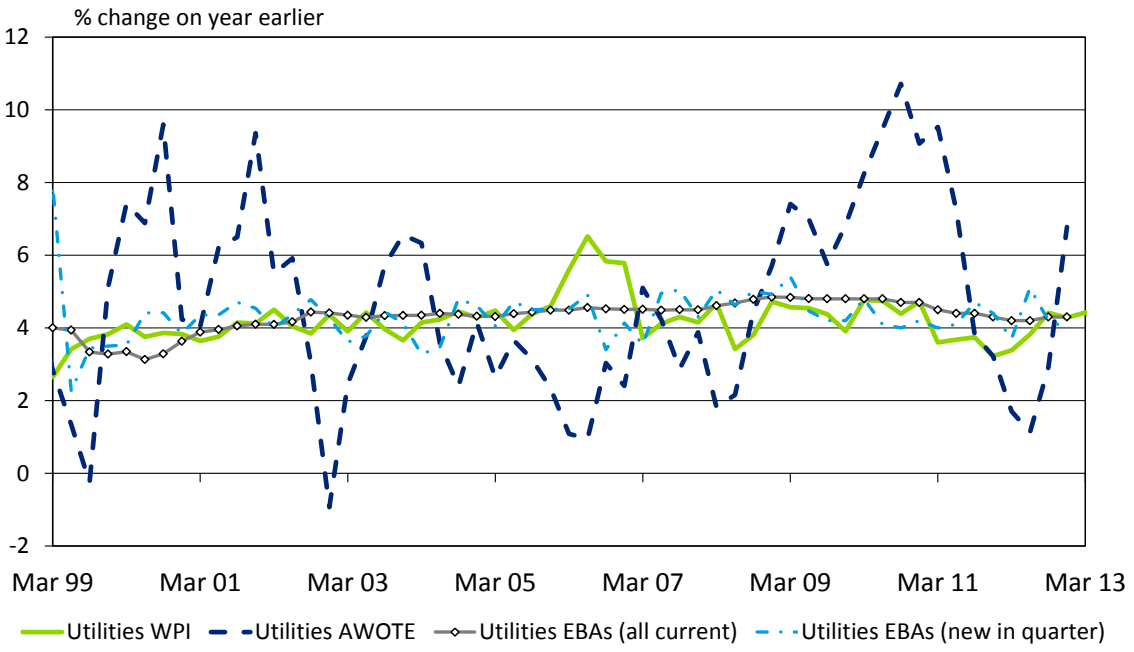
Chart 8.7 compares growth in the utilities sector WPI with a number of other wage growth measurements that are produced on a regular basis.

A measure of average weekly ordinary time earnings (AWOTE) for the national utilities sector is included as a comparator to the WPI. As Chart 8.7 shows, the AWOTE series is particularly volatile and is limited in its use in forecasting.

The remaining two series come from the *Trends in Federal Enterprise Bargaining* publication produced by the Department of Education, Employment and Workplace Relations and cover growth in wages under enterprise bargaining agreements (EBAs):

- The first of these series (the all current series) shows growth in wages under all enterprise bargaining agreements current during the quarter. Hence, movements in this series are expected to broadly flow through to the WPI series.
- The final series shows annual growth that will occur under any agreements commencing in the quarter shown. This series gives a better indication of the future trends in the first EBA series – if there were to be, say, a sustained decline in wage growth, then that would show up first in new agreements. These changes should therefore be a precursor to movements in the latter series and the path of future utilities WPI.

Chart 8.7: Measures of utilities sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

A key conclusion to take from the above is that EBA's in the utilities sector are a good predictor of the trend growth in the WPI measure, while the movement in the AWOTE have been generally unrelated to movements in the EBA series over time.

As Chart 8.7 shows, wage growth from EBA's has been solid in recent quarters. That suggests the immediate future hold a degree of continuing strength in the utilities WPI.

8.4 Forecasts of utilities wage growth

Wages in the utilities sector WPI grew by 4.4% in the year to March 2013, well above the national average growth rate of 3.2%. However it is likely that this gap will begin to close over the next 12 months.

We may have reached a turning point in utilities WPI growth. The pressures on the utilities sector were described in Chapter 4. And the pressures on wage growth in the utilities – which has outpaced national wage growth over the past decade – have been discussed in this Chapter.

In brief, the skill shortages brought on by the boom in resource-related construction will not provide the same boost to wages in the utilities sector in coming years as they did in the past decade. In fact the trend will be for an unwinding of those pressures.

In addition, the manufacturing sector will continue to exhibit weakness, both as a customer for utilities services, and as a competitor for the utilities workforce.

Therefore, for most of the coming decade it is expected that wage growth in the utilities will trend marginally below the national average.

9 The national outlook for wages in related industries

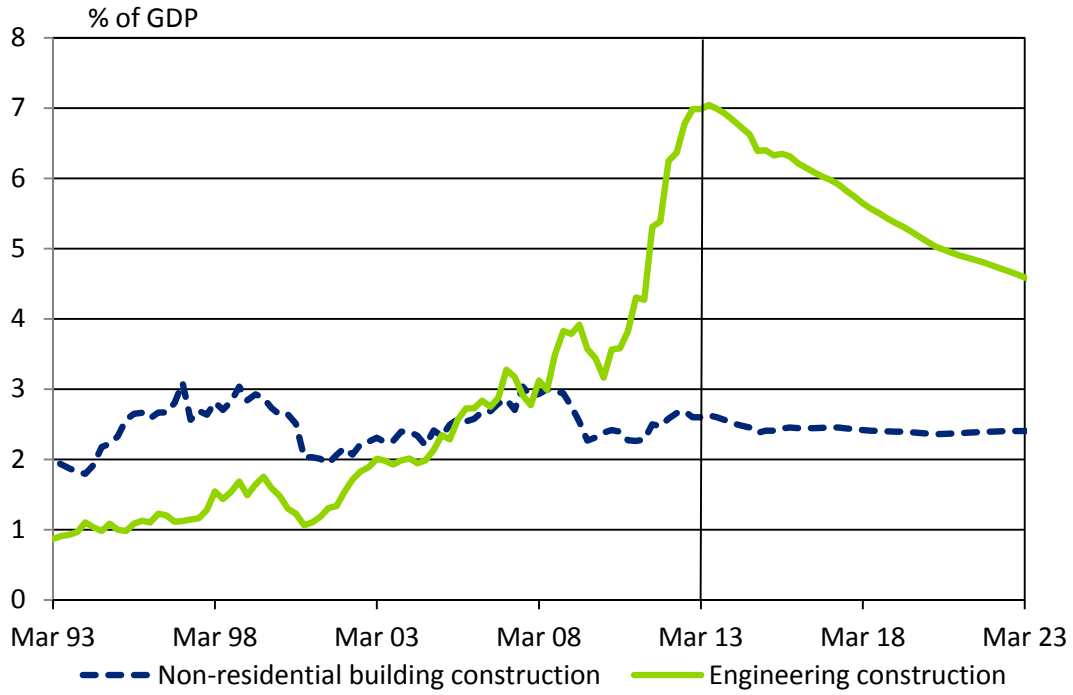
This chapter discusses the outlook for wage growth in the construction and administrative services sectors. These sectors have the potential to compete with the utilities sector to attract and retain workers.

9.1 Construction

As discussed in section 5.2, the engineering construction sector has been the key beneficiary of the resource boom across the past decade. However, with the focus now moving from building facilities to extracting minerals from the ground for export, the future success of this sector is beginning to hinge on a dwindling number of large projects.

The expectation of an imminent peak in the engineering construction workload is built on three points – that (1) we have been building far more than we ever used to (so even if the growth falls away sharply we will still be building relatively more than normal), (2) global growth (notably China) is unlikely to grow quite as strongly as previously hoped, and (3) rising relative costs in Australia (particularly in construction) have meant global resource investment is shifting to other markets.

Chart 9.1: Components of construction – engineering and commercial work



Source: ABS, Deloitte Access Economics

As a result, we expect engineering construction to plateau through the next six to nine months before falling away beyond that. The most recent data for capital expenditure saw both mining and non-mining capex fall, with the non-mining sector continuing a long running decline relative to output.

That is not overly suggestive of an economy that will be able to manage a deft rebalancing in major capital spending away from mining into other sectors.

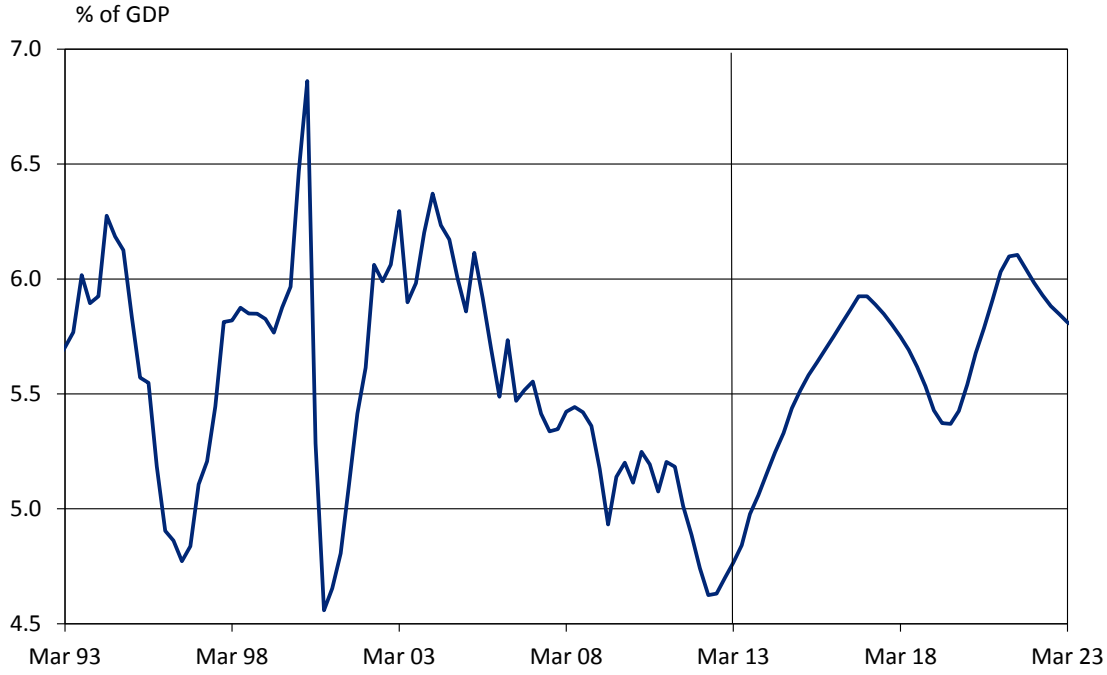
In addition, the other components of construction are also struggling. In the case of commercial construction the industry has been restrained by the combination of slow growth in white collar employment (meaning less demand for new office space) and by weak retail demand (both due to consumers spending less in total as they return to saving, and as digital disruption means an increasingly significant proportion of retail spending is now moving to overseas operators at the other end of the internet).

Neither factor is expected to ease significantly in the short term – consumer confidence remains low and the political environment invites a fair level of caution as well, although 2013 looks like a relatively solid year for retail construction.

So, there are only modest signs of better news for commercial construction on the horizon. Interest rates are lower, and that is a powerful plus, but less powerful than it used to be.

The final component of construction, residential building, will also be assisted by lower interest rates. As we have noted before, solid population growth and low interest rates are key ingredients for an upturn in the housing cycle.

Chart 9.2: Components of construction – housing work



Source: ABS, Deloitte Access Economics

Our outlook is that housing will do *some* of the work in outweighing weakness elsewhere. As Chart 9.2 above shows, our outlook for housing construction (shown here as a share of GDP) sees a long-awaited rebound from the very low rates that have been seen recently.

That said, the strength in population growth is hardly a new development and has yet to ignite a recovery in housing. And some States are more in need of construction than others (as some States have been more responsible for the downward trend in recent years than others), most notably New South Wales (which is coming back marginally after a very poor decade), Queensland (which is yet to really recover from the GFC) and Western Australia (thanks to surging local population).

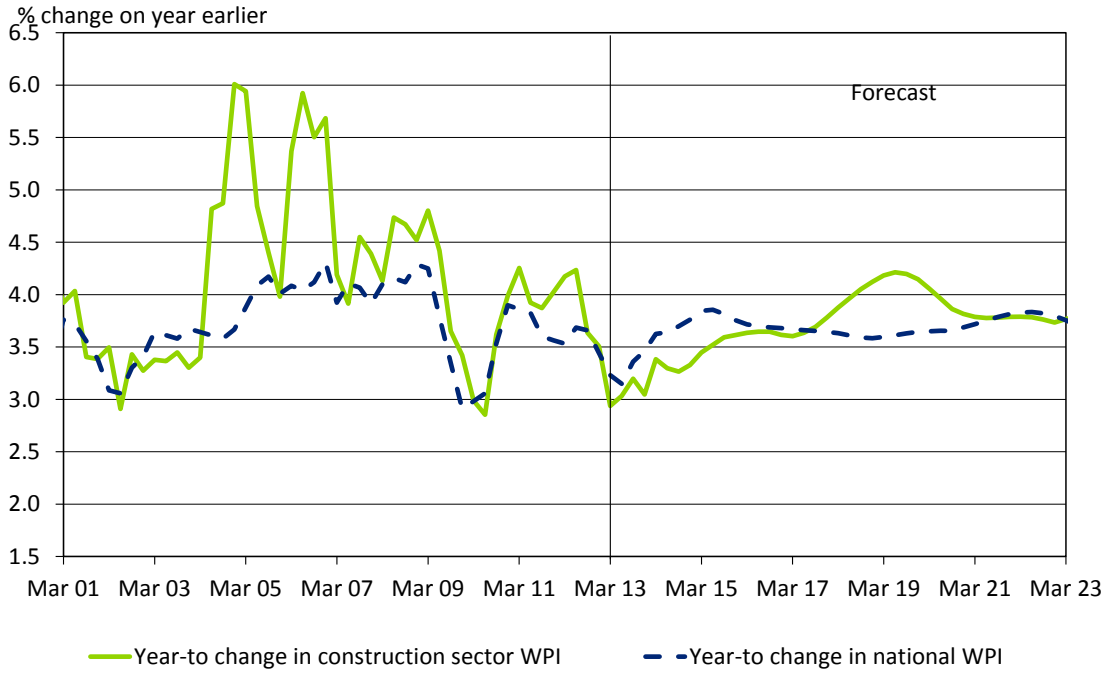
Whether the underlying demand in these States can be matched by supply – both in terms of land, builders and development processes – will largely determine how effective housing is at driving the construction sector.

In the short term, we expect a final hurrah in engineering construction work (linked to major gas projects) to largely do the job, with the construction sector growing in line with the rest of the economy over the next year or two. However, as noted earlier there is the expectation of a downswing later on, as Chart 9.1 earlier makes clear.

9.1.2 Current WPI projections

Chart 9.3 shows that while growth in the construction WPI generally moves in line with broader wage trends, growth over the past decade has at times been particularly strong for extended periods.

Chart 9.3: Construction WPI growth forecast



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

That strength has been driven in large part by the mining boom, or at least the construction that has been building towards the coming growth in Australia's mining production. That

massive surge in demand for workers has seen wage rates bid up – particularly in times where a number of large projects have been starting concurrently (explaining the occasional very strong leaps in wage rates).

What has been unusual has been the sustained strength in construction wages across this time. For virtually the entire period since 2001 construction sector wages grew at or above the national average, and sometimes very much above. Construction wages even outpaced those in the wider economy across the downturn in 2008-09, a period where some of the excess gains of the years may have been expected to have been wound back.

Overall, the decade saw wages rise around 5 percentage points more than the average.

That long, strong run may have ended with the peak in the mining construction boom. The March quarter of 2013 (the latest available data) saw annualised growth in the construction sector's WPI fall back towards the weakest rates seen since 1999, a fall which has outpaced the national easing over that time.

Over the year to March 2013, construction sector wages (measured by the WPI) grew 2.9%, well down on the 4.2% growth recorded in the year to June 2012. By contrast, the Australian average WPI grew by 3.2% in the year to March.

The forecasts (shown in Chart 9.3) show a sustained period of underperformance in construction sector wages, which would see around one fifth of the 'extra' growth in wages seen in the sector across the past decade unwind by the middle of 2017.

Construction sector wages are forecast to recover as overall wage rates do – but to lag behind across the next few years. After the 3.2% growth in the year to March 2013, growth should pick up slowly to 3.3% by March 2014 and 3.6% in each of the following two years.

9.1.3 Comparison with EBA results

Chart 9.4 shows the outcomes for wage growth in the construction sector as measured by EBAs, WPI and AWOTE.

The average increase in construction sector wages under current EBAs remained steady across 2012 – holding at 5.2% for the past three quarters – even as the total industry measure began to decline slightly (to now stand at just 3.8% growth in the year to December 2012).

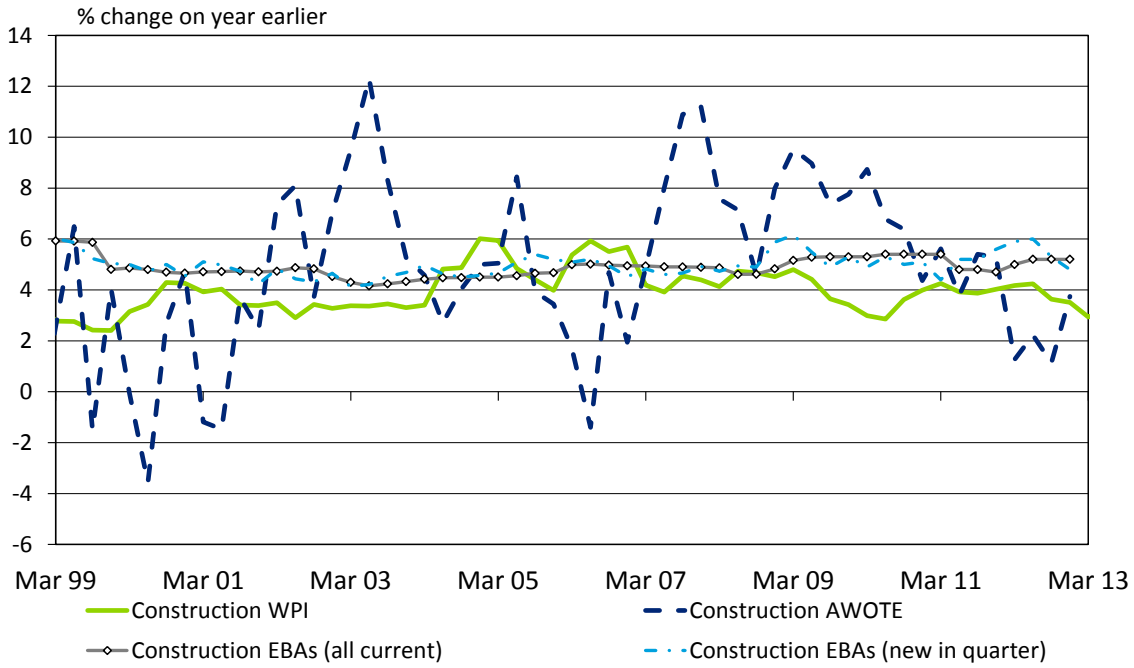
That relative stability is not reflected in the results for new EBAs across this period. The surge in growth shown in these new EBAs slipped from around 6% to below 5% across the second half of 2012 (outpacing the fall seen in other industries).

Downturns in new EBA wage growth have consistently been a strong indicator of an upcoming downturn in growth rates measured by broader measures such as the WPI, a trend that is even more apparent in heavily unionised industries such as construction.

Other things equal, the concurrent fall in the WPI is of no surprise.

It is still worth noting, however, that only around 15% of construction sector employees are covered by the EBAs included here – below the national average and the lowest proportion of the key sectors considered in the report.

Chart 9.4: Measures of construction sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

9.2 Administrative services

9.2.1 Current WPI projections

In many ways the WPI for the administrative services sector has shown the opposite traits to construction and mining. When the overall WPI has been weak, then wage growth in administrative services have been particularly weak (such as in 2001 and 2009), while at other times the sector has unwound some of these losses (such as 2007 and 2008).

Overall, however, in relative terms wages in the administrative services sector fell consistently behind the national average across the past decade. At least in part that was due to other industries growing relatively strongly than administrative services.

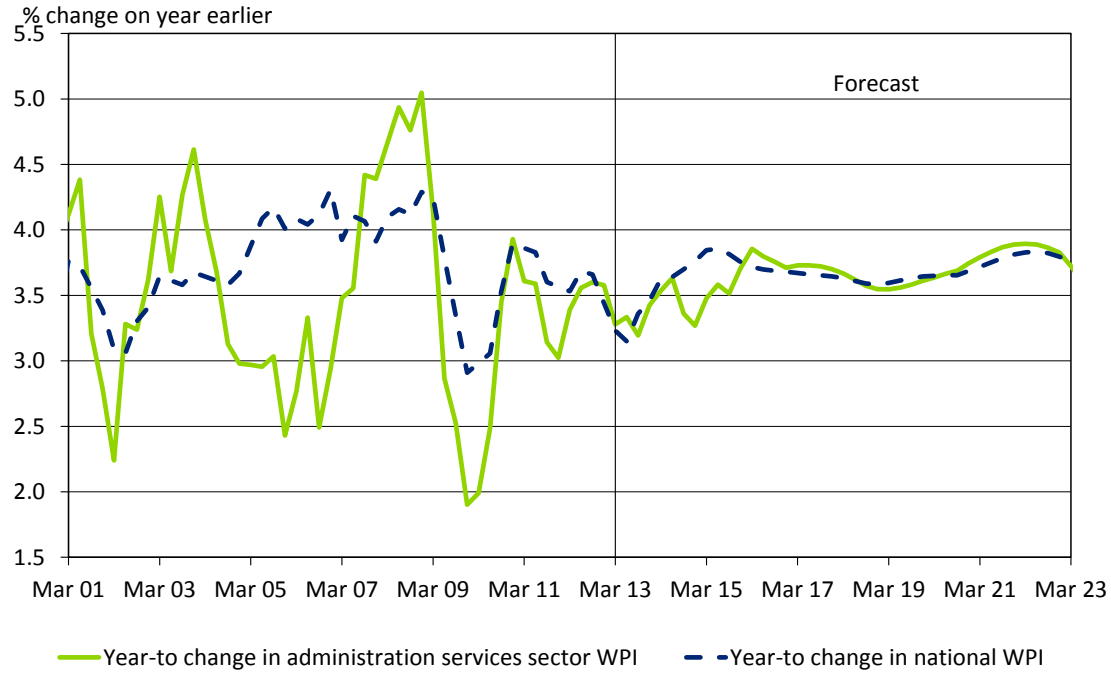
Unsurprisingly, those years saw a decline in the sector's share of economic importance within Australia as a whole and (more tellingly) its employment share as well.

That latter trend has stabilised since the GFC. Employment numbers have actually recovered and wage growth has been closer to (albeit still less than) the national average.

While cost control is still a key factor in the minds of business leaders, the losses in the services sector have been felt more by the professional services sector (lawyers and accounts) than in administration services.

That is likely to be because some parts of the administrative services sector offer low cost alternatives to existing business arrangements.

Chart 9.5: Administrative services WPI growth forecast



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

That said, continuing labour market weakness has resulted in a general downgrade in the wage outlook for 2013 and 2014. The revisions amount to around a 0.25 percentage point lowering of annual wage growth in that period, a shortfall that is projected to be partially unwound through the course of 2015 and 2016.

As Chart 9.5 shows, growth in the WPI in this sector is easing slightly in line with the overall trend. Growth in the year to the March quarter 2013 was 3.3%, down from a peak of 3.6% in the year to September 2012. The national WPI grew by 0.1 percentage points less than administrative services in last year, with the better than average growth for the sector expected to persist for a further quarter.

While slightly lower in the short term, the outlook for wage growth in the administrative services sector is much the same as in our February 2013 reports for AER, with a recovery in growth in the short term in line with national trends, followed by a slightly below average growth over the medium term.

Wage gains for the sector are therefore expected to be a touch below the national average in 2012-13, with a slightly wider gap across the medium term as the sector struggles to keep up with the national average.

In addition, the projection for wages across the medium term also reflects Deloitte Access Economics' view that the pace of growth in the administrative services sector's wages will be held back in relative terms by the sector lying on the wrong side of the longer term trend towards increased skill differentials in wages and salaries.

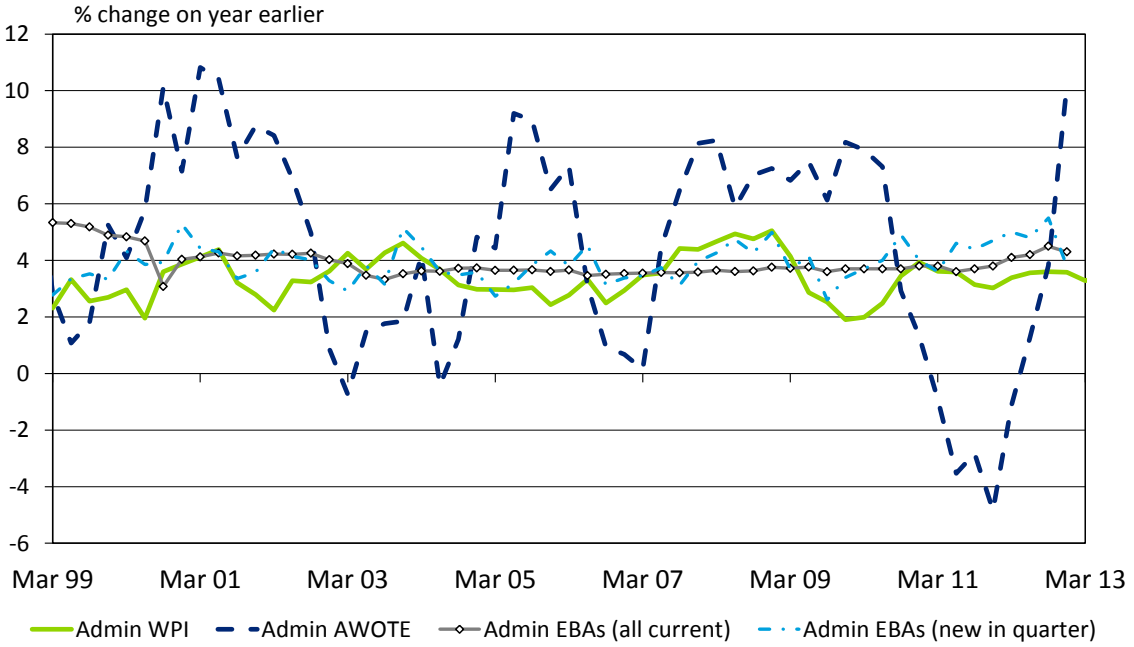
Growth in the sector may also swing towards lower skill components of the sector – such as building cleaning and pest control – which would drive a further wedge in wage gains between this sector and the national average.

That said, the latter phase will not last forever, and wage growth in the administrative services sector is likely to move towards tracking the general rate of WPI increase in the longer term.

9.2.2 Comparison with EBA results

As Chart 9.6 shows, the general acceleration in wage growth under EBAs in the administrative services sector since early 2011 ended in December 2012, presaging the decline in the WPI measure.

Chart 9.6: Measures of administrative services sector wage growth



Source: ABS, Department of Education, Employment and Workplace Relations

With 18% of workers in the industry covered by EBAs (close to the overall national average of 19%, but somewhat below the 30% share seen in the utilities sector), the measures here – both current EBAs plus new EBAs lodged in the quarter – are a fairly solid indicator of WPI trends.

That stands in contrast to the extremely volatile AWOTE measure.

Wage gains in new EBAs peaked at 5.5% in the year to September 2012, before slipping back sharply to just 3.8% for agreements lodged in the December quarter 2012 (with a relatively large number of workers covered by the newer, lower increase, agreements).

Increases contained in all EBAs in operation, which steadily rose from around 3½% in 2009 to 4.5% in September 2012, have also slipped back lately – although at 4.3% they are well above the all-industry average of just 3.8%.

The increase in the growth in wages under EBAs for the administrative sector across 2011 and 2012 were consistent with improvement in the performance of the WPI in this sector, and the end of that run suggests that the more recent downturn in WPI growth is more than just volatility in the measure.

Adding to those factors, we still expect the broader negatives associated with cost cutting by key sectors to be an additional negative factor in the short term.

9.3 Summary results

The forecasts for national and sectoral wage growth are shown in Table 9.1. Forecast components include real and nominal WPI, and real and nominal productivity adjusted WPI.

Table 9.1: National sectoral wage forecasts

Year to March changes in nominal national industry sector WPI

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	3.5	3.4	3.7	3.8	3.7	3.6	3.6	3.6	3.7
Utilities	4.2	3.5	3.3	3.5	3.5	3.6	3.5	3.4	3.4
Construction	3.6	3.2	3.3	3.6	3.6	3.7	4.1	4.2	3.9
Administration services	3.5	3.4	3.4	3.7	3.7	3.7	3.6	3.6	3.7

Year to March changes in real national industry sector Wage Prices

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	1.4	0.7	0.9	1.0	1.0	1.1	1.2	1.2	1.0
Utilities	2.1	0.8	0.5	0.7	0.9	1.0	1.0	1.0	0.7
Construction	1.4	0.4	0.5	0.8	0.9	1.2	1.6	1.7	1.2
Administration services	1.4	0.6	0.6	0.9	1.1	1.1	1.1	1.2	1.0

Year to March changes in nominal productivity adjusted Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	1.5	1.6	2.5	2.3	2.0	2.1	2.0	1.9	1.7
Utilities	2.3	1.9	2.0	1.8	1.7	2.0	1.9	1.7	1.5
Construction	1.3	1.9	2.2	2.2	1.9	2.2	2.5	2.5	1.9
Administration services	1.3	2.1	2.1	2.1	2.0	2.1	2.0	1.9	1.7

Year to March changes in real productivity adjusted Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	-0.6	-1.1	-0.2	-0.4	-0.7	-0.5	-0.4	-0.4	-0.9
Utilities	0.2	-0.8	-0.8	-0.9	-0.9	-0.5	-0.5	-0.6	-1.2
Construction	-0.8	-0.8	-0.5	-0.5	-0.8	-0.3	0.1	0.1	-0.7
Administration services	-0.8	-0.6	-0.7	-0.6	-0.7	-0.5	-0.4	-0.5	-0.9

Source: ABS, Deloitte Access Economics Macroeconomic model, Deloitte Access Economics Labour Cost model

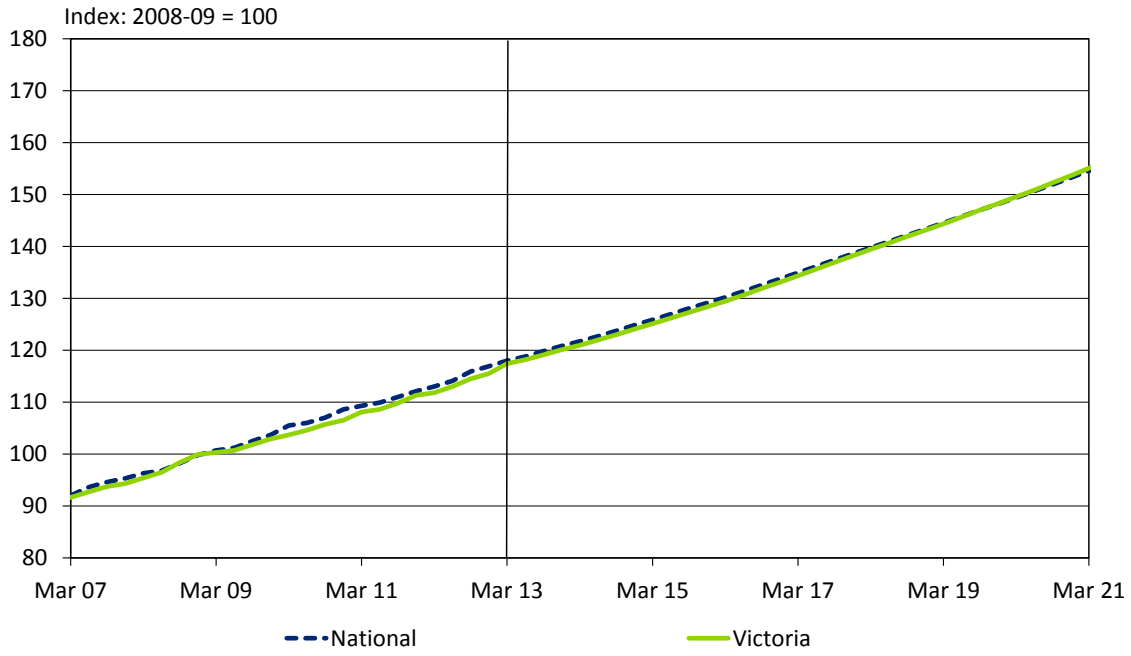
10 The Victorian outlook for wage growth in the utilities and competitor sectors

This chapter sets out the projections for labour costs in the utilities sector in Victoria, and provides additional State level projections for the two additional industry sectors of construction and administrative services.

10.1 State trends

National trends by industry will tend to dominate at the State and Territory level over time – particularly in the larger States, while volatility ('noise' in the data) can lead to significant movements in smaller jurisdictions.

Chart 10.1: Utilities sector WPI forecasts – national and Victoria



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

As Chart 10.1 above shows, over the longer term the underlying trends in wages in the sector (that is, at the national level) dominate the movements by State –these lines look very similar in both history and forecast.

There can be deviations from State to State, with these differences driven by a combination of:

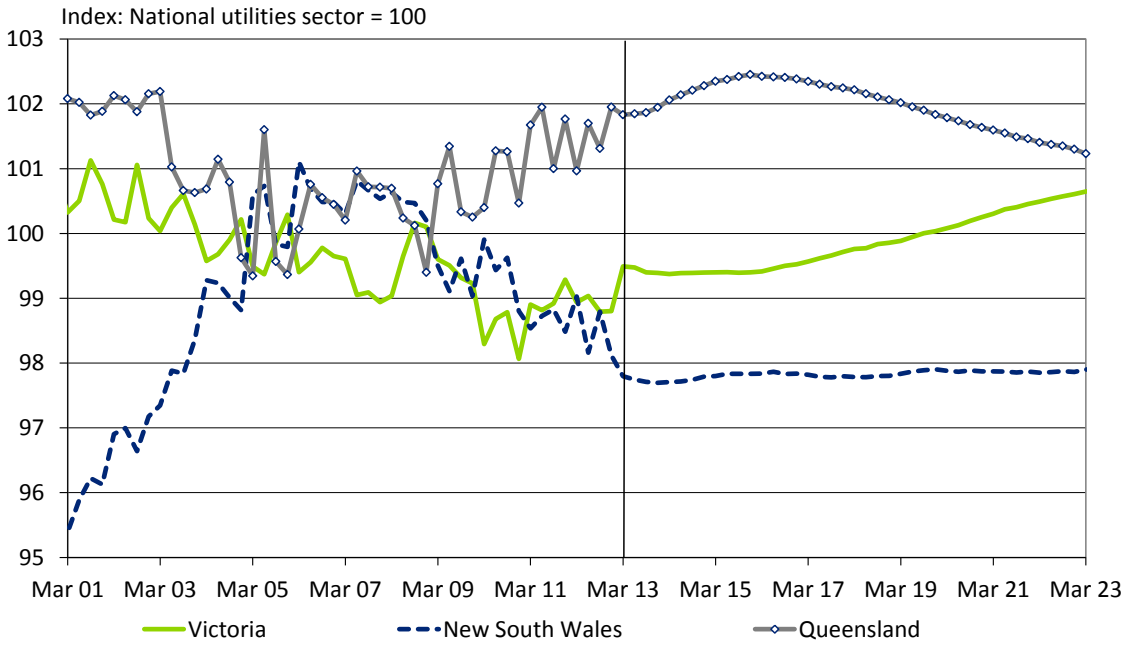
- **General trends in State wage growth.** Slower growing States will likely see slower WPI growth; and

- **One-off factors that affect a particular industry** – such as movements in a specific award level or a single EBA, or a sharp swing in demand or supply for workers in that sector *and* in that State.

However, as we have stressed elsewhere, there are limits to how far wage rates can deviate over the longer term – large and lingering relative swings in either direction will tend to be limited by competition between State and industries and the ability of workers to move towards better paying jobs.

Overall, the differences in index levels for utilities wages by State are easier to see when expressed in relative terms, as they are in Chart 10.2 below.

Chart 10.2: Relative utilities WPI forecast by State



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

In this chart the national utilities index at any point in time is set to a value of 100 and the index for each State is expressed relative to that value.[6] Both the volatility at the State level and the tendency for indices to revert towards the national average over time are evident.

Although the utilities sector has seen relatively faster wage growth nationally, much of that strength from the late 1990s to around 2005 was due to strength in New South Wales. Wage gains in Victoria were more moderate than those in NSW through to 2005, and the State failed to keep pace with the mining States across the first (pre-GFC) mining boom.

In more recent times the flow-on effects from the Queensland and Western Australia mining sectors have been a more important driver of WPI growth. Utilities wages in those strong mining States has been growing particularly rapidly, helping to hold down Victoria's relative utilities sector WPI since mid-2009.

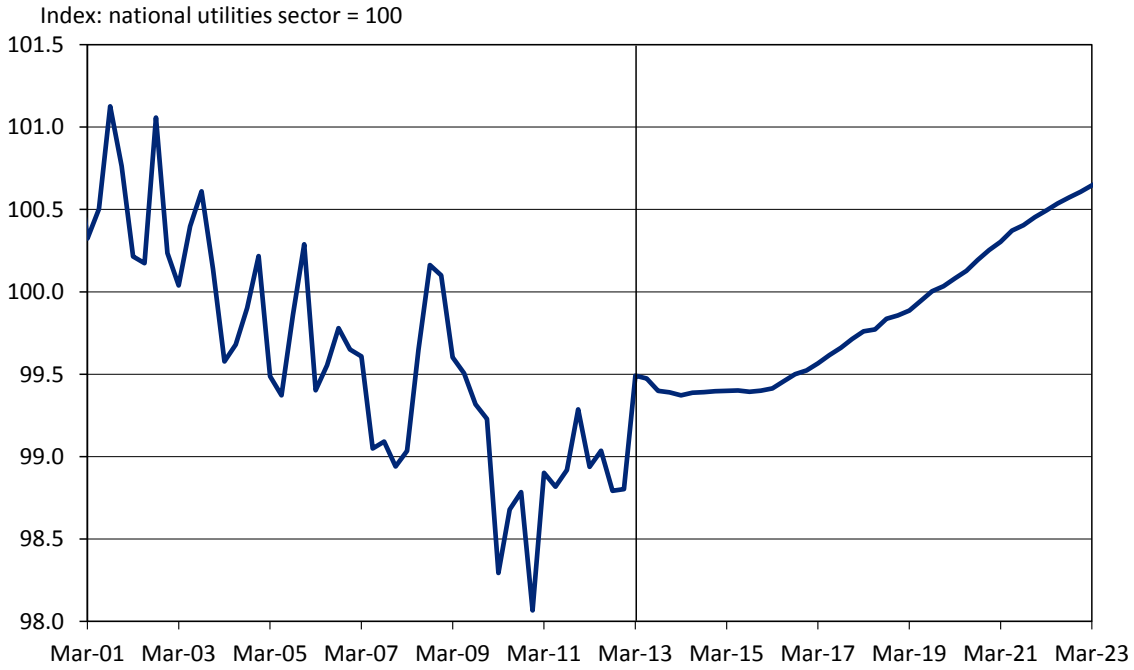
[6] As noted earlier, this does not imply an ordering for wage levels, as each individual series is an index equal to 100 in 2008-09.

This is not a measure of absolute weakness, just weakness relative to the industry average; an average that has been increasingly dominated by developments in Queensland and Western Australia.

However, the trends that drove a long-running wedge between the growth rates seen in the mining States and those seen in the key States and New South Wales and Victoria are now starting to unwind.

With the modest pace of the advance in overall demand for the services provided by the utilities in Victoria combining with declining pressure from wage growth in local competitor industries, some of the past outperformance in some wage measures will partially unwind over the medium term.

Chart 10.3: Relative utilities WPI forecast for Victoria



Source: ABS, Deloitte Access Economics labour cost model

The forecast profile in Chart 10.3 shows Victoria's relative utilities WPI measure rising slightly over time, despite the State's utilities sector WPI growing less rapidly than its overall WPI measure. The March quarter 2013 data showed a sharp spike in this direction, one which we believe overstates the pace of the unwinding, and as a result the short term shows this reversal stabilise below gradually picking up pace.

By 2020 the Victorian measure is back at a level which implies that, by that time, all the "relative ground" that the local utilities sector WPI has lost since 2008-09 will have been caught up again.

However, this "local growth" occurs across a period where growth in the utilities sector in general (that is, nationally) will be lagging the overall rate of WPI increase, so what the State's utility sector workers gain on the one hand, they will be losing on the other.

As always, it should also be noted that volatility in the State indices implies that actual movements in State-by-industry WPI in the future are likely to be far less smooth than shown in the charts here – for example the jump in relative Victorian utilities sector WPI seen in March 2013, while reflective of the general trend we expect, could well unwind slightly in the short term.

Picking point-to-point growth rates are therefore particularly hard, and the results in Chart 10.2 show the broad trends in relative labour cost movements in the sector over a period of time.

10.2 The utilities sector

Official ABS data show that annual wage gains in Victoria's utilities sector have been gradually accelerating from around 3½ during 2010 to 4½% in early 2013, marginally outpacing general wage growth in Victoria, and gradually moving ahead of the national average for utilities.

Chart 10.6 shows a comparison of these growth rates.

These patterns are occurring as the Victorian utilities sector begins to catch up some of the ground lost to other States during the mining boom years.

But the growth is not all "catch-up". Across this period the State's utilities sector has been increasing its share of Victorian employment, suggesting strengthening underlying demand for workers in the sector has contributed to the increasing rate of wage growth.

Recent investment in key infrastructure projects, including the newly completed Wonthaggi desalination plant and Melbourne Water's $220 million main sewer replacement from Swallow Street (near Beacon Cove) to Wurundjeri Way at Docklands, have underpinned a lot of this increase in demand.

In general, those trends are expected to continue through the rest of 2013 and into 2014, supported by further expansion in the utilities sector, such as the upgrade the Eastern Treatment Plant at Carrum. In the energy sector, works continue on the $450 million, 52 turbine wind farm at Bald Hills near Inverloch.

Yet there are some clouds to the outlook. As noted above in Chapter 4, weak prospects for output in the utilities will continue to hamper employment prospects in the sector, particularly if recent trends toward reduced electricity demand are maintained.

That said, utilities wages in Victoria have increasingly kept pace with wages in the sector nationally, even as the sector itself has outpaced the national average growth in wages. The national trend is expected to weaken from here as the utilities sector wavers and the demand from competitor firms in the construction sector peaks and declines.

On the other hand the Victorian sector should be slightly less affected by this national change – first because it is an unwinding of competitor pressures that have driven growth more in other States, and second because of the underlying growth in the local sector which should remain solid over the coming year.

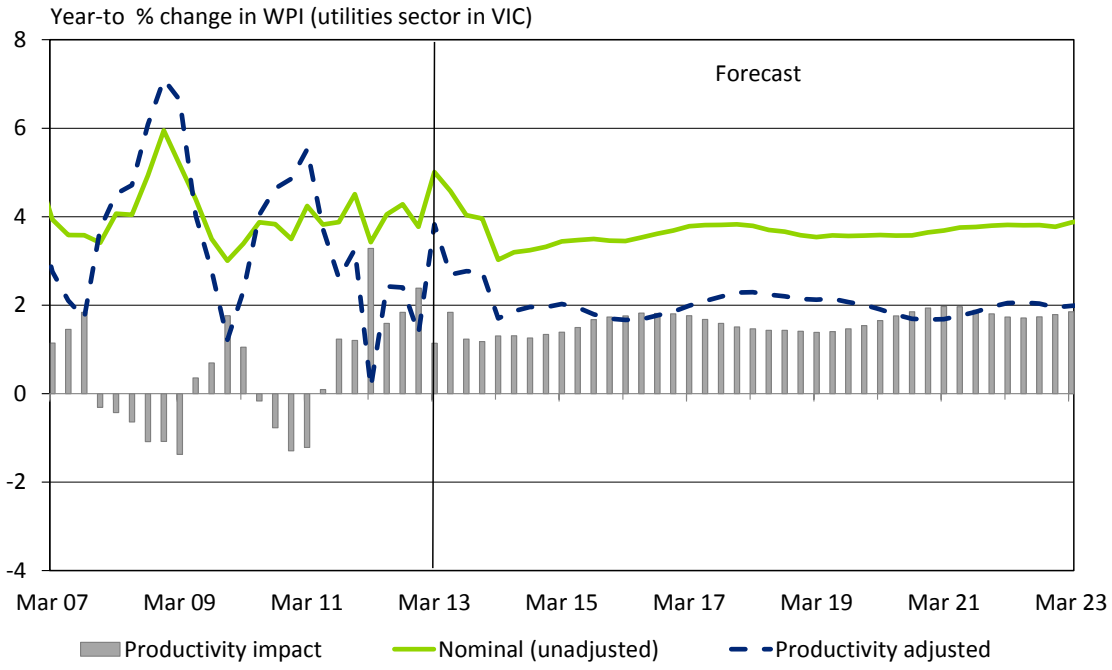
However, the trends that are forecast here can be overwhelmed by volatility in quarter-to-quarter movements. The official WPI results for the utilities sector in Victoria were particularly strong – lifting by 1.6% in the March quarter 2013, to lift year-to-growth to 5.0%.

We have little problem with the direction here (previous forecasts have shown the State's sectoral growth as likely to catch-up to the recent national growth trend), but it should be noted that this could be a case of the data "getting ahead of itself".

The short-term forecasts therefore mow show a period of stability in the rate of growth compared to the national average as this latest jump in wages is absorbed, before the longer term returns to the better-than-average growth rate we have been projecting in previous forecasts.

That means year-to wage growth in the Victorian utilities sector (seen in Chart 10.4 below) will drop back in 12 months (once the recent surge has passed through the analysis), although this latter shift is a reflection of past volatility rather than of particularly weakness at that time.

Chart 10.4: Victorian utilities WPI forecasts



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

The longer term sees a more modest outlook for Victoria's utilities sector, particularly in terms of employment growth. The utilities sector will continue to be affected by a number of negative factors, some of which may be easing, but will still have lingering effects.

While the Australian dollar may drop back, the impacts of 'two speed troubles' gripping the State's manufacturing sector will still have a negative impact, with the increased availability of skilled manufacturing workers cutting into wage pressures, and with Victoria's important manufacturing sector fading in importance as a customer for the services of the utilities sector.

In addition to the woes of manufacturing (which have flared again with the announcement that Ford will be shuttering production in Geelong in late 2016), engineering construction

employment is now also heading into a period of much greater uncertainty. Mining-related construction levels are peaking, with the most recent economic data showing either slowing growth or even some declines.

Indeed, the construction sector in Victoria is cooling both because of that, but also due to weakening housing demand.

As a result, wage pressures emerging from these sectors are tending to fall back. That trend will be more evident in Victoria than in Australia in general, particularly with the State's manufacturers exposed to a $A that (even though starting to ease) is projected to remain uncomfortably high for some time.

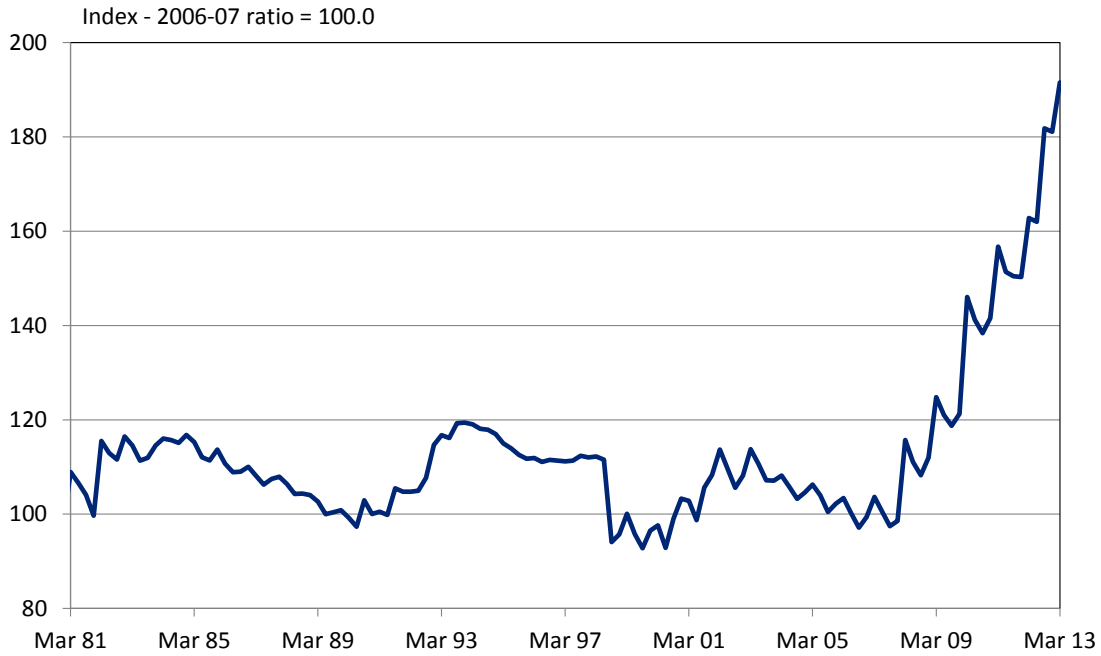
At the same time Victoria's housing sector will see a relatively muted recovery in the coming years due to the relatively solid growth in housing seen in the past – unlike some other State where significant recent 'underbuilding' of new homes will tend to lift demand.

The utilities sector in Victoria will also struggle due to the sustained rise in electricity prices across recent years as well as the potential for future cost pressure linked to carbon pricing.

As noted earlier, electricity price increases have massively outpaced the general rate of inflation in Australia over the past six years. In the case of Victoria the gap is even larger, because since 2006-07 electricity prices have effectively doubled in real terms.

This effect is even more starkly seen when compared with the longer term comparison stretching back to the 1980s shown in Chart 10.5. That chart indicates that, until recently, movements in electricity prices broadly tracked with overall inflation (and, if anything, trended marginally lower across the period).

Chart 10.5: Melbourne electricity prices relative to total CPI



Source: ABS

However, they have leapt alarmingly in the past six years, rising by 91% more than general price levels over than time (well above even the solid 74% gap seen nationally).

That combination of sectoral weaknesses would further ease the pressure on what had until recently been relatively tight labour markets for the skills of utilities workers in the State.

With the State's unemployment rate expected to continue the steady increases seen over the last 18 months, the task of finding workers will be easier than it had been when unemployment remained near its post-GFC lows. In turn, that will help to moderate pressure on wages in the utilities sector in the short term.

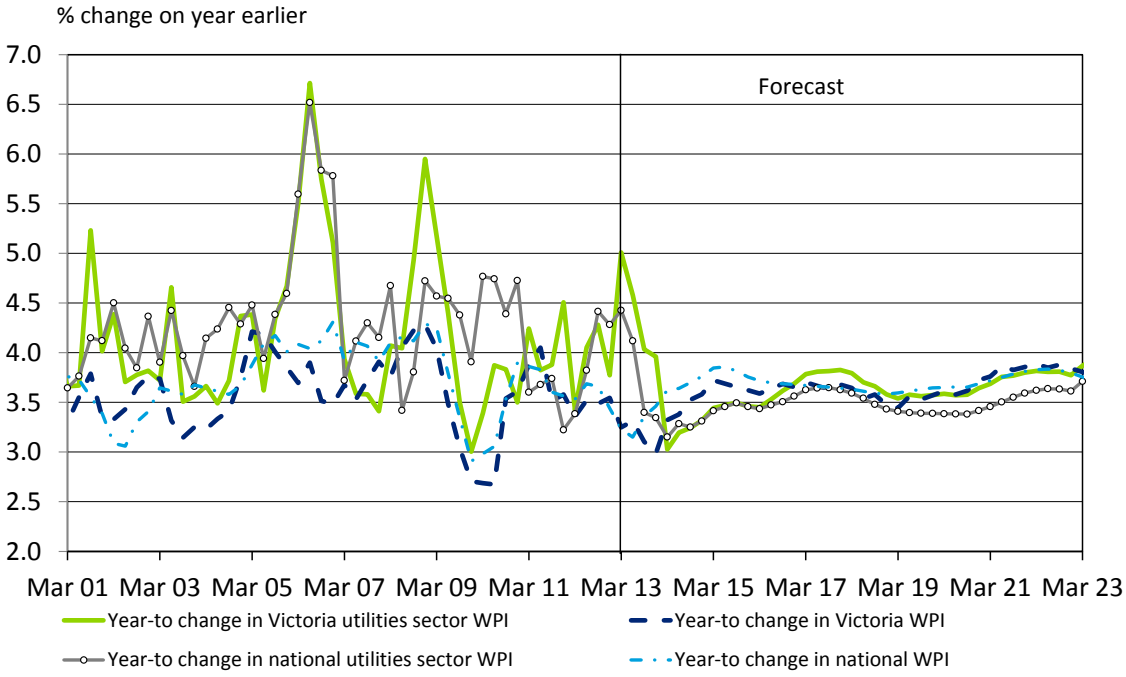
Overall, that means a steady easing in the State's utilities sector WPI.

That outlook is shown in Chart 10.4, albeit with an additional increase in utilities wages in the short-term built in due to the jump in March quarter data. Output growth in Victoria is under pressure and overall WPI growth rate in the State is easing towards 3% from the 3½% seen in the past year.

That pattern therefore sees utilities WPI growth reaching a trough in early 2014 at 3% as all of the above factors peak. Growth then gradually recovers in line with an upturn in general wage rates.

Those medium term increases are supported by an improvement in productivity growth – as Chart 10.4 also shows once the impacts of productivity growth (and the recent wage jump) are removed, the growth in wages is fairly stable, running at close to 2% per year consistently across the forecast period.

Chart 10.6: Victorian utilities forecast comparison



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Compared to the other relevant wage growth rates shown in Chart 10.6, Victoria's utilities sector WPI should move back into line with the broader sectoral average before entering a period of outperformance (or catch up for past underperformance) from 2016.

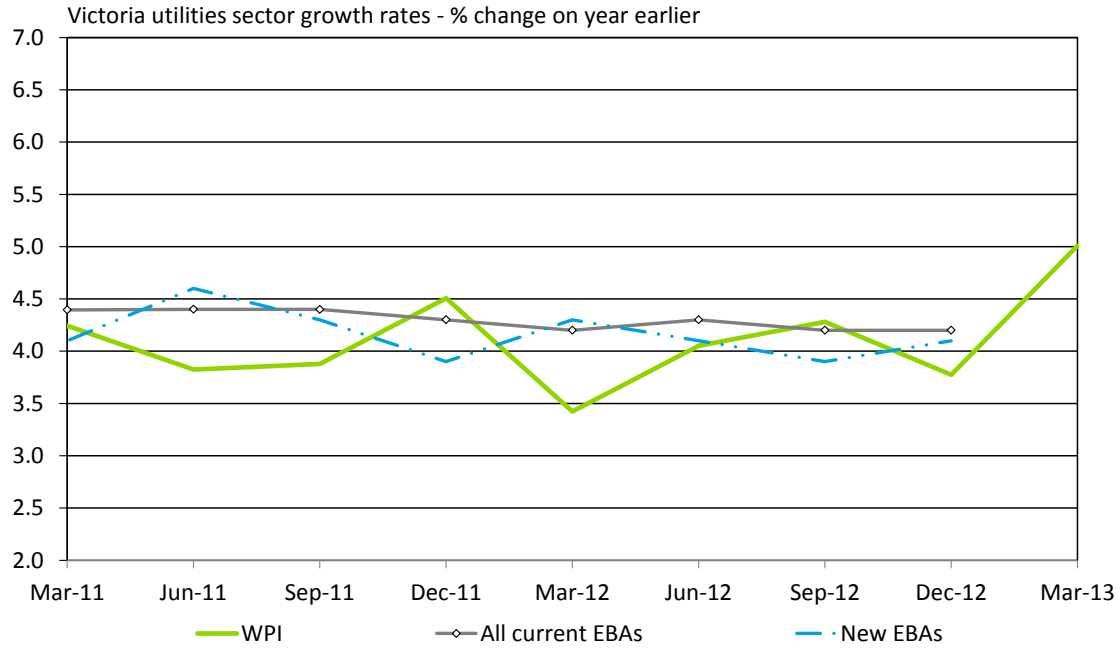
That will coincide with a period where the recent strong outperformers (mainly Queensland and Western Australia) are projected to fall back towards the national average in terms of wage growth.

That trend of relatively recovery will mean that, unlike utilities in general, the State's utilities sector WPI will be rising in line with the overall State WPI growth rate from the middle of the decade – rather than lagging behind as will be the case nationally.

Chart 10.7 compares the growth in Victoria's utilities sector WPI with partial results from Enterprise Bargaining Agreements. The general trends across the three measures have shown a gradual easing from around 4½% across 2011 to closer to 4% by the end of 2012, although the WPI results (which are unadjusted ABS estimates) have been more volatile than the rates implied by all current EBAs.

While these trends would have suggested further easing heading into 2013, the March quarter WPI results leapt sharply. As we have stressed above, the relative strength in local utilities wages is not unexpected, but the size of the leap is, and underlying growth is probably less than this single result for the Victorian utilities sector WPI otherwise implies.

Chart 10.7: Comparative measures of wage growth in Victorian utilities



Source: ABS, DEEWR

10.3 The construction sector

For a State with relatively fewer natural resources, Victoria's economy has been a consistent success story across the past decade.

The State's construction sector has been both a cause of that impressive performance, as well as a beneficiary of it, with the sector aided by the solid performance of the State's economy.

Strong growth in employment led to stronger population growth which drove a long run-up in housing construction in the State. In turn, that led to increasing expenditure on infrastructure development (something that Victoria did capably, unlike some other States) which further boosted construction.

Adding to the underlying boosts to demand were two additional positives for the State:

- In part, the State's over-achievement in construction is due to under-achievement in New South Wales over the past decade; and
- Even as demand lifted, Victoria managed to keep its office space, industrial land and housing relatively more affordable than in other markets.

The first factor allowed it to steal a march on its northern neighbour, while the second helped it keep pace with the State that were undergoing resource-driven booms but suffered increasing shortages in supply and a sharp surge in prices.

In addition a series of one-off boosts to demand – such as new subdivisions on the outskirts of Melbourne, reconstruction efforts following the Black Saturday bushfires and flooding in regional Victoria – kept construction activity in the State running well ahead of national trends.

It easily outpaced activity in New South Wales and Queensland, and even approached the performance of those two States combined.

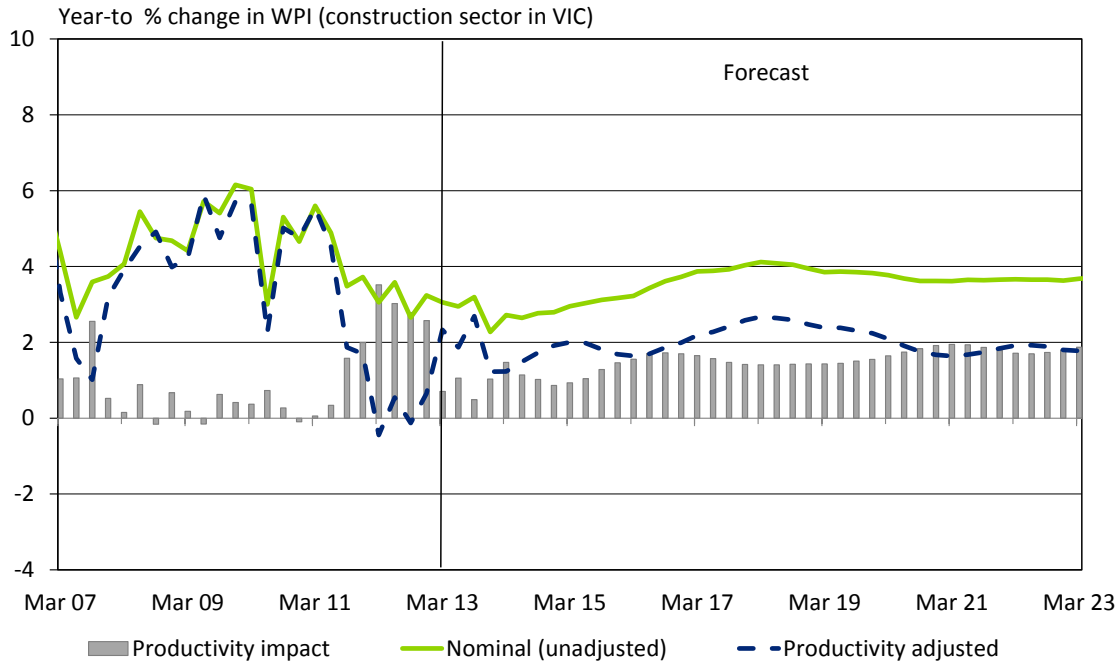
Yet this 'virtuous circle' of strength driving further impressive growth is now beginning to come under increasing pressure. The big question for Victoria's housing sector is whether 2012-13 represented a 'new normal' or whether it was just a way station between the strong construction levels of recent years and a return to the weak results of the first half of the last decade.

Leading indicators and actual construction levels stabilised somewhat over the past year, but they are still edging down, and rental vacancy rates are at close to an eight-year high.

Yet Victoria's population growth has rarely been better for a generation, housing affordability is almost back to levels seen when interest rates were slashed at the height of the GFC, and – despite some publicity suggesting otherwise – construction employment isn't easing back as notably as it is in some States.

As Chart 10.8 below shows, wage rates, while easing at present, have not really slumped, but they have moved lower in line with broader economic indicators. That is a continuation of the results of the past decade, where even the GFC did little to halt the momentum of wage gains in the local construction sector.

Chart 10.8: Victorian construction WPI forecasts



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

It should be remembered that the major negative for Victoria's housing construction outlook in the short term is the State's recent successes in this area – which means it hasn't got anything like the pent-up demand evident in some other key States.

That leaves the overall housing construction outlook in this State projected to be solid enough, and indeed the State will continue to lead the way in terms of housing starts, just somewhat less impressive than it is for other parts of the country.

The Victorian engineering construction sector has also had a pretty good run in recent years – all the more so when you consider Victoria's relative lack of minerals to dig out of the ground. But the engineering construction spend in Victoria has now been fading for a couple of years, and the lack of investment in current and upcoming projects outside the transport and utilities sectors, and from the private sector in general, is a concern for Victoria.

Indeed, publicly funded projects in Victoria account for close to two thirds of the value of major engineering projects, whereas public sector funding accounts for less than a quarter of the value of engineering construction projects nationally.

Resource projects continue to be led by the $4.4 billion Kipper-Tuna-Turrum Project located 45 kms south east of Lakes Entrance in Bass Strait. That project will provide work out to 2016. But other than that, there is a lack of any significant contribution from Victoria's resources sector in coming years.

On the other hand, Victoria leads the way in terms of major rail projects underway, with the $5.3 billion regional rail link from West Werribee to Melbourne's Southern Cross Station due for completion in 2016.

Road projects are led by the $980 million Western Ring Road expansion between the Hume Highway and the West Gate Freeway, with work scheduled for completion early in 2014, while work on the $760 million Peninsula Link project wrapped up over the quarter. Meanwhile, work has begun on a $1 billion, 140 turbine wind farm near Macarthur, while work continues on the $417 million upgrade of the Eastern Treatment Plant at Carrum in Victoria, currently the largest water treatment project underway in terms of capital value in the country.

Activity in commercial construction continues to be held up by a series of large retail and office developments in Melbourne's CBD. The $1.5 billion Village Docklands project at Collins Square in Melbourne leads the way, while a $700 million Bourke Junction project consisting of two office towers, a hotel, a medical centre, shops, gymnasium and a pub is underway. Meanwhile, the expected final cost of the Emporium Melbourne project on Lonsdale Street has ballooned to $1.16 billion, with final work scheduled for completion in November.

Elsewhere, the State Government continues to spend up on health projects with a series of hospital and health centre upgrades currently underway. Work on the $1.3 billion Victorian Comprehensive Cancer Centre at Parkville is scheduled out to 2016, along with the stage 1 upgrade of the Bendigo Hospital, with the final cost of the project up to $630 million. Meanwhile, a series of minor upgrades to a number of regional hospitals are underway with a combined value of around $2.3 billion.

Or, in other words, just as the State's housing sector has been strong and therefore will largely miss out on the national upswing, Victoria's engineering construction sector hasn't seen the great surge in demand seen in other States and so doesn't run the same degree of risk from the expected slowdown.

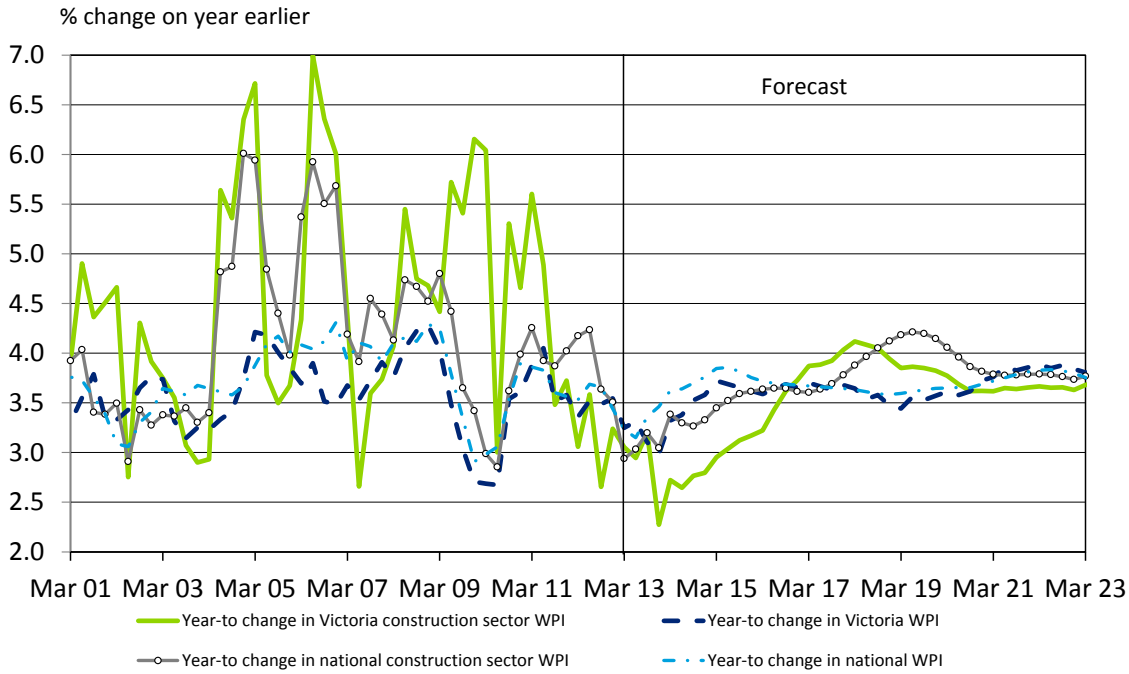
That said, the generally weak outlook for growth in the Victorian construction industry suggests little reason to expect that the State's construction sector wage growth will rebound from the easing that has been a developing trend since late 2011. That has seen the pace of Victorian construction sector wage growth decline from well above the national average to somewhat below (although the national figure is now declining in line with Victoria's).

As Chart 10.9 below shows, wages in the construction sector have been rising more slowly than the State's (below average) overall wage growth for some time, although all measures of wages are now growing at roughly the same rate (between 3% and 3¼% in the year to the March quarter 2013).

With further weakness in construction expected, Victorian construction sector wage growth may fall back below the broader wage measures shown in Chart 10.9. That relative performance is in line with previous forecasts.

However, rather than being stable at around 3% per annum, growth in wages in Victoria's construction sector is projected to slowly accelerate across the period from 2014 to 2017, in line with changes to the general tenor of the forecasts.

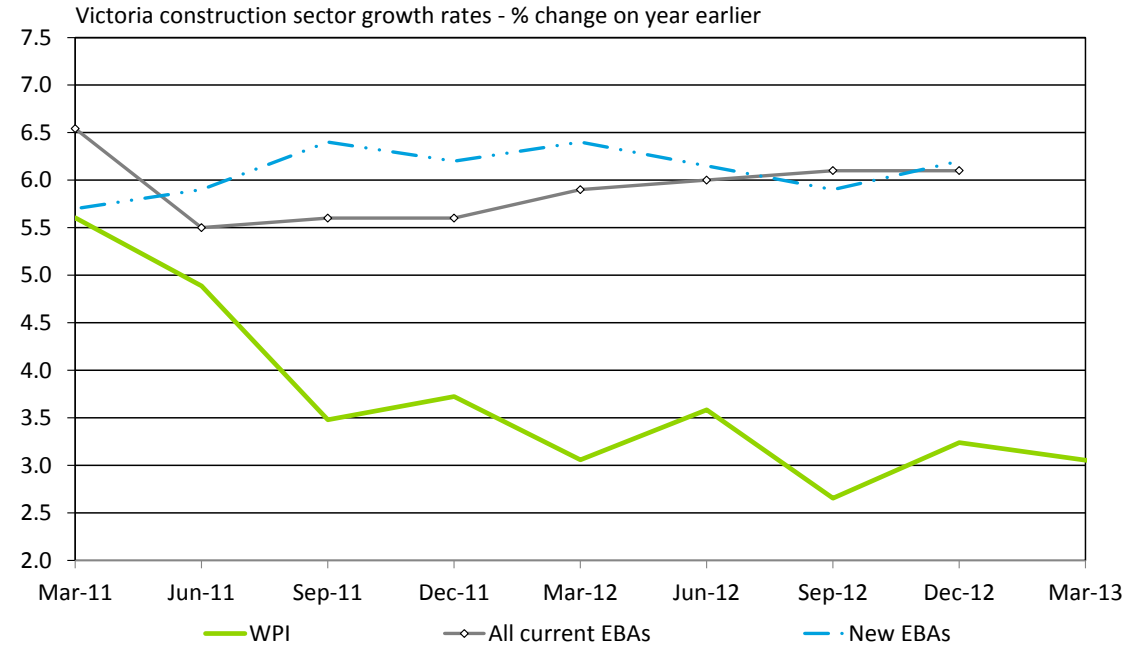
Chart 10.9: Victoria construction forecast comparison



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

That means that Victoria is likely to see a sustained period of relative easing in construction wages – a trend that matches the general construction sector outlook which has left far less (if any) pent up demand for housing.

Chart 10.10: Comparative measures of wage growth in Victorian construction



Source: ABS, DEEWR

While growth in the WPI has been declining since the start of 2011, Chart 10.10 shows that measured wage rises from EBAs have been generally accelerating across this period. Growth included in new agreements has been running at or above 6% while the annual increases across all agreements has risen from 5.5% in mid-2011 to 6.1% at the end of 2012.

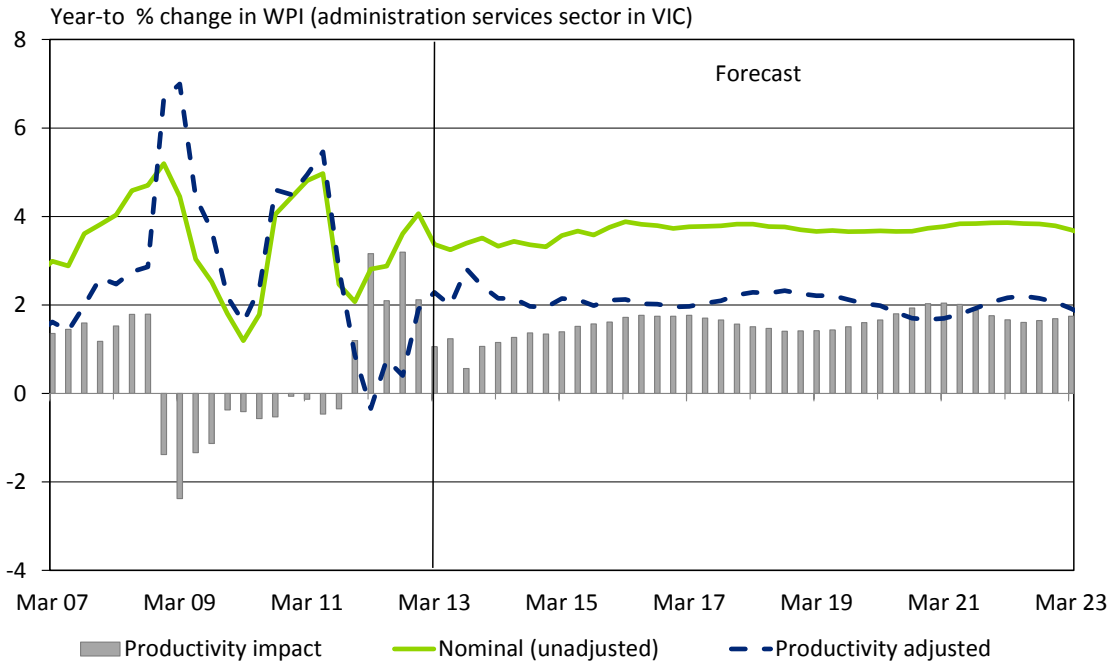
This is partially due to the relative low level of coverage of EBAs in the sector (the detailed data from DEEWR shows only around 15% of construction sector employees are covered by the EBAs included here – below the national average and the lowest proportion of the key sectors considered in the report).

In addition, construction sector EBA's tend to be focused on a relatively small number of large projects, many of which are the subject of considerable industrial bargaining tension.

10.4 The administrative services sector

As Chart 10.11 shows, WPI growth in the State's administrative services sector has been relatively volatile across the past few years; a major slowdown during the GFC followed by recovery across most of 2011, partly thanks to the rebound in wages generally, partly due to solid employment in the sector, and partly due to one-off impacts from the transition to the *Modern Awards* system which became evident in the September quarter 2010 data.

Chart 10.11: Victorian administrative services WPI forecasts



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

That one-off event affects the growth rate in Chart 10.11 across 2010-11, somewhat obscuring the underlying upward trend in sectoral WPI increases across the past four years.

However, that trend may have now ended, with growth slipping back from 4.1% in the year to December 2012 to just 3.4% in the year to March 2013.

This latter decline coincides with a developing period of weakness in Melbourne's broader office employment sectors – covering not just the administrative services (employment services and cleaners) but also property and business services (such as lawyers and accountants) – which had been an area of consistently solid performance since the GFC.

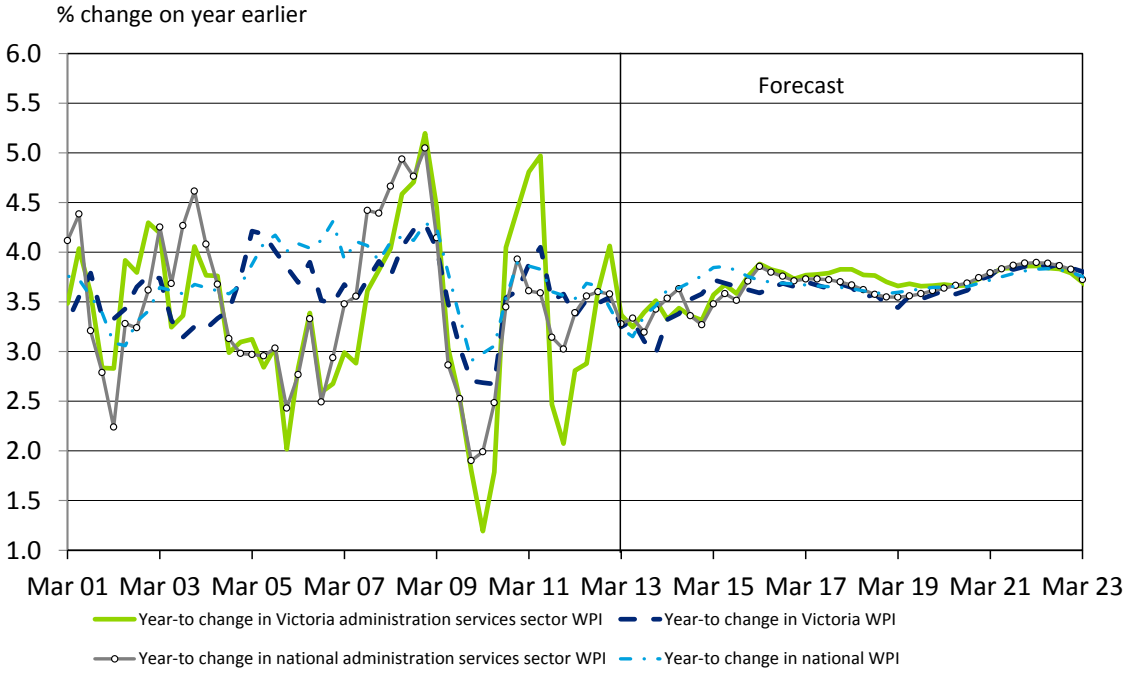
As with utilities, the prospects for wage growth in the administrative services sector will be tied largely to movements in other key sectors, in this case Melbourne's CBD office market.

While the present sees a period of modest easing, Melbourne is somewhat ahead of the game in terms of white collar cost cutting, having seen its finance sector (another key competitor in this area) cut back earlier than in Sydney.

Public sector jobs, another industry that competes for these workers to some degree, are also under pressure at present. However, as is true of the finance sector, those pressures are less than in other States (such as Queensland).

That leaves a fairly benign outlook for the Victorian administrative services sector. Chart 10.12 suggests that WPI growth will track the broader national industry rate and overall Victorian growth upwards across the medium term, with little difference in longer term results as well.

Chart 10.12: Victorian administrative services forecast comparison



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

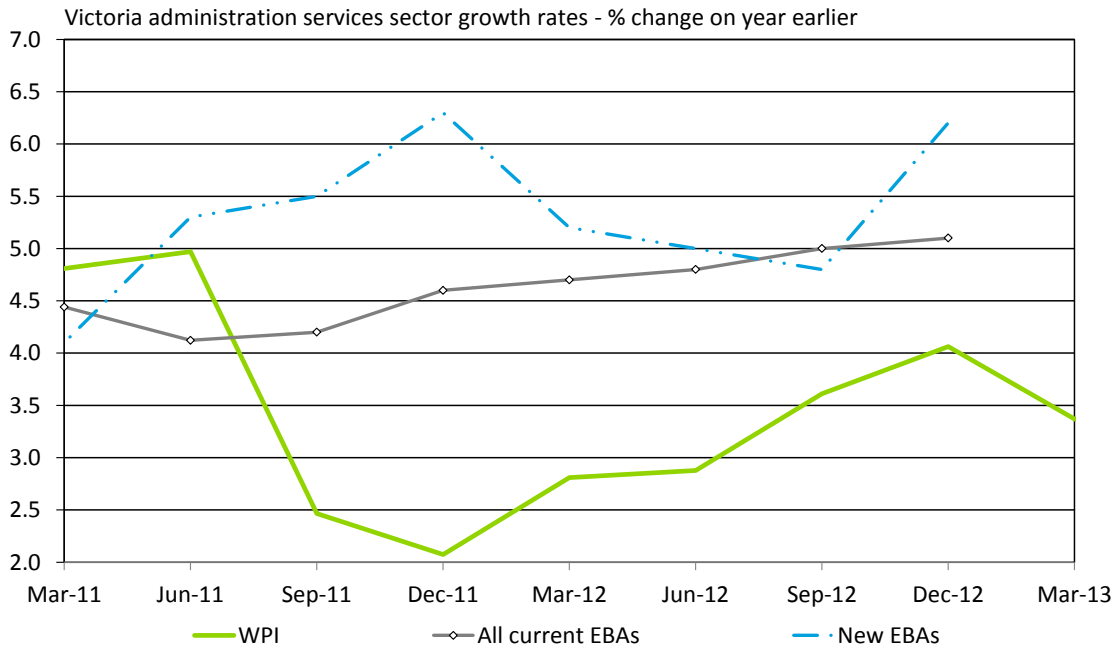
It should be remembered however, that this is a relatively small sector and hence is prone to some level of volatility. While the national administrative services sector has seen a similar pattern of growth to Victoria, local growth has seen both sharper rises and periods of greater weakness than its national counterpart.

To some degree, that reflects the influence of the awards changes noted above, but similar divergences will probably happen in the future as well. That said, forecasts should not over-

react to such short term swings. Over any appreciable period of time the growth rate in this sector should be very similar to broader sectoral trends.

As with the construction sector and administrative services wages in general, Victorian EBAs have recorded considerably faster increases than the WPI. Chart 10.13 shows data for growth in wages included in Enterprise Bargaining Agreements rising from around 4% annualised growth in early 2011 to over 5% by the end of 2012, with rises included in new agreements generally running at or above 6% per annum.

Chart 10.13: Comparative measures of wage growth in Victorian administration services



Source: ABS, DEEWR

10.5 Summary results

Forecasts for sectoral wage growth in Victoria are shown in Table 10.1 below. Forecasts include real and nominal WPI, and real and nominal productivity adjusted WPI.

Table 10.1: Victoria wage forecasts

Year to March changes in Victoria nominal Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	3.4	3.2	3.6	3.6	3.7	3.7	3.5	3.6	3.7
Utilities	4.3	3.9	3.3	3.5	3.7	3.8	3.6	3.6	3.6
Construction	3.1	2.8	2.8	3.1	3.7	4.0	4.0	3.8	3.6
Administration services	3.5	3.4	3.4	3.7	3.8	3.8	3.7	3.7	3.7

Year to March changes in Victoria real Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	1.5	0.4	0.7	1.1	1.1	1.0	1.0	1.1	0.9
Utilities	2.3	1.1	0.5	1.0	1.0	1.2	1.1	1.1	0.9
Construction	1.2	0.1	0.0	0.6	1.0	1.4	1.5	1.4	0.9
Administration services	1.5	0.6	0.6	1.2	1.2	1.2	1.2	1.2	0.9

Year to March changes in Victoria nominal productivity adjusted Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	2.2	2.0	2.1	1.9	1.8	2.1	2.3	2.1	1.7
Utilities	2.5	2.5	2.0	1.8	1.8	2.2	2.2	2.0	1.7
Construction	0.8	1.8	1.8	1.8	1.9	2.5	2.5	2.3	1.7
Administration services	1.3	2.3	2.1	2.1	2.0	2.2	2.3	2.1	1.7

Year to March changes in Victoria real productivity adjusted Wage Price aggregates

Annual % change	2012	2013	2014	2015	2016	2017	2018	2019	2020
All industries	0.2	-0.8	-0.7	-0.6	-0.8	-0.5	-0.2	-0.3	-1.0
Utilities	0.5	-0.2	-0.8	-0.7	-0.7	-0.4	-0.3	-0.4	-1.0
Construction	-1.1	-0.9	-1.0	-0.7	-0.6	-0.1	0.0	-0.1	-1.0
Administration services	-0.6	-0.4	-0.7	-0.4	-0.6	-0.4	-0.2	-0.3	-1.0

Source: ABS, Deloitte Access Economics labour cost model

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Appendix A: Some rules of thumb for wage forecasting

Inflation has three main drivers:

- wage gains (or, to be more exact, wages relative to productivity),
- import prices, and
- the degree of pressure on prices coming from the spare capacity (or the lack of it) in the economy.

The Reserve Bank tries to keep consumer price inflation (CPI) to an average of 2 to 3% a year across the business cycle. That is an average both across time and across categories. For example, retail prices for imports have grown relatively slowly across the past decade, while prices for services have tended to grow faster.

Aiming for average CPI of 2 to 3% also requires aiming for average inflation in labour costs of the same.

- That is exactly what does occur – growth in nominal unit labour costs is close to growth in the CPI over time.
- Many people in the corporate world find that strange at first blush. After all, they see their own wages and those of people around them growing at faster rates.
- However, there are two other steps to take account of in translating wage growth into labour cost growth.
    - **First**, the workforce sees entries and retirements each year, with those retiring on higher earnings than the juniors who are entering. To look at the wage growth of individuals as a proxy for wage growth more widely is to forget that the group of individuals gains a year in experience and seniority every year whereas, due to retirements, the workforce as a whole sees rather less of an increase in experience and seniority every year.
    - **Second**, whether considering a specific group of individuals or the workforce as a whole, you have to remember that we get better at working over time – for example, thanks to working with better equipment. This growth in labour productivity saves money. For example, the work that last year took an hour may this year take 58 or 59 minutes. In turn, that productivity growth reduces the impact of rising wages on labour costs.

The above therefore helps to identify some rules of thumb:

- Across a long enough period, growth in prices will tend to average somewhere in the Reserve Bank's target range of 2 to 3% a year – perhaps 2.5%.
- The same is true for labour costs for a unit of output (nominal unit labour costs) – also averaging somewhere close to 2.5%.
- However, wages for the 'average' worker will tend to grow faster – the sum of both prices and productivity. As the latter has averaged around 1.5% over the past three

decades, that might suggest that wages for the 'average' worker will grow by perhaps 4.0% in a typical year.

- There will be a divergence between wage growth on the one hand and price and productivity growth on the other over the course of a business cycle. When demand is strong relative to the available supply of workers, wage growth will exceed this rule of thumb measure – and vice versa.
- Moreover, wages for the typical 'specific' worker will tend to grow faster still, as their seniority and experience increases each year. It is harder to identify a general rule of thumb here, as the reward for seniority and experience varies notably across sectors and occupations, as well as across the business cycle. That said, wages for the typical 'specific' worker will tend to grow by perhaps 5.0% in a typical year.

Appendix B: Macroeconomic and wage forecasting methodology

Introduction

The model used by Deloitte Access Economics to forecast the WPI by State and by industry has been created as a subsidiary component of our Deloitte Access Economics Macro (AEM) model. Key aggregates, including overall wage and productivity movements, and projections for output and employment by State and for Australia are used to drive WPI measures at more detailed levels.

The following are **excerpts** from the full model documentation that cover the creation of the key driver of the detailed wage model. Full documentation for this component of the model has been provided separately to the AER.

Macroeconomic forecasting

AEM is a macroeconometric model of the Australian economy. It is made up of numerous accounting identities and behavioural equations which describe the aggregate actions of households, businesses, government and foreigners. The formulation of these behavioural equations is based on mainstream theory. The resultant model is best described as a small open economy model in which all foreign (world) prices and interest rates are taken as given (that is, they are exogenous to the model).

The structure of AEM has evolved over time in response to various forecasting and policy simulation challenges. Significant changes to current and future Australian population characteristics have led to a number of changes in the structure of the AEM over the previous version (version 5).

In brief, the model now has a better spelled out supply side, with an endogenous role for capital deepening and an exogenous role for total factor productivity growth, which along with a more detailed treatment of population dynamics acts as a long term anchor for output.

As the then Treasury Secretary Ken Henry noted in 2007, Australia cannot:

> *"… generate higher national income without first expanding the nation's supply capacity: one of the 3Ps — population, participation or productivity. Now you might be thinking that that's all pretty obvious. It is, after all, a tautology. But one of my messages to you today is that if you understand what I have just been talking about, then you are a member of a rather small minority group."*

The redesigned model adds to the sectoral structure of the previous version, which included a business sector, a housing services sector and government sector, by netting out farm output from the business sector. Given the variable nature of farm output, this change allows us to account for volatile changes that could not be captured when farm output was combined with non-farm output.

In the new model, business sector factors of production (capital and labour) produce non-farm business sector output, which is non-farm GDP less the service flow from housing and the value of government services. The level of business sector output is the sum of potential output and the output gap.

Potential business sector output is the level of output that would exist if there were no temporary or cyclical influences. In constructing potential business sector output, considerable attention is paid to the population characteristics which influence labour force participation, the growth rate of residual total factor productivity and the expected rate of capital deepening. The output gap is the gap between actual and potential business sector output. Negative output gaps imply the economy is operating below its potential, while positive gaps imply the economy is operating above its potential.

Fluctuations in the output gap are driven by a number of cyclical factors, including fluctuations in interest rates, foreign GDP and the terms of trade.

Imports are effectively intermediate goods in the latest version of the AEM model. They are combined with domestically produced traded goods to produce gross national expenditure on traded goods. Higher domestic demand raises the demand for imports. In contrast to the previous version of the model, the level of exports is determined by foreign demand conditions rather than domestic supply conditions. Just as stronger domestic demand raises the demand for imports, stronger foreign demand raises the demand for exports.

The demand for capital and labour in the new model has been reworked so that the short and long run paths of capital and labour are consistent with the forecast potential output path.

One of the new features of the model is the introduction of an equation forecasting the price of business sector investment. This change was necessary because the previous model assumption that the pricing of consumption and investment goods are similar no longer fits with the data. This change should yield more accurate forecasts of investment and the returns to investment.

Changes to the household sector in the model were minor. The most significant change involved the introduction of equations for the price of consumption and housing investment.

With the exception of some minor changes caused by the introduction of distinct prices for consumption and investment, the balance of the model remains unchanged.

Finally, model parameters are estimated using quarterly data extending from September 1974 to the most recent quarter for which data are available. Quarterly data are used as annual data is too aggregated to allow analysis of turning points and interest rate movements. Monthly data is not feasible because most key ABS collections are produced on a quarterly basis – notably the national accounts, the balance of payments, CPI and international investment data. Another advantage of quarterly data over annual data is that both calendar and financial year totals can be calculated.

Domestic production

Domestic production is divided into farm and non-farm. Non-farm production is further divided into household, general government and business sector production.

The current version of the model nets out **farm sector** production from total production. Given the variable nature of farm output, this change allows us to account for volatile changes in farm output that could not be captured when farm output was combined with non-farm output. Farm output is an exogenous input to the model.

In keeping with the previous version of the model the **household sector** produces housing rental services. This is the household sector's only output. The service flow is modelled as a fixed proportion of the housing capital stock.

Public sector production is limited to general government output, which comprises general government services (equal to the wage cost of the general government employees) and general government gross operating surplus (equal to the depreciation of general government capital).

All other non-farm production takes place in the **business sector**, which incorporates private and public enterprises. Business sector output is produced using capital and labour via a standard constant returns production technology. Business sector production is also influenced by the level of total factor productivity.

To capture the impact of cyclical fluctuations on the economy business sector output is divided into potential output and an output gap. **Potential business sector output** is the level of output that would exist if there were no temporary or cyclical influences. In constructing potential business sector output, considerable attention is paid to population characteristics which influence labour force participation, the growth rate of residual total factor productivity and the expected rate of capital deepening.

The **business sector output gap** is the gap between actual and potential business sector output. Negative output gaps imply the economy is operating below its potential, while positive gaps imply the economy is operating above its potential. Fluctuations in the output gap are driven by a number of cyclical factors including fluctuations in interest rates, foreign GDP and the terms of trade. Output gaps play an important role in determining the level of price and wage inflation.

AEM forecasts all components of aggregate demand. To ensure consistency between aggregate expenditure and aggregate output, the model uses adjustment factors which trim individual expenditure components so that aggregate expenditure equals aggregate output.

Labour market

The size of the **labour force** is forecast using exogenous assumptions about age specific **population growth** and **labour force participation**.

There are two measures of employment in the model. There is the potential employment that underlies the estimate of potential output and actual employment. The output gap to a large extent reflects the gap between the actual and potential employment.

Potential employment is the actual labour force less the level of unemployed workers implied by the natural rate of unemployment, where the natural rate of unemployment is the level of unemployment that would exist in the absence of cyclical fluctuations.

Actual employment is the actual labour force less the level of unemployed workers implied by the actual rate of unemployment.

There are three types of workers in the economy, civilian non-government (business sector workers), civilian general government and defence employees. Demand for business sector workers is endogenous, while the demand for the other two types is exogenous.

Business sector employment is driven by a standard labour demand function that relies on labour productivity, real wages and business sector output growth. Since labour force participation is tied down by exogenous assumptions, the actual unemployment rate for the economy is the residual after subtracting employment (for all three types of workers) from the labour force.

Other measures of employment, such as **wage and salary earners** are assumed to grow at the same rate as total employment.

Prices and wages

In addition to national account price deflators, the model also includes the underlying and headline measures of the **consumer price index (CPI),** and prices for **new cars, house building materials, material used in manufacturing, and preliminary stage domestic and imported commodities.**

The model also includes a number of measures of wages. The central measure is **average quarterly earnings** estimated from the national accounts. Other measures include **average weekly ordinary time earnings, average weekly earnings** and the **labour price index**.

Price and wage inflation in AEM are governed by the behavioural equations of the:

- business sector output gap;
- real exchange rate;
- import prices (including oil prices);
- monetary policy reaction function;
- average quarterly wages; and
- underlying consumer price index.

The way these equations interact is best observed through some examples.

A positive shift in domestic demand that raises the gap between actual and potential output (a positive output gap) will have a direct impact on price inflation by raising the underlying CPI. Wages respond with a lag to changes in underlying CPI inflation, with the long run real wage tied to CPI inflation and labour productivity growth.

A positive output gap also has a direct and indirect effect on real interest rates via the monetary policy reaction function, with the typical reaction to a widening output gap and higher price inflation being higher nominal interest rates. Higher interest rates dampen

domestic demand which narrows the output gap and relieves upward pressure on price and wage inflation. Over time this mechanism forces the output gap back to zero, interest rates to a neutral position and inflation to return to the RBA target level.

A change in real wages that exceeded the change in labour productivity raises price inflation in the short run. Since wages increase by more than labour productivity this raises nominal unit labour costs, which in turn raises underlying CPI inflation. Wages in turn respond to changes in underlying CPI inflation. Over time wage inflation will equal price inflation (plus changes in productivity growth). In the long run, price inflation is governed by the same mechanism at work in the output gap example above, which forces the CPI inflation rate to return to the RBA target level.

While the real exchange rate and import prices do not have an import role in the output gap and real wage scenarios, they are key players in the next foreign price shock example. Holding other things constant, higher world prices raise domestic import prices. Higher import prices have a direct impact on price inflation by raising the underlying CPI. Higher price inflation causes nominal interest rates to rise via the monetary policy reaction function. Higher domestic interest rates and incomplete pass-through of world price changes to domestic prices causes the differential between domestic and world real interest rates to rise.

Ordinarily this would imply an appreciation of the real exchange rate but in the Australian case this is more than offset by a deterioration of the terms of trade due to higher import prices which causes a depreciation of the real exchange rate. Combined with incomplete price pass-through the nominal exchange rate appreciates in the short run, which partly offsets the rise in domestic import prices due to rising world price. Over time there is full pass-through of world prices to domestic prices, which eliminates the gap between domestic and foreign real interest rates and returns the terms of trade to its pre-price shock level. Just as in the domestic inflation example, wages respond with a lag to changes in underlying CPI inflation, with the long run real wage tied to CPI inflation and labour productivity growth.

Wage forecasting

The wage forecasting methodology adopted in this report involves estimation of the deviations between industry – and State-specific wage measures and the broadest measures of wages in the Australian economy. In other words, the AEM model has provided an overall picture for how the WPI will move, and the remainder of the modelling determines which industry, State and industries within States will see their WPI measures grow faster or slower than this value.

Industry and State Labour Price Indices

Modelling of specific labour price indices (WPIs) begins with the movements in the total Australian WPI – taken from the Deloitte Access Economics Macroeconomic model. This measure serves as an anchor to overall wage rates in every part of the economy, in part because it provides a measure of the wage rises that other employees are receiving, making it a common starting point for negotiations.

From this initial index, the model adds in deviations from the average. Three key factors will drive these wage differentials:

- **Business cycle factors**. Deviations in industry (or State) performance from the national average. Faster growing industries and States will tend to see faster growth in wages

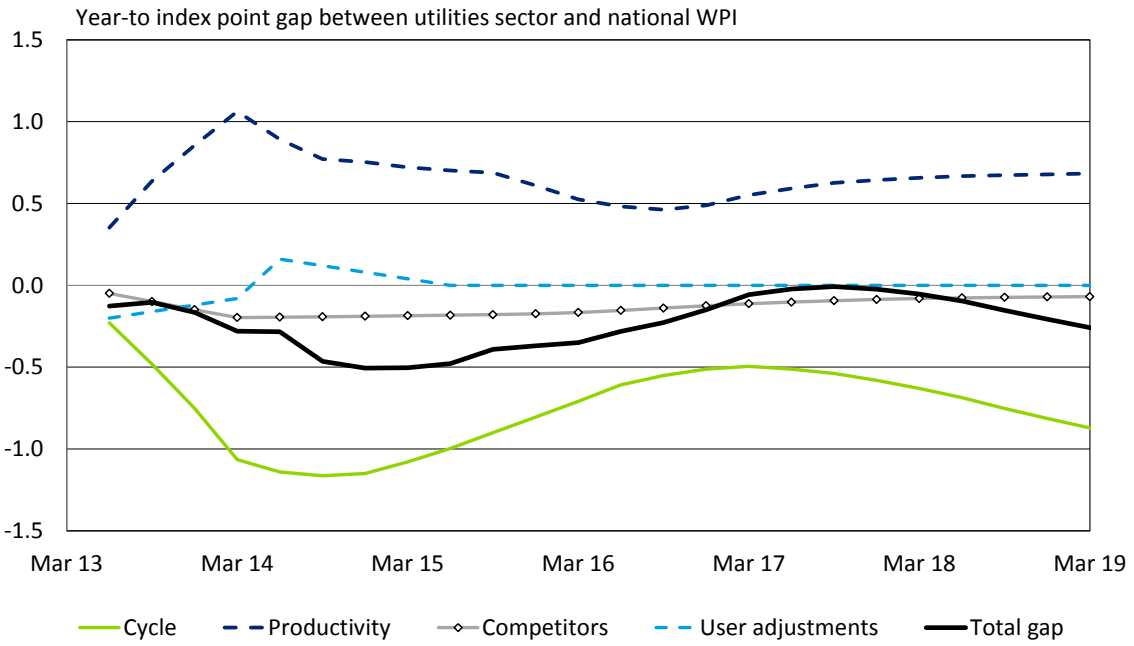
and vice versa. In this model, the key factor is how fast the industry (or State) is growing relative both to the national average, as well as to historical averages. So, while manufacturing growth in the future may be below the national average, if the gap is relatively less that has been seen in recent years, this is view as an out-performance by the sector and would see some upward pressure on wages. In this model the methodology is forward-looking, with forecast growth across the next six months (as well as the past twelve) used to determine the current performance of an industry.

- **Productivity factors**. The model assumes that industries with faster growth in productivity will see faster growth in wages – workers across an industry being rewarded for increasing the average amount of output per employee faster than the national average. As these factors take some time to become evident (and due to the inherent volatility in productivity measures at the State and industry level) an average productivity trend across the past two years is used.
- **Competition (relative wage) factors**. Depending on the nature of the industry, workers will have skills that are relatively more or less transferable to other sectors where wages may be rising faster than in their own. Indeed, many workers will be performing effectively the same task (or same occupation – effectively their job description) across different industries (as their industry classification is determined by what their employer produces, rather than what they do). This will tend to limit the ability of wage rates to diverge. As wage rates in (say) mining rise higher, companies in (say) the construction sector will be forced to pay higher wages to keep their staff. Similar factor operate across States – although they are likely to be less significant (and react only to relatively larger discrepancies in wages). The modelling here will see wages in competitor industries tend to move more closely together – with industries that are benefiting from the two previous factors tending to be drawn back towards the average, and wages in otherwise slow growing industries boosted.

In addition to these three 'mechanical' factors, there is often the need to use judgement to determine movements in wages – particularly when other data is volatile (which employment data currently is) and when factors not relevant to wage determination are having effects on broader output and employment measures.

It is important to remember that the WPI for an industry is a composite measure and can, in certain situations, behave in the perverse manner. When there is a significant change in the occupational structure of an industry, movements in the WPI may not be reflective of movements in the wages of individual employees. In an extreme case, it would be possible for (say) all the workers in an industry to take a pay cut but the overall WPI measure in the industry to rise if all the low-paid workers left the industry all together – shifting the average wage towards the higher level.

Chart B.1: Sample composition chart of sectoral wage drivers (national level)



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

The user-defined adjustments that are required have been explicitly shown in the charts that decompose the movements in industry WPI. The chart above (analysing the national construction sector) compares movements to the national WPI – above the line means growth in the index of more than would be expected if it rose in line with the national WPI and below the line implies growth in the index less than that implied by the national WPI.

In the case of the utilities sector chart above, this indicates the following:

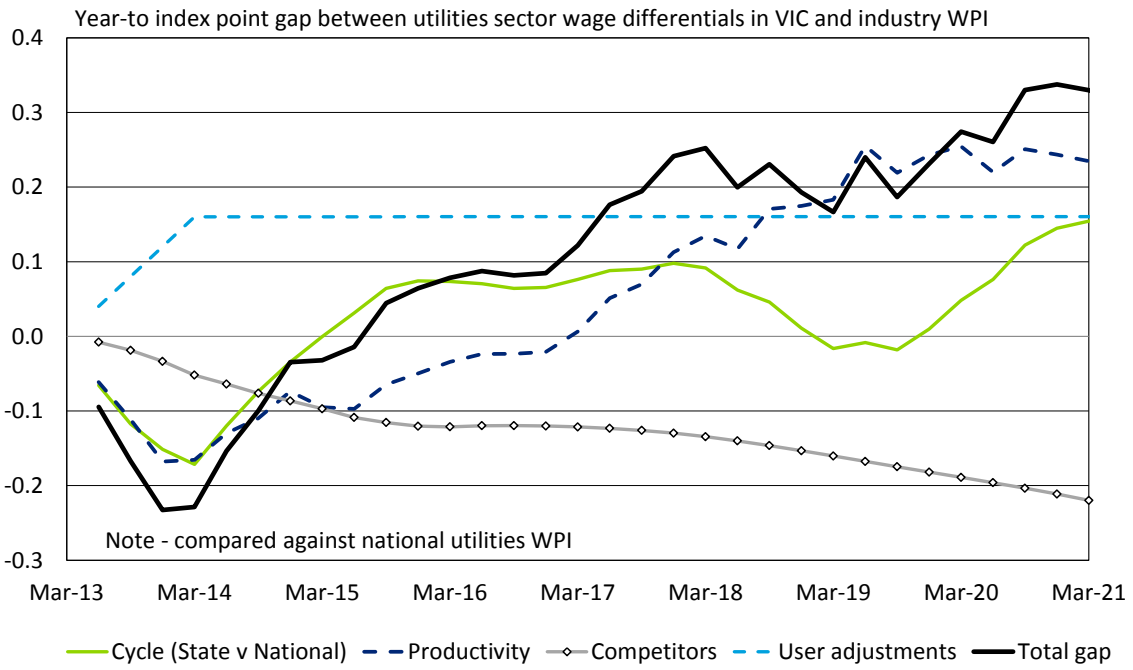
- The recent strength in the construction sector will keep upward pressure on the wages in the sector (represented here by the **Cycle** line). By the end of 2012 growth rates will begin to move in line with the overall economy and the cyclical pressure will diminish (and reverse further out); but
- The higher rate of productivity growth in the utilities sector will put upward pressure on the WPI for construction across the forecast period (the **Productivity** line). This effect will largely dissipate further out; but
- The relatively strong growth in construction sector wages implied by these first two trends (and the recent strength in the WPI) means the sector will face minor downward wage pressure from other sectors. Weakness in the manufacturing sector in particular will limit the impact from competitor industry wages (the **Competitors** line). In the longer term the otherwise stronger wage growth in the sector will not see a need for wages to rise to maintain pace with growth in competitor sectors (mining, construction and manufacturing) to prevent workers being tempted to move.

The final result of all of these effects is construction sector WPI growth well ahead of the national average early on, but lagging in later years.

In the case of State-level indices, our point of departure is the national industry WPI. So the chart below implies that the State's construction sector WPI will:

- Grow relative fast as the State's growth will be well ahead of national averages through the forecast period;
- See a strong offset due to relatively weaker productivity growth, particularly in the latest years; and
- Will initially be boosted as the State's WPI is currently low by historical standards, but will be constrained in the longer run as the WPI soon grows ahead of the national rate.

Chart B.2: Sample composition chart of sectoral wage drivers (State level)



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

Labour prices versus labour costs

The methodology above estimates movements in labour prices – the cost of employing the average employee, whether broadly in the Australian economy, or in a specific industry in a specific State.

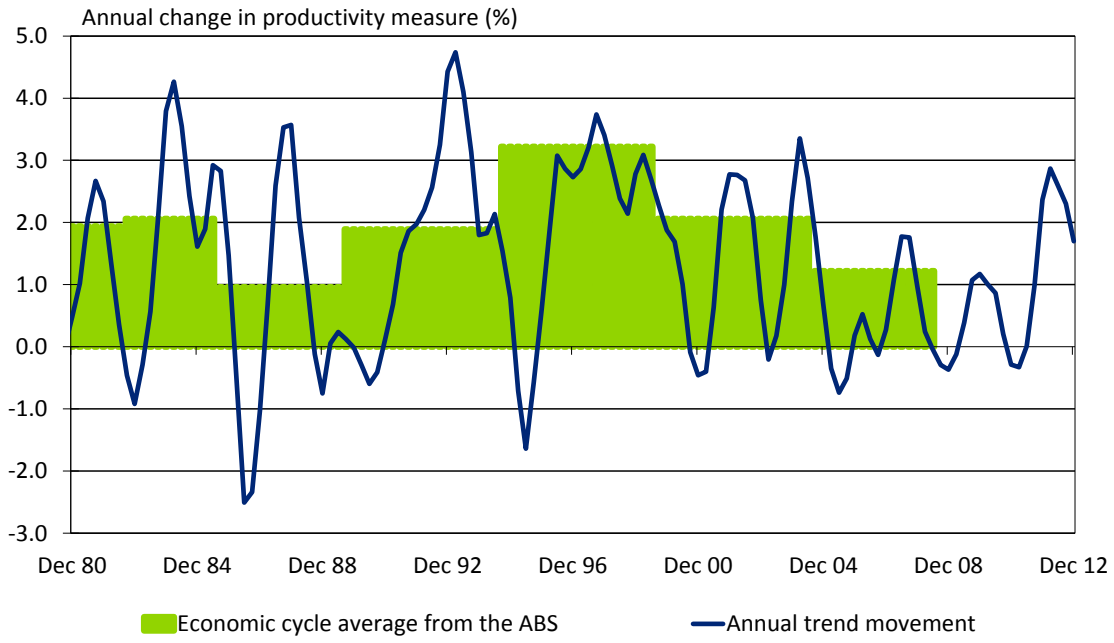
However, labour costs will rise at a different rate due to the effects of labour productivity growth. Effectively, labour productivity measure the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are required to create a given level of industry output. If productivity is rising, the total cost of labour (the price of each employee multiplied by the number of employees) will rise less rapidly than the individual employee's price.

The measure adopted for increases in labour costs is the growth in productivity-adjusted labour prices. Because so many factors can influence productivity (for example, during times of rapid expansion in employment, productivity may fall as new workers are often less productive that those who have been working in an industry for longer, but productivity may

also rise as 'economies of scale' become available, and workers who may has been underemployed in their workplace increase their effective level of output) it is often best measured over an entire economic cycle. The chart below shows annual growth in a simple productivity measure against the ABS' cyclical average measure (the last published cycle ends in 2007-08, so the last few years have no official cyclical productivity growth measure).

For the last two economic cycles (1998-99 to 2003-04 and 2003-04 to 2007-08) the ABS has produced a labour productivity measure adjusted for the quality of hours worked. This measure is closer to the basic measure (output per employee) over the cycle than the simpler output per hour worked measure over this period.

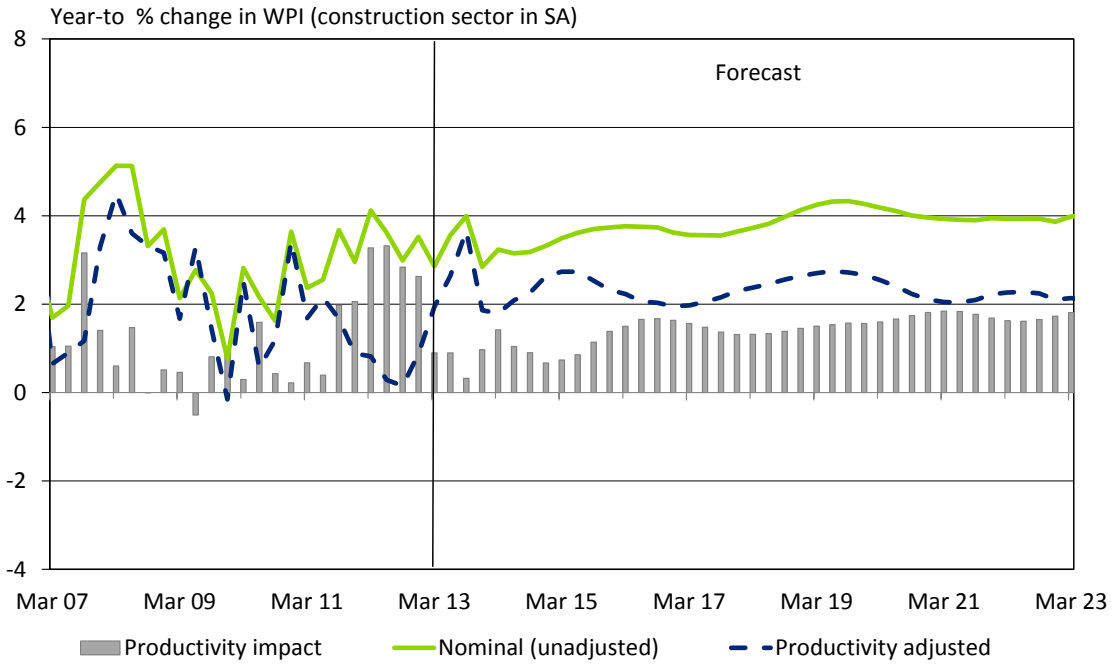
Chart B.3: Growth in productivity – annual methodology vs economic cycle methodology



Source: ABS

However, in the methodology used here the volatility in the underlying productivity data is minimised by creating a composite productivity measure based on national, industry and State-specific productivity movements – where the relative impact of movements in the smaller and more volatile States and industries is lessened.

Chart B.4: Sample measure of forecast productivity effects



Source: ABS, Deloitte Access Economics estimates, Deloitte Access Economics labour cost model

In the example above, the cyclical impact of productivity becomes clearer. Across the latter part of the forecast (from 2012 to 2018), the nominal (or unadjusted) WPI rises by 4.0% per year, while the rate of increase adjusted for productivity improvements is just 2.0% per year – the gap implying productivity improvements of 2.0% per year.

Appendix C: Different measures of wage growth

The Australian Bureau of Statistics published an article in the October 2005 issue of Australian Labour Market Statistics (catalogue 6105.0) which discussed the comparative features and relative merits of the measures they produce.[7] The following reproduces part of that article, and then adds some observations.

Introduction

Statistics on employee remuneration are in demand from a wide range of users, including economic analysts, social researchers, policy makers, and employer and employee associations. The ABS publishes a number of measures relating to the remuneration of employees, to meet the different needs of users. These measures include average weekly earnings, changes in the price of labour, and compensation of employees.

The variety of measures available can sometimes lead to misunderstanding and misapplication. The choice of measure will depend on what type of analysis is being undertaken. This section explores the differences between the various measures of employee remuneration.

Measures of employee remuneration

Three distinct measures of employee remuneration are discussed below: earnings; changes in the price of labour; and compensation of employees.

Earnings

Estimates of the level of earnings are produced from a number of surveys: the Survey of Average Weekly Earnings (AWE); the Survey of Employee Earnings and Hours (EEH); and the Survey of Employee Earnings, Benefits and Trade Union Membership (EEBTUM).

The AWE survey is one of the major sources of data on earnings, and is designed to provide a quarterly measure of the level of earnings. Three earnings series are produced from AWE:

- average weekly ordinary time earnings for full-time adults;
- average weekly total earnings for full-time adults; and
- average weekly total earnings for all employees.

While the AWE survey provides a frequent time series, data are only available for full-time adult employees and all employees, and can only be cross-classified by a small number of variables, such as sex, state, sector, and industry. The EEH and EEBTUM surveys provide additional detail, although on a less frequent basis. The EEH survey is run every two years and

[7] See http://www.abs.gov.au/AUSSTATS/abs@.nsf/90a12181d877a6a6ca2568b5007b861c/9b6a7239b96304ddca2570930000e4bf!OpenDocument

provides a large number of variables important in the analysis of weekly earnings, including: managerial/non-managerial status; state; sector; level of government; industry; occupation; employer size; sex; full-time/part-time status; adult/junior status; and type of employee (e.g. permanent/fixed-term contract or casual). The EEH survey therefore supplements AWE survey data by providing detailed information on the composition and distribution of employee earnings and hours.

The annual EEBTUM survey is a household survey, in contrast to the AWE and EEH surveys which are business surveys. The EEBTUM survey, which is conducted as a supplement to the monthly Labour Force Survey, collects weekly earnings data cross-classified by a range of socio-demographic information, including: sex; age; marital status; relationship in household; geographic region; school attendance; birthplace and year of arrival in Australia. The EEBTUM survey also collects details about the type of employment, including: occupation; industry; hours worked; full-time or part-time status; sector; size of workplace and leave entitlements.

While the EEH and EEBTUM surveys are run less frequently than the AWE survey, they are a valuable source of information as they enable detailed analysis of earnings levels.

Changes in the price of labour

Information on changes in the price of labour is available from the quarterly Labour Price Index (LPI). The LPI is compiled from information collected from businesses on changes in wage and non-wage costs. Information collected on wages is used to produce a Wage Price Index (WPI).

The WPI was first compiled for the September quarter 1997 and is the main ABS measure of wage growth. The WPI measures quarterly changes over time in the cost to an employer of employing labour, and is unaffected by changes in the quality or quantity of work performed.

The ABS publishes four wage price indexes each quarter. The headline WPI series is the index of total hourly rates of pay excluding bonuses. This series excludes bonus payments (which generally relate to the individual performance of the employee or to the organisation's performance), and so represents a pure price measure for combined ordinary time and overtime hourly rates of pay.

Compensation of employees

Compensation of employees (CoE) is a quarterly measure of the total remuneration paid to employees in return for work done and is published as part of the national accounts. Compensation of employees is a broader measure than earnings as it includes irregular payments (e.g. annual bonuses) and social contributions paid by the employer (e.g. severance, termination and redundancy payments; employer superannuation contributions; and workers compensation premiums). These payments are excluded from measures of earnings, which have a narrower focus.

A quarterly measure of the average CoE per employee, known as Average Earnings National Accounts (AENA), is produced by dividing the total compensation of employees for the quarter by the total number of employees. The total number of employees is estimated using Labour Force Survey data, calculated as an average of the three months in each quarter. Some adjustments are made to this estimate of employment. Two measures of AENA are produced: average non-farm compensation per employee; and average compensation per employee.

The average non-farm compensation per employee estimate is the key series, as it is a more stable estimate. This is because employee earnings in the agricultural sector can fluctuate due to seasonal effects.

Summary of the surveys and their key series

Table C.1 (found at the end of this chapter) provides a comparison of each of the surveys discussed. It outlines the key series produced, what each survey is designed to measure, the frequency and type of data source, the benefits and limitations of each survey, and the related publication.

Drawbacks to using the WPI measure

While Deloitte Access Economics would view the WPI as the best measure for use in the context of this report, 'best measure' is not the same as 'perfect measure', and there are also drawbacks to using the WPI:

- First, the WPI is published by State and by sector separately, but not by State and by sector. That is, the WPI for NSW is published, and the mining sector WPI is also published, however the NSW mining sector WPI is not. The latter data is only available by special request and, in the case of small sample sizes, the ABS does not release their estimates. In contrast, more series at the 'by State and by sector' are available for AWOTE from the ABS 6302.0 release. However, it is possible to 'back out' reasonable estimates of WPI at the 'by State and by sector' level. Appendix B discusses how Deloitte Access Economics does that. The resultant series are rather less volatile than the matching ABS AWOTE series. (Note that, not surprisingly, the ABS is reducing over time the range of sectoral level AWE data which it is willing to release. This phase will eliminate one of the remaining arguments in favour of using AWOTE or AWE over the WPI measures.)
- Second, it is sometimes relevant that the composition of the workforce is changing. That is particularly true in analysing the implications of wage developments for the Australian economy as a whole. For example, promotions are easier to get during a sustained expansion, reflecting the strength of cyclical demand rather than pure productivity. Other things equal, that adds to total incomes in the economy, but doesn't show up in the WPI (which does not 'recognise' that people at a certain seniority today are, on average, different to those who were at that level some years past).

EBAs and contract rates

Deloitte Access Economics' forecasts are developed using a more formal modelling approach rather than a more 'institution-based' approach.

The latter focuses on:

- increases in the **Federal Minimum Wage / Fair Pay Commission decisions**,
- increases in **collective agreements** under enterprise bargaining,
- increases in **individual agreements**.

That said, close attention to such institutional factors can assist in short term forecasting (as opposed to longer term forecasts), given that most such decisions have lingering effects on wage outcomes.

Accordingly, Deloitte Access Economics notes developments in DEEWR's Trends in Federal Enterprise Bargaining reports at www.workplace.gov.au/TrendsInFederalEnterpriseBargaining, and takes account of these in its short term forecasting if they appear likely to have a material impact.

Further issues

The ABS has reviewed its production of AWE and AWOTE measures at the industry by State level (e.g. the AWOTE for the utilities sector in Victoria). This information will now no longer be produced.

A key reason was the high standard errors for these series. In the case of the AWE/AWOTE publication, sample selection is stratified across States and across industries, but not both. That means that as the businesses in the sample change from quarter to quarter (and about 8% of the 5,000 do each time) there is no guarantee that the State by industry samples can be readily compared. This led to questionable comparability of detailed AWE/AWOTE results from quarter to quarter as the changes may be driven by changes in the sample, rather than changes in wages.

The WPI, by contrast, suffers as little as possible from this problem because its sample follows specific "jobs" over an extended period (at least five years). This limits the rotation problems that the AWE/AWOTE series suffered from.

Table C.1: National wage surveys

	AWE Survey	EEH Survey	EEBTUM Survey	LPI	CoE
Key series produced	Average weekly total earnings (AWTE) for full-time adult employees and all employees. Average weekly ordinary time earnings (AWOTE) for full-time adult employees	Average weekly earnings for all employees. Average weekly earnings for full-time adult non-managerial employees	Median and mean weekly earnings of full-time, part-time and all employees	Labour Price Indexes. Wage Price Index (WPI) of total hourly rates of pay excluding bonuses.	Non-farm Average Earnings National Accounts (AENA)
Designed to measure	Level estimates of weekly earnings and the distribution of earnings	Level estimates of weekly and hourly earnings and the distribution of earnings	Level estimates of earnings and the distribution of earnings	Changes in the price of labour	Level estimates of average compensation of employees
Frequency and basis of survey	Quarterly survey of businesses	Biennial survey of businesses	Annual survey of households	Quarterly survey of businesses	Quarterly national accounts series based on quarterly survey of businesses
Benefits of the methodology	Quarterly time series (original, seasonally adjusted and trend estimates available)	Provides detailed job information allowing analysis by industry, occupation, hourly rates etc. Source of distributional data (e.g. quartiles)	Provides detailed demographic and job information. Source of distributional data (e.g. medians)	Provides estimates of wage and non-wage inflation	Broad measure of remuneration
Limitations of the methodology	Few cross-classificatory items	Survey run infrequently (two-yearly)	Only provides average weekly total earnings (no series on ordinary time earnings). Includes payments not related to the period of work performed (e.g. backpay and pay in advance)	No level estimates or in-depth cross-classificatory items	Few cross-classificatory items
Publication description and ABS catalogue number	Average Weekly Earnings, Australia (cat. no. 6302.0)	Employee Earnings and Hours, Australia (cat. no. 6306.0)	Employee Earnings, Benefits and Trade Union Membership, Australia (cat. no. 6310.0)	Labour Price Index, Australia (cat. no. 6345.0)	Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

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