2018 VICTORIA INFRASTRUCTURE OUTLOOK REPORT

BIS OXFORD ECONOMICS

CIVIL CONTRACTORS FEDERATION

The Civil Contractors Federation (CCF) is the peak industry body representing Australia's civil construction industry with more than 2,000 contractor and associate members nationally and over 520 of these based in Victoria.

CCF members are responsible for the construction and maintenance of Australia's infrastructure, including roads, bridges, pipelines, drainage, ports and utilities. Our members also play a vital role in the residential and commercial building industry by providing earthmoving and land development services including the provision of power, water, communications and gas.

With the significant level of investment being made in major infrastructure projects and in the lead up to the State election later this year, there is no better time to have an open and transparent discussion on the long term economic strategy for Victoria. The 2018 Victorian Infrastructure Outlook Report commissioned by CCF and released by BiS Oxford Economics, provides a sound platform for this discussion.

John Kilgour

CCF Victoria Branch - CEO

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"Infrastructure investment is playing an important role in supporting economic growth in the short term, but it can also play a more vital strategic economic role in the long term by building on Victoria's core strengths that can sustain high levels of business investment, employment and population growth."

Melbourne Sky Rail Project
Source: ABC

Executive Summary

This is the first *Victoria Infrastructure Outlook Report* authored by BIS Oxford Economics and commissioned by the Civil Contractors Federation – Victoria. The civil construction industry continues to face multi-dimensional challenges as the Victorian economy continues its transition from the (negative) impacts of the mining boom – including the downturn in the manufacturing sector – to a new economy powered by non-mining investment delivering sustainable, robust growth.

The Victorian economy has been amongst the strongest of all the states and territories in recent years, with the end of the mining investment boom driving a fall in the Australian dollar that has boosted the competitiveness of Victoria's heavily trade-exposed economy. In turn, rising economic activity in the state has seen a return to stronger population growth as Victorians have returned from Western Australia, Queensland, and other states and brought with them many others in search of new employment and business opportunities. Stronger population growth coupled with positive economic policies, ranging from housing incentives to new public infrastructure investment initiatives (some financed by asset sales), has in turn ignited activity in the Victorian construction industry. While residential building activity has led the charge in new construction work in recent years, the Victorian economy is also benefiting from new investment in non-residential buildings (hotels, retail, offices, schools and hospitals) as well as civil infrastructure across transport and utilities – and it is in these subsectors where investment and construction work is expected to grow further in coming years, offsetting an expected correction in residential building work. In turn, increasing construction work is reinforcing the state's economic performance, given the sector's strong economic multipliers.

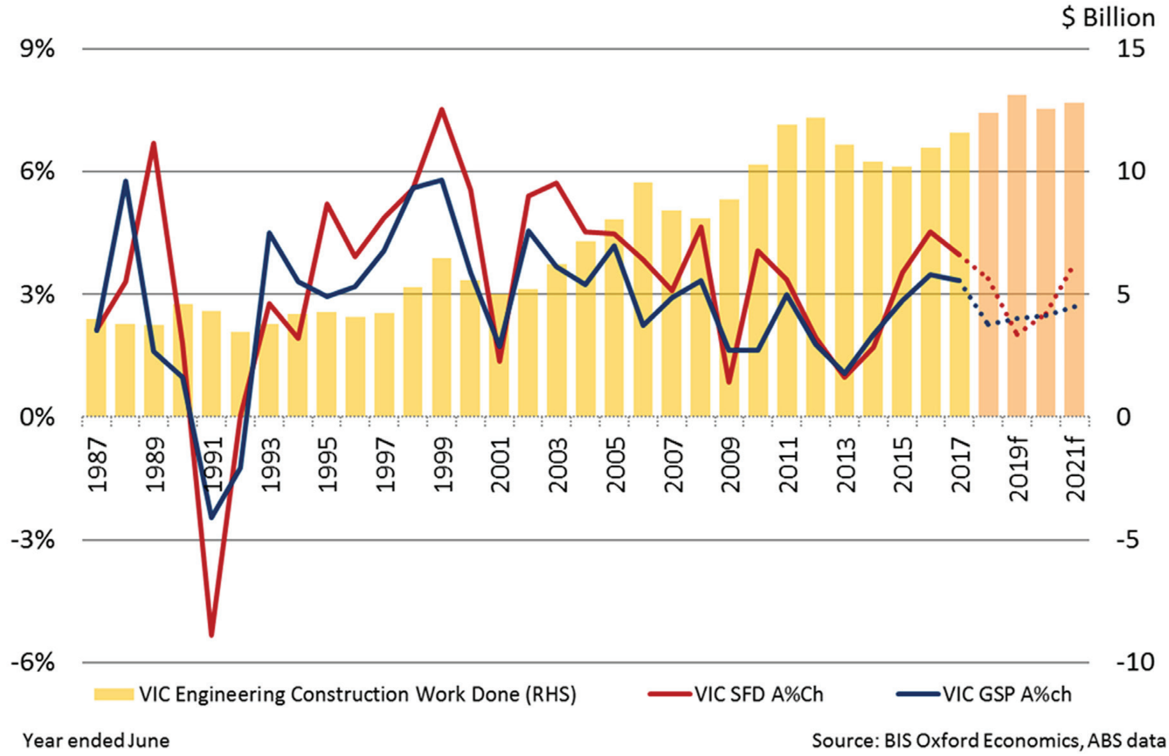
The main challenges for Victoria from here are two-fold: firstly, sustaining stronger rates of growth in the economy and employment beyond the current cycle, and, secondly (though just as importantly), planning to ensure that the construction industry – and the broader economy – avoid capacity and capability constraints that are likely to emerge as non-mining investment continues to grow.

The former challenge requires good public policy that not only encourages private enterprise and investment (including for assets that may be traditionally thought of as 'public infrastructure') but also puts public finances on a sustainable footing so that governments (at all levels) can continue to meet Victoria's public infrastructure needs well into the future. The second challenge is arguably more difficult, and requires sensible policies being put into place to ensure sufficient skilled labour, materials and equipment are supplied timely to meet future investment demands. The recent mining boom showed what could happen when construction industry capacity and capability is put under pressure. While civil construction projects embarked on during this period (by both governments and the private sector) were eventually completed, construction costs escalated rapidly as industry and government raced to source scarce skills, materials and equipment. The result was a well-documented blowout in total project costs, major delays in the delivery of projects, and various other failures across both projects and businesses. In this regard, Victoria cannot afford to be complacent with respect to future capacity and capability risks.

Given this environment, there is no better time to have an open and transparent discussion on the long term economic strategy for Victoria. This should concentrate on leveraging from (or improving) Victoria's core (or potential) strengths compared to eastern state rivals such as its relatively lower cost of doing business, excellence in research and development, iconic tourism destinations and lifestyle benefits. State Government strategy has focused on boosting programs to bring new businesses to Victoria including the $90 million investment to help create and retain jobs in priority industry sectors including manufacturing and aviation. While the core aim of the economic strategy should be to continue to attract businesses and people to Victoria, attention also needs to focus on how best to accommodate this growth.

Key Indicators Victoria: State Final Demand, Gross State Product and Engineering Construction Activity, 2014/15 Constant Prices

Source: BIS Oxford Economics, ABS data



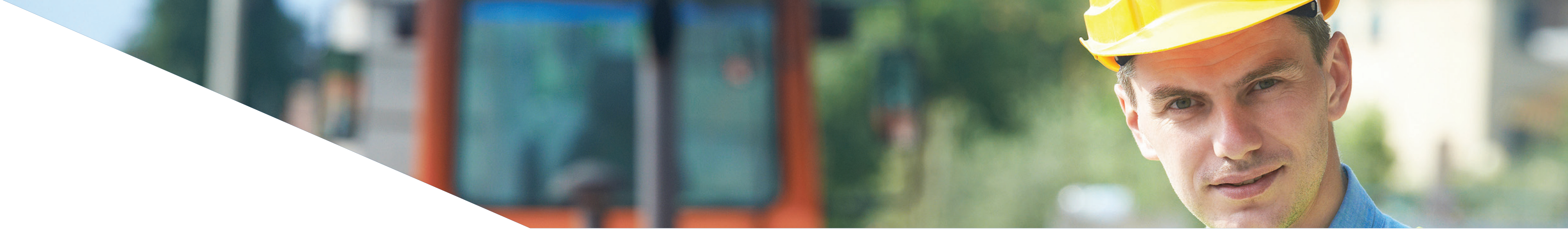
KEY FINDINGS

• Over the next four years, Victorian engineering construction activity – encompassing transport, utilities and mining and heavy industry construction – is forecast to average $12.8 billion per year, higher than the $10.9 billion of the previous five-year period. Major activity will be driven by construction within the roads, railway and telecommunications sectors particularly.

• Both public and private sector investment is driving higher levels of civil construction work. Publicly funded engineering construction work done is expected to account for around 45 per cent of total engineering construction activity, at around $5.7 billion on average each year over the four-year period.

• Total construction activity is expected to moderate from 2018/19 as residential building (particularly in the high density apartment segment) starts to fall following record levels of activity in recent years. However, non-residential building and engineering construction, though cyclical, are forecast by BIS Oxford Economics to remain above 2016/17 levels throughout the next four years.

• Falling construction activity (as the housing boom unwinds) and weaker growth in consumer spending is anticipated to see some weakening in state economic growth in coming years, but growth is still expected to remain relatively robust, supported by a healthy pipeline of infrastructure projects and rising non-mining business investment.



• The largest driver of growth in non-mining civil work recently and over the coming year is the rise in transport infrastructure investment; specifically, roads and rail construction. However, sustaining investment at these levels over the medium to longer term will prove challenging, and may lead to capacity and capability risks in the construction industry.

• Following strong increases in recent years, construction employment is anticipated to decline through the next four years in line with (total) construction activity. Given this, it is important that policies are put into place to ensure that there are adequate skills in the civil construction industry to deal with the generally higher levels of work expected in this segment.

POLICY CHALLENGES AND RECOMMENDATIONS

The Victorian economy has been relatively strong during the post-mining boom era; however, the State does face several challenges and risks. While the national economy and "resource rich" states face a number of rather different challenges of their own (mainly transitioning away from a resources investment led boom to a less labour intensive production cycle), Victoria's risks stem from exposure to trade exposed industries and resource allocation during the construction cycle. From a Victorian perspective, the infrastructure task is high over the next five years, and challenges can lead from rising costs of construction, particularly since the construction phase within the state coincides with rising non-mining civil construction activity nationally.

The resources investment boom and bust – though not focused in Victoria – has certainly impacted the State economy, and was not costless. In Victoria, the associated rise in the Australian dollar drove a structural change away from dollar-exposed industries, making room for the growth in industries servicing mining investment. The investment bust and the associated fall in the Australian dollar is reversing that structural change away from mining industries and regions and rebuilding activity in dollar-exposed and services regions. However, not all industry lost during the resources boom will come back.

Across Australia, new drivers for economic growth, competitiveness, productivity and rising living standards are needed. While a lower Australian dollar has helped speed the structural adjustment in the Victorian economy, there is more that can be done through domestic economic policies. In particular:

• **Continuation of microeconomic reforms** to boost competitiveness and productivity

• **Reforming the fiscal tax/transfer system** to minimise current inefficiencies, improve fairness and ensure that governments can fund rising recurrent expenditures (particularly in the areas of health and welfare) through the economic cycle

• **Boosting productivity growth** (which has been relatively weak over the past decade) through initiatives that reduce business costs, encourage research and innovation, as well as investing in productivity-enhancing infrastructure.

While easy to state as a policy prescription, structural change is hard. However, with the closure of automotive manufacturing, Victoria needs other industries to step up to help sustain growth in demand and employment. The lower post-boom Australian dollar (albeit still flirting with US$0.80) is a key 'X factor', immediately boosting the competitiveness of trade-exposed industries that were suppressed during the mining boom, such as agriculture and manufacturing, as well as services such as tourism and education.

Infrastructure investment is also playing an important role in supporting economic growth in the short term, but it can also play a more vital strategic economic role in the long term by building on Victoria's core strengths that can sustain high levels of business investment, employment and population growth. Used effectively, public infrastructure investment can "crowd in" private investment in trade-exposed industries benefiting from the lower dollar, and can be an important tool in establishing sensible policy settings that will help boost productivity and competitiveness in the long term.

With these challenges in mind, this Report issues the following recommendations:

A. Developing a Long Term Infrastructure Program

Recommendation 1: Commonwealth and Victorian Governments should plan to sustain a rolling infrastructure investment program that provides industry confidence and certainty. This should focus on projects with proven productivity benefits.

Recommendation 2: The Commonwealth and State Government should engage with industry to develop clear and comprehensive longer term (15 to 20 year) infrastructure plans.

Recommendation 3: Both short term and long term public investment programs should be based on maximising economic benefits through transparent cost benefit analysis (CBA).

B. Funding Productive Infrastructure

Recommendation 4: Given low interest rates and relatively low government debt at the Commonwealth level, further debt funding of productive infrastructure should be used as an effective means to address the infrastructure deficit.

Recommendation 5: Furthermore, the Commonwealth Government should guarantee the debt of any expanded infrastructure program by the Victorian Government to a defined maximum figure so long as those projects are shown to be productive through the transparent CBA process.

Recommendation 6: The Commonwealth Government should provide 5 yearly pooled infrastructure funding to Victoria and reduce the use of project specific or tied (conditional) s96 grants.

Recommendation 7: Given relatively successful lease outcomes, Victoria should consider other long term asset leases to fund infrastructure investment – but only after rigorous analysis to demonstrate that the benefits outweigh the costs and that effective regulatory processes are in place.

Recommendation 8: The Commonwealth Government should reactivate its 15% Asset Recycling Initiative to encourage Victoria to fund new productive infrastructure and which compensates for the loss of the future income stream of publicly held assets.

Recommendation 9: The Victorian Government should further develop policies for encouraging and assessing unsolicited infrastructure investment proposals from the private sector.

C. Boosting efficiency and reducing costs

Recommendation 10: To maximise efficiencies in public infrastructure provision and reduce costs, both the Commonwealth and Victorian Government should follow through with reforms to the public infrastructure procurement process, as outlined by the Productivity Commission's review in 2014.

Recommendation 11: Procurement policies and approaches should be harmonised across all levels of government within jurisdictions – and, where possible, across jurisdictions – including the use of open (rather than closed) tenders, local content rules, and de-bundling large infrastructure projects to boost competition and the sustainability of the civil construction industry.

Recommendation 12: Commonwealth and Victorian Governments should look to increase funding for infrastructure maintenance as a more cost effective way of sustaining the existing asset stock and reducing future requirements for costly asset replacement.

Recommendation 13: Commonwealth and Victorian Governments should continue to make concerted efforts to eliminate structural deficits in their Budgets. This would be assisted, in turn, by improvements in the quality of Budget reporting to better isolate capital and recurrent expenditure items and the degree to which each are effectively funded through debt.

M80 Upgrade
Source: Summit Concrete Constructions

1. Victorian Economic Outlook

Growth in the Victorian economy has outperformed the national average since the turn of the decade, with Gross State Product (GSP) and State Final Demand (SFD)[1] averaging 2.5 per cent and 2.9 per cent respectively since 2010. Recent growth has been notably robust, with SFD averaging 4.0 per cent over the past 3 years. Annual employment growth has averaged 2.8 per cent over the same period while the unemployment rate has typically tracked slightly above the national average.

SFD is expected to moderate from recent strength over the next 3 years as the housing market cools and consumer spending is held back by weak growth in disposable household incomes.

- In the most recent September quarter, growth moderated to 0.4 per cent quarter by quarter in seasonally adjusted terms, from around 1.6 per cent quarter by quarter over the March and June quarters. SFD is forecast to increase by 3.5 per cent in 2017/18 before decelerating sharply to 2 per cent in 2018/19. Overall, SFD is projected to average 3.2 per cent per annum over the next five years, which is still above the national average of 2.9 per cent; while GSP is predicted to average 2.6 per cent, slightly lower than the 2.7 per cent average for national GDP growth.

In recent years, Victoria has recorded fastest population growth of any state.

- Annual growth over the year to June 2017 was 2.3 per cent (2.4 per cent in 2015/16), compared to the national average of 1.6 per cent (1.5 per cent in 2015/16). Victorian population growth is expected to continue to outpace the national average, although the gap between Victoria and Australian growth will narrow over the next decade. Melbourne's population has been growing at an outstanding rate and is one of the 10 fastest growing large cities in the developed world. Accordingly, BIS Oxford Economics is more optimistic about outlook on residential construction, and currently see the Victorian housing market as being in a small undersupply. Nevertheless, a downturn in residential investment is still approaching and we expect to see declines across 2018/19 & 2019/20. This downturn, in combination with weak wage growth restricting household's ability and desire to spend, will be a drag on the economy over those two years.

Offsetting this will be the continued pickup in public investment.

- Over the past two years, the economy has been supported by strong levels of public investment, centred on telecommunication, transport, education and health projects. New public investment (i.e. excluding asset sales / purchases) grew 19.3 per cent in 2016/17 and the good news is that robust public investment will continue over the next two years.

Yet the overall health of the state's economy has been overshadowed by the closure of the automotive manufacturing industry.

- The Toyota, Ford and Holden factories have closed; this will have flow on impacts for other industries along the supply chain. There were 24,600 people employed in the motor vehicle and parts manufacturing industry in 2015/16, equivalent to 0.8 per cent of total state employment and 9.2 per cent of total manufacturing employment in Victoria. While some parts makers will survive, jobs losses are expected to be significant.

Other key points to Victoria's economic outlook include:

- Despite a range of risk factors (threats to **global trade, North Korean Conflict), global economic growth is predicted to strengthen over the next two years**, providing support to the Victorian economy. Indicators currently point to robust and stable activity in the world economy with world GDP predicted to grow at an average of 2.7 per cent over the next five years. Meanwhile, the Australian dollar is expected to depreciate over the short term – forecast to average around US$0.73 over 2018/19 & 2019/20, before gradually rising back toward US$0.80 in 2022, and averaging US75 cents in the longer term. This will ensure Victoria's key exporting and import competing industries, such as education, manufacturing and agriculture remain internationally competitive.

[1] According to the Australian Bureau of Statistics' Australian System of National Accounts: Concepts, Sources and Methods (Cat. No. 5216.0, 2015, pp481-482), state final demand (SFD) is the aggregate level of final consumption expenditure and gross fixed capital formation within a state over a specified period of time. It equals household final consumption expenditure (HFCE) plus government final consumption expenditure (GFCE) plus gross fixed capital formation (GFCF). In simple terms, SFD is the sum of private and public consumption and investment within a state, and is a measure of demand in a state economy.

- **Business surveys are consistently showing optimism**, and the recent capital expenditure survey suggests a further acceleration in investment spending over the next 12 months, suggesting an improved outlook for non-mining investment.

- **New Public investment will fill some of the gap left by the retreat in private dwelling investment and shutdown of the automotive industry**. We expect further strong growth in new public investment in 2017/18 and 2018/19 to make a significant contribution to the state's economic growth. Increased public consumption and investment spending is being funded by asset sales (mainly the $9.7 billion Port of Melbourne sale), rising real estate stamp duties, healthy payroll tax receipts and commonwealth road funding.

- **Employment to moderate from recent strength** – 3.7 per cent in 2016/17 and 3.5 per cent over 12 months to November 2017 - with annual growth expected to ease below 3 per cent over the next year and further to around 1 per cent over 2018/19 and 2019/20. This will see household consumption expenditure weaken over the next 3 years.

- **Victoria is a net exporter of goods & services to other states** and will be affected by sluggish national growth for the next 2 years.

OUTLOOK FOR THE GLOBAL ECONOMY

During the coming structural readjustment, the Australian and Victorian economies are being supported by a relatively positive global economy.

Despite several well known risk factors (conflict in North Korea, Chinese financial stability, US and global trade policies), forward indicators currently point to robust and stable activity in the world economy. Reflecting a boost in relatively broad-based support from global trade, world GDP growth is anticipated to increase this calendar year and next, before moderating slightly. The picture across countries and regions is mixed, but overall positive for the Australian and Victorian economies, with relatively stronger growth expected amongst key trading partners:

- Although growth has slowed since 2010, **emerging Asia** still posted growth of 6.0 per cent in calendar 2016. Declines in oil prices and more hawkish signals from central banks in advanced economies may worsen the external backdrop for some emerging economies, driving growth lower.

- **OECD economies** grew at 1.8 per cent in calendar 2016. Oxford Economics forecasts growth will pick up to around 2.5 per cent by calendar 2018. Importantly, Australia's trading partner growth (weighted by exports share) will grow at a faster rate over the next five years, due to the high weighting of the relatively fast-growing economies of China, East Asia and India in Australia's export mix.

- In **China**, GDP growth has moderated in recent years from pre-GFC rates of around 10 per cent, partly reflecting the authorities' efforts to rebalance the economy towards household consumption. Chinese economic growth is expected to soften gradually from 6.7 per cent in calendar 2016 to 5.2 per cent by 2022. China's real GDP growth is easing as the country continues its transition to a demand-driven economy amid further urbanisation, demographic changes and weaker growth in investment.

- **Japan**'s GDP grew by a weak 0.9 per cent in calendar year 2016. Yet Oxford Economics forecasts suggest the economy will strengthen and grow by 1.8 per cent in calendar 2017 and by a similar rate in 2018 as improving global demand and a weak yen support growth in exports and business investment. Moreover, fiscal and monetary policy will remain helpful. Given solid employment, BIS Oxford Economics expects domestic demand to become an increasing driver of growth.

- Economic growth in **India** is expected to be 6.5 per cent in 2017. Demonetization and banking sector stresses are weighing on growth. However, we are of the view that the economy is now on the mend, due to a continued pick-up in consumption, higher infrastructure spending and a reasonable outlook for exports. Despite low private investment remaining a drag on growth, we forecast that growth will average 6.9 per cent over the five years to 2022.

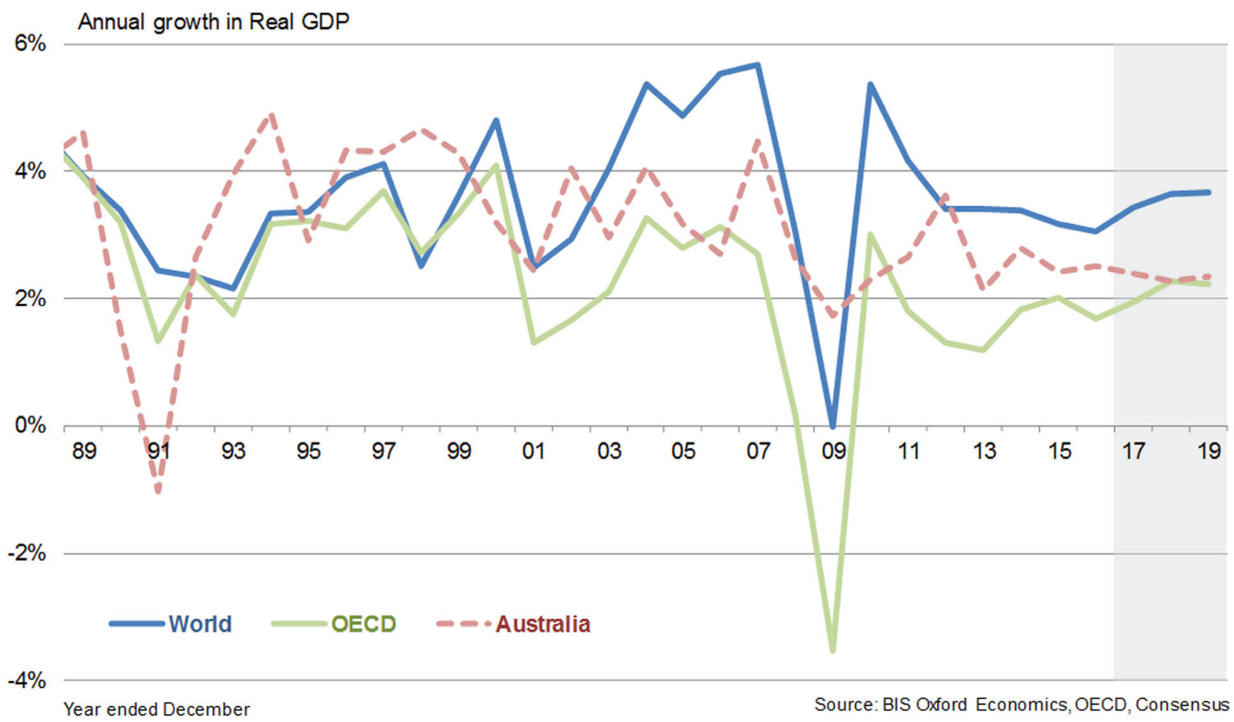
- The **Eurozone** is expanding at the fastest pace in a decade. Export conditions are improving, investment is recovering, and weaker inflation and strong consumer confidence and employment are increasing household spending. Overall, growth in Europe will average 2.3 per cent in 2017 and 2.0 per cent in 2018. Broadly, economic growth in Europe is expected to sink to an average of 1.7 per cent over the five years to 2022, as growth eases over the medium term.

- Despite the stronger global environment, growth in the **United States** remains constrained at around 2.3 per cent. US economic growth is forecast to be 2.3 per cent in calendar 2017, but will accelerate to 2.7 per cent in calendar 2018. The combination of solid increases in employment and moderate wage growth will drive household income, consumer spending and residential investment. Business investment is forecast to accelerate, driven by improving domestic demand and export gains from a stronger global climate and rebounding energy sector activity.

The uncertainty surrounding the likelihood, timing and magnitude of President Trump's policy proposals explain why he is seen as the greatest upside and downside risk to US and global growth in the short term. Political uncertainty represents a downside risk to business expansion. Trump's proposed fiscal stimulus measures – especially those relating to large civil infrastructure projects – have the potential to boost growth from 2019, given the long lead times in getting major infrastructure projects 'shovel-ready' from the planning stages to commencement. Passing of legislation, notably complex tax reforms, will also take time.

Stronger US economic growth is expected to be tempered by the Federal Reserve raising interest rates towards more 'normal' monetary policy settings, and to ward off inflationary pressures from easing fiscal policy. This tightening cycle also presents a risk for the international economy: emerging economies potentially face the risk of rising capital outflows as investors rebalance portfolios and shift balances to higher returns on offer in advanced economies. Emerging economies may need to raise rates (higher than what would be typically warranted by domestic circumstances) to prevent the destabilisation of capital outflows, falling asset prices and weaker confidence.

Figure 1.1: Economic Growth by Global Region and Australia, Calendar Years



OUTLOOK FOR COMMODITY PRICES

- **Commodity prices have generally strengthened over the past 12 months, however medium term uncertainties still linger**.

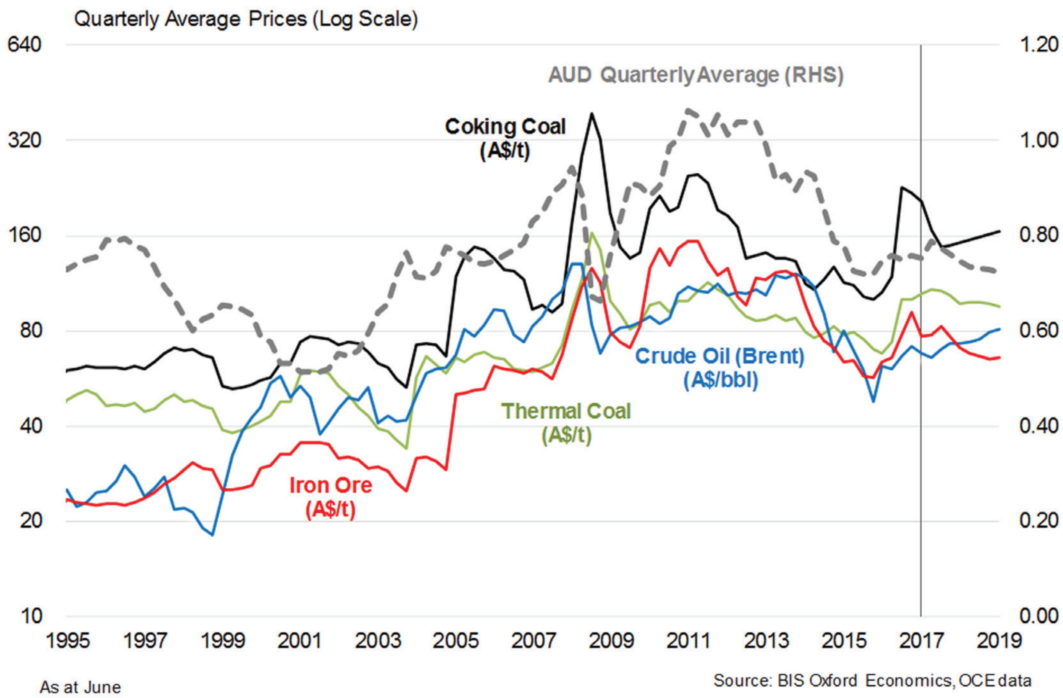
Bulk commodity (coking coal and iron ore) prices rebounded in 2016/17 but are likely to fall over the next two years as demand for steel making raw materials from China slows due to deceleration in the pace of urbanisation. A sustained recovery is forecast from early next decade as global growth builds momentum against constrained supply, and as the path of development in emerging economies becomes more steel intensive.

- **Prices are set to consolidate in the near term for most commodities, but rise in the medium to longer term**.

In the past year, commodity prices have risen on the back of supply side disruptions (particularly in the case of metallurgical coal) and rising demand. The unwinding of disruptions has seen bulk commodity prices ease back more recently, which may yet dilute the positive impact of higher prices on exploration and investment.
Overall, however, prices for most commodities are forecast to move higher through the forecast period, with the sustainability of increases providing signals for new investment.

In US dollar terms, the prices for several key commodities edged higher driven by supply side concerns and policy changes in China and we anticipate further minor contractions in these prices in the short term. After recording strong gains from supply side concerns, coking coal prices are forecast to fall over the next two years driven by both increased coking coal production in China and a return to average (normal) production levels in Australia. Within iron ore, supply growth from the three main Australian producers (Rio Tinto, BHP and Fortescue, and other smaller producers such as Roy Hill) – plus large additions to capacity by Brazil's Vale, will weigh down on prices around or below US$50/tonne over the next three years, before rising demand sees a recovery in prices.

Figure 1.2 Commodity Prices (A$)



OUTLOOK FOR THE AUSTRALIAN ECONOMY

The Australian economy grew by just 2.0 per cent in 2016/17 – the weakest rate of growth since 2008/09. While a weak outcome, this result extends Australia's long period of uninterrupted economic growth to 26 years – a new world record.

Large slices of luck and lessons learned from the last recession (in 1990/91) have helped successive Australian governments and the Reserve Bank of Australia (RBA) steer the economy through the 1997/98 Asian crisis, the 2000/01 downturn, the global financial crisis (GFC) in 2008, and a large bust in resources investment since 2012/13.

Overall, however, the Australian economy has been unable to sustain economic growth above 3 per cent since the peaking of the resources investment cycle in 2012/13. Much of this weaker economic performance is due to very weak growth in domestic demand during the period, which has been negatively impacted by the ongoing decline in resources investment.

While partially cushioned by a boom in residential investment since 2013/14 and, more recently, by a recovery in public infrastructure investment, economic growth has also been hampered by record low growth in wage incomes, with households spending more of what they earn and reducing savings just to maintain only moderate household expenditure growth. Weak wage growth has also driven weaker than budgeted tax revenues for governments, lengthening the time horizon required to return to sustainable budget surpluses, and limiting the firepower of governments to counter weak private investment with higher public investment without further increasing public debt.

Unlike many other resources-exporting economies, Australia did not experience a recession in the wake of the resources investment bust. Strong growth in mining production and exports from world class, competitive deposits, and supercharged by a much lower dollar – which also stimulated other exports of goods and services, such as tourism, education services, agriculture, manufacturing and business services – has helped offset some of the pain from weaker demand growth. Economic growth (which includes net exports) has generally been higher than growth in domestic demand.

The challenge for Australia is that mining exports, in particular, are capital – rather than labour – intensive. Stronger, sustainable growth in employment requires stronger growth in local expenditures in domestic demand. In turn, this requires the return of growth in non-mining business investment, which has remained stalled since the GFC.

The problem for non-mining industry sectors has generally been weak growth in demand, weak profits and excess capacity. In that environment, it is foolhardy for businesses to invest ahead of requirements, straining cash flows and locking in additional costs before they had the revenue to support them. Most businesses are still in cost cutting mode, preserving cash and deferring investment until demand recovers. Low interest rates in this environment have had relatively little impact. While there has been plenty of funds available, this just has not been the business environment for investment. That will come later.

The next growth phase in the Australian economy will be driven by non-mining business investment. When it does recover, it will be to service growing demand, driven by a growth logic (evidenced by rising profits) and augmented by a technology catch-up. In turn, this will have a strong multiplier through business services into the rest of the economy. While non-mining business profits have staged a healthy recovery over the past year (to September quarter 2017), it is still too early to say that businesses are confident in the path of future demand and profits, and are willing to make the psychological shift from caution to a 'go for growth' investment mentality.

Part of the reason for this is that nationally, by region and industry, growth and profitability is highly fragmented. Very strong economic growth has returned to New South Wales and Victoria, after spending much of the mining boom years suppressed. However, growth in demand is still very weak in many other regions. In some states such as Western Australia and Queensland, State Final Demand has outright declined. Growth in the South Australian economy has remained weak for several years, but did pick up somewhat in 2016/17 on the back of higher public investment.

Challenges remain ahead for the Australian economy, too, which are likely to keep business confidence and investment on a weak plane over the next two years. Wage growth, except for skilled professions and trades in some sectors and states, is likely to remain relatively weak, affecting retail trade and household expenditures. Politics is highly adversarial, with major political parties unable to forge a workable consensus on many important policy areas surrounding taxation, energy security, and the environment. But, more importantly, investment cycles across Australia are likely to remain highly unsynchronised over the next two years – keeping national economic growth constrained to around 2.5 per cent per annum on average over 2017/18 and 2018/19.

These unsynchronised investment cycles include:

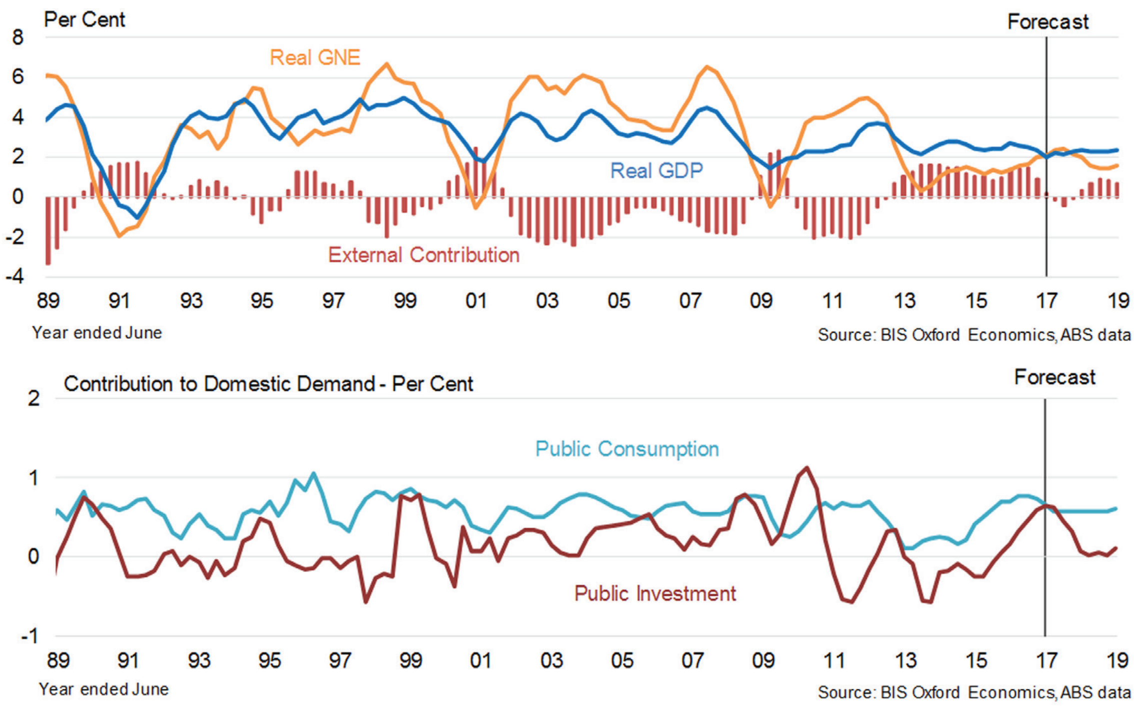
- Residential investment, a key driver of growth over the three years to 2015/16, peaked in 2016/17 and is expected to decline over the next year three years, with particularly large declines expected in the volatile high-density apartment market

- Mining investment is now entering its fifth year of an expected six-year decline, with further significant declines to come over the next 18 months as the LNG investment boom finally runs its course. This will see mining construction fall around 78 per cent from the 2013/14 peak to the 2018/19 trough, although mining equipment purchases and exploration have started to recover across most commodities, indicating the initial stages of the next upturn

- Public investment finally started to recover in 2015/16 after five years of decline, surging 10 per cent in 2016/17 alone. Growth in public investment is being supported by new transport infrastructure, but will be offset in part after 2017/18 by falling investment in Australia's largest public infrastructure project – the *National Broadband Network* (NBN). Total public investment is expected to be flat or falling (and hence be a drag on Australia's economic growth) by the end of the decade

- Non-mining business investment is currently showing only modest growth but is expected to strengthen from late decade as higher profitability, demand and capacity utilization (in turn supported by a slightly weaker Australian dollar) drive a change in psychology.

Figure 1.3: Australia – Basic Economic Indicators



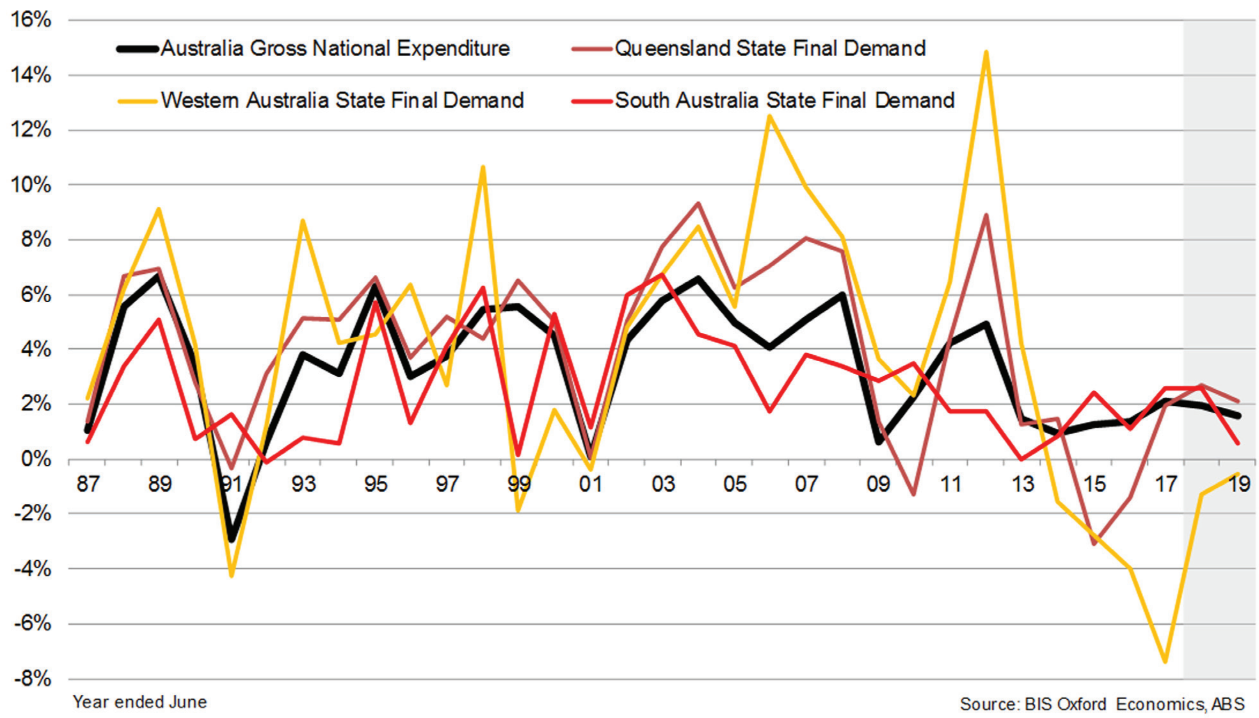
Consequently, domestic demand growth will improve markedly late in the decade, as the declines in mining and residential investment bottom out and start showing signs of recovery. Capacity constraints and expected improvements in business confidence are predicted to drive an acceleration in non-mining business investment. However, until that time, economic growth and inflation are expected to remain relatively subdued, with the Reserve Bank unlikely to be in a position to raise interest rates until 2019/20.

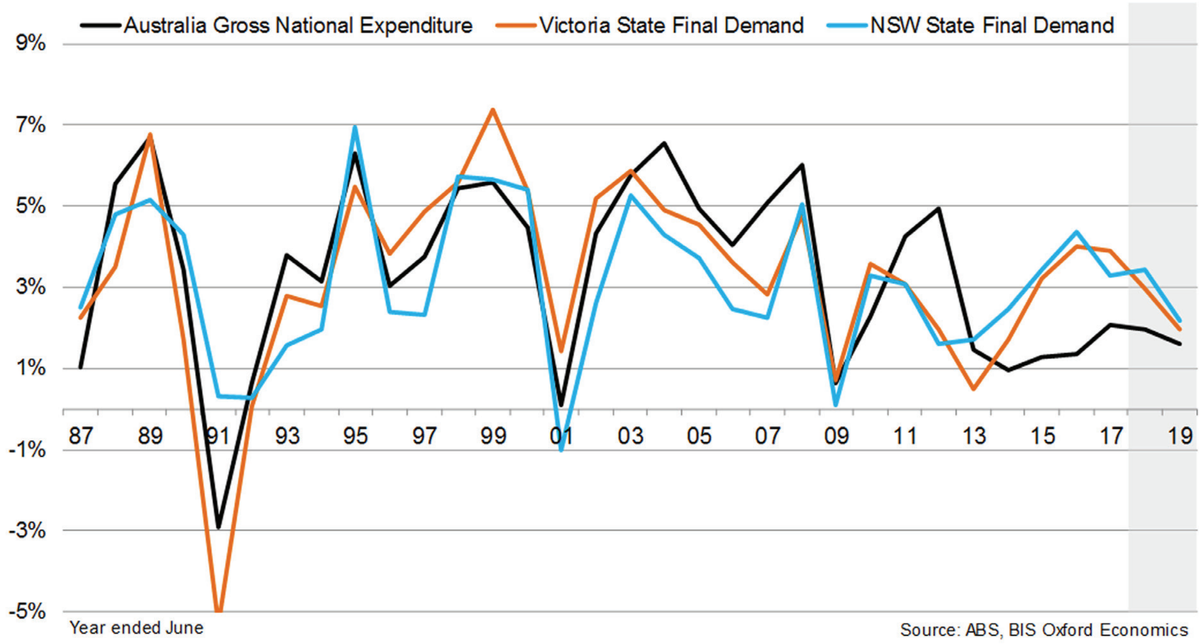
Regional Rail Link Project
Source: V Line

OUTLOOK FOR VICTORIA

Differences in the timing and magnitude of regional investment cycles are creating large differences in economic performance and construction activity by state. Strong pipelines of infrastructure projects, relative undersupply in housing, higher population growth and private sector confidence to invest is driving a construction upswing in New South Wales and Victoria, which in turn is spilling over into broader industry and economic growth.

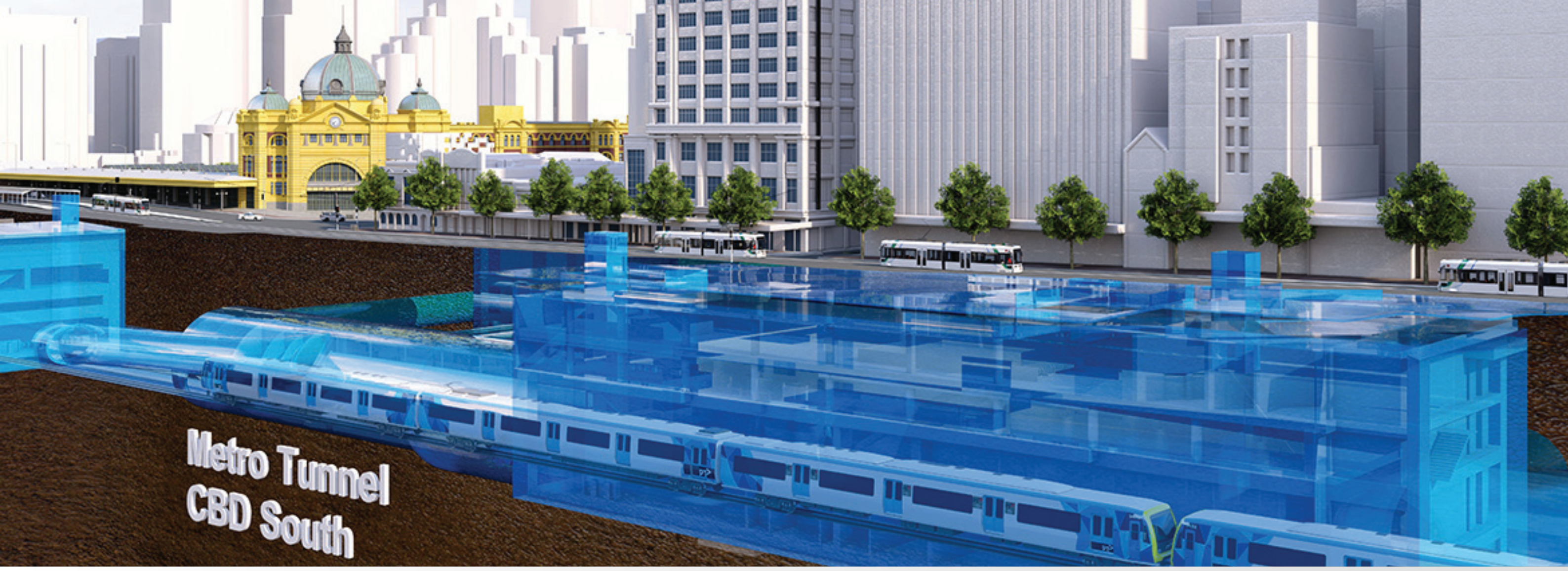
Figure 1.4: Comparisons of State (SFD) and National (GNE) Growth in Final Demand





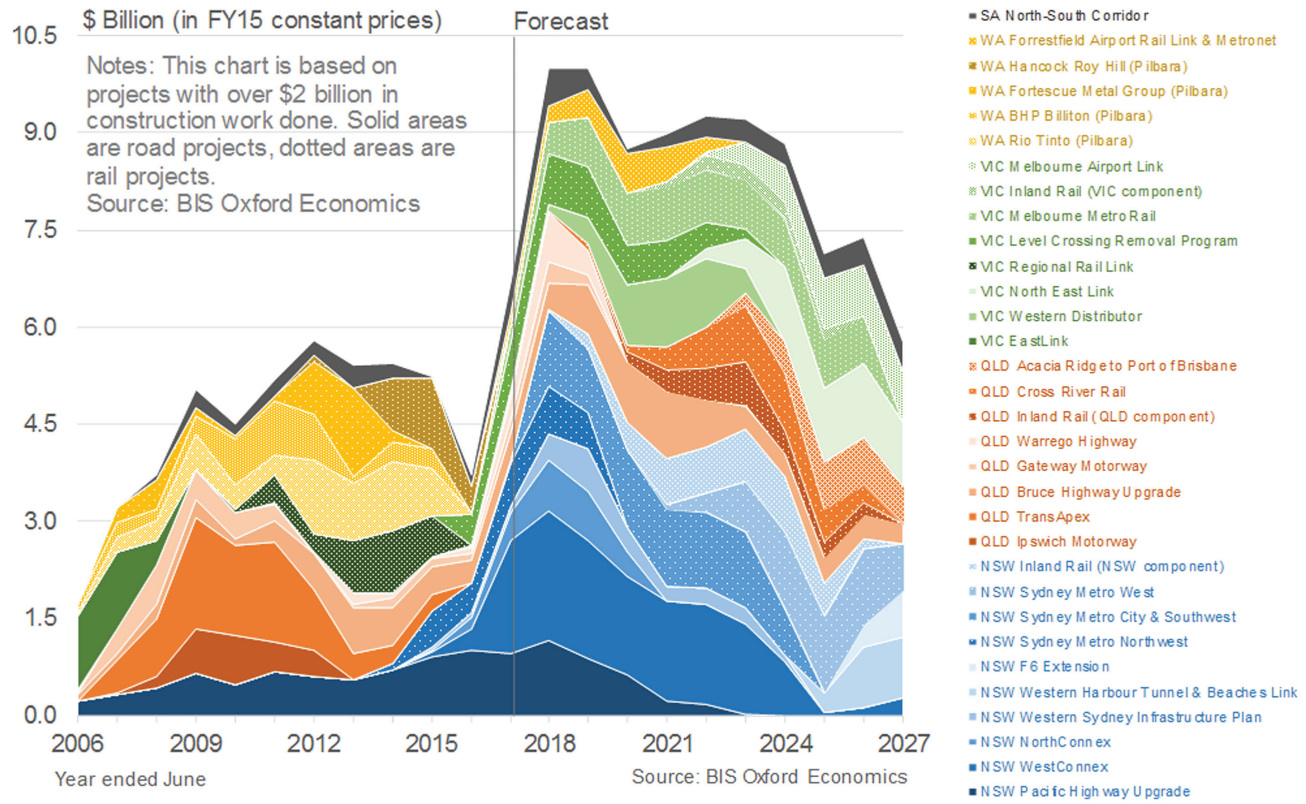
The eastern states – and particularly New South Wales and Victoria – are at the start of a tremendous wave in **land transport investment**, as shown in Figure 1.5, which is being supercharged by asset recycling strategies and strong growth in own source revenues from property taxes (in turn driven by robust increases in population growth). This boom in land transport infrastructure investment is drawing in resources from other states that will create its own challenges as other states begin to increase their own infrastructure investment.

Ararat - Buangor Highway Duplication
Source: The Courier



Melbourne Metro Tunnel
Source: www.premier.vic.gov.au

Figure 1.5: Major Transport Projects Construction (over $2 billion in Construction Value)



By contrast, investment growth and construction activity remains relatively weak or falling in the former resources boom states of Queensland and Western Australia. These states are now generating strong growth in mining production and exports as a direct consequence of the previous resources investment boom, boosting Gross State Product (GSP). However, growth in State Final Demand (SFD), the sum of household consumption, government consumption and investment – (both public and private) has been very weak or negative in recent years. This is important, as growth in SFD tends to be a greater driver of growth in employment and incomes than growth in capital-intensive mining exports.

Unfortunately, the strong economic performance seen over the last three years is not expected to be sustained. SFD is expected to moderate from recent strength over the next 3 years as the housing market cools and consumer spending is held back by weak growth in disposable household incomes. In the most recent September quarter, growth moderated to 0.4 per cent quarter by quarter in seasonally adjusted terms, from around 1.6 per cent quarter by quarter over the March and June quarters. SFD is forecast to increase by 3.5 per cent in 2017/18 before decelerating sharply to 2 per cent in 2018/19. Overall, SFD is projected to average 3.2 per cent per annum over the next five years, which is still above the national average of 2.9 per cent; while GSP is predicted to average 2.6 per cent, slightly lower than the 2.7 per cent average for national GDP growth.

KEY RISKS TO THE VICTORIAN ECONOMIC OUTLOOK

There are external and domestic risks to the Victorian economic outlook, both on the upside and downside. On the external front, the main risks revolve around policy decisions enacted by major economies, and the performance of these economies affecting trade, commodity prices and US interest rate settings. On the domestic side, the main risks include sluggish wages continuing to limit consumer spending, electricity prices harming manufacturing output (and household spending) and upside risks around levels of residential construction.

- **A key external risk relates to any extreme policies enacted by US President Trump**. In such a scenario the recent solid momentum in the US economy is disrupted as the President pushes through highly protectionist and isolationist measures, fails to implement a fiscal stimulus package amid deteriorating relations with Congress, and proceeds with immigration curbs and deportations that result in substantial labour force declines. Against a backdrop of heightened uncertainty and falling confidence in the administration, fragilities in the US economy are exposed and the global economy is badly shaken.

While the consequences will mostly be felt by major trading partners such as Mexico, there will be some indirect flow-on effects for the Australian economy. The Federal Reserve's rate cuts in response to the US and global economic slowdown and concerns about the outlook see the Australian dollar appreciate against the dollar, and this will have a dampening effect on key service exports, such as education and tourism. The impositions of tariffs on Mexico, China, Korea and Taiwan weakens global trade flows substantial, with Asian supply chains most affected. Global growth slows to 2.5 per cent (from 3.2 per cent in the baseline) in 2018 and 1.5 per cent (from 2.9 per cent) in 2019. The countries that take large hits to GDP, such as China and South Korea, are some of Australia's major trading partners. Their weakness would flow through to the Victorian economy via subdued demand for exports. For the domestic economy, annual growth averages 1.8 per cent in 2018/19, which is 0.6 per cent pts lower than the base case.

- **Delayed Policy tightening amid subdued inflationary pressures** remains is upside for the global economy, which is reflected in the latest Oxford Economics Global Risk Survey - nearly 30 per cent of respondents saw it as the top upside for the global economy. In this scenario, the current trend of weak wages and price pressures in advanced economies persists for longer than expected, which has implications for monetary policy, financial markets and global growth. The policy impact is greatest in the US, where delayed rate rises leave the Federal funds rate up to 90 basis points below our baseline forecast. A prompt market adjustment ensues, in which the US$ drops 4 per cent in trade-weighted terms and 10-year bond yields fall to 1.8 per cent in H1 2018.

"THE EASTERN STATES – AND PARTICULARLY NEW SOUTH WALES AND VICTORIA – ARE AT THE START OF A TREMENDOUS WAVE IN **LAND TRANSPORT INVESTMENT** WHICH IS BEING SUPERCHARGED BY ASSET RECYCLING STRATEGIES AND STRONG GROWTH IN OWN SOURCE REVENUES FROM PROPERTY TAXES."

- **While Private Consumption Expenditure is forecast to grow at 2.6 per cent per annum over the next 3 years, there is a downside risk to this forecast if wages continue to remain muted**. This will work to supress household disposable incomes and consumer spending. Additionally, if the cost of utilities continue to rise (electricity prices jumped 9 per cent in the most recent September quarter, largely a result of the unforeseen Hazelwood shutdown and other policy failures) this will further limit household's ability to spend.

- **High-energy prices are also a downside risk for Victoria's manufacturing industry**. If retail and wholesale energy prices trend higher, not only could there be a serious loss of output and jobs, but potential investments may also not proceed. The key in all of this is that even if gas and electricity prices are eventually resolved, it is important to remember that once domestic manufacturing capacity shuts down or is moved offshore, it is unlikely that it will return home or be re-started. Hence, the drop in manufacturing output could be permanent. Manufacturing in general, and the sub-sectors of basic non-ferrous metals (such as Alcoa's Portland Alumina smelter), non-metallic mineral products (especially ceramics, such as bricks and tiles, glass and cement clicker), petroleum, chemical, polymer and rubber manufacturing, iron and steel and parts of pulp and paper manufacturing are among the sectors with both high gas intensity and high trade exposure, which will suffer the largest impacts.

- **Recent changes to stamp duty and the first home owners buyers grant, that act to make property more affordable for first home buyers, are an upside to the Victorian economy**. These policies could encourage a faster-than-predicted pickup in demand for dwellings and stimulate greater levels of residential construction over the next few years than currently forecast.


BUS
LANE
METRO

2. Victorian Infrastructure Outlook

The key points can be summarised as follows:

- Engineering construction in Victoria was relatively steady at $10.8 billion annually in the five years to 2016/17, peaking at $12.2 billion in 2011/12 on the back of work done in railway, road and telecommmunications sectors during that year. The private sector accounted for 56 per cent of engineering construction work done in 2016/17, and has maintained a proportion above this level since early 2000s. The roads, electricity, and telecommunication sectors were the largest contributors to work done over the past decade and are set to hold a sizable portion in the medium term to 2025/26.

- Engineering construction activity has trended down in the three years since reaching a peak of $12.2 billion in 2011/12. Several sectors declined in activity including roads (which fell from $3.1 billion in 2011/12 to $1.9 billion in 2013/14) and, mining and heavy industry which fell from $1.5 billion to $848 million over the same period. In aggregate, a gap in major projects led to engineering activity to a trough of $10.2 billion in 2014/15. In 2015/16, engineering activity rose to $11.0 billion underpinned by increases in telecommunication and railways (increase of 23 per cent and 43 per cent respectively) which offset declines in other sectors including roads.

- In 2016/17, engineering activity increased by 5.3 per cent to $11.6 billion. Sectors contributing to the increase include telecommunication (due to the continued rollout of the NBN and addressing mobile black spots) and, an increase in roads and railways (impacted by the investment in level crossing construction work). However, other sectors recorded declines in 2016/17 including water, sewerage and drainage, pipelines and harbours, and mining and heavy industry.

- The Victorian state government has outlined plans to invest in infrastructure to improve productivity and drive future economic growth. The major public infrastructure committed by the government include the $10 billion Melbourne Metro Rail project, the Level Crossing program and the $600 million extension of the South Morang train line to Mernda.

- Over the next four years, engineering construction activity is forecast to average $12.8 billion per year, higher than the $10.9 billion of the previous five-year period. Major activity will be driven by construction within the roads, railway and telecommunications sectors. Publicly funded work done is expected to account for around 45 per cent of total engineering construction activity, at around $5.7 billion on average each year over the four-year period. This proportion allocated to public funded work has increased from around 39 per cent of the total in the previous five-year period because of large publically funded projects in rail and roads.

- As has been the trend previously, the majority of the public work will be contracted out to the private sector. We anticipate the contract proportion of 86 per cent (marginally higher than the 8 per cent contracted out in the past five years to 2016/17).

- Because of large projects in several sectors dominating activity over the next five years, the value of engineering work will likely remain volatile year on year. For example, we forecast engineering activity to increase within telecommunication sector due to the roll out of the NBN network, peaking in 2017/18 at $2.7 billion while the peak in engineering activity within the roads sector is only anticipated to occur in 2020/21 at $4.1 billion, rising from a low of $2.9 billion in 2017/18. Overall, growth will be dominated by a handful of sectors particularly in roads and railways.

- Over the five years to 2030/31, we are forecasting engineering construction activity to average $11.6 billion annually, slightly lower than the period prior. With a predicted increase in population, we expect key sectors including roads, railways and telecommunications construction to hold strong.

NBN roll out in Ballarat, Victoria
Source: The Courier

RECENT TRENDS AND OUTLOOK FOR CONSTRUCTION ACTIVITY

Unlike other resource rich states, Victoria's construction industry is not heavily influenced by the requirements of the mining industry. Since 2001/02 total construction activity (including residential building, non-residential building and engineering construction) has trended higher, year on year, and except for brief periods of declines (2006/07 and again in 2012/13 and 2013/14). In dollar terms, construction work done in Victoria soared from $22.0 billion to $43.8 billion[1] between 2001/02 and 2016/17.

The robust growth masks cyclical trends in each of the subcategories to total construction. For example, the residential sector had cyclical lows between 2004/05 and 2006/07 before rebounding between 2008/09 and 2010/11. The peak in the residential segment is expected to occur in 2017/18 at $21 billion, before recording negative growth between 2018/19 and 2020/21. Non-residential construction activity increased from $5.6 billion in 2000/01 to $10.4 billion in 2016/17 with cyclical weakness and declines experienced between 2009/10 and 2012/13. The outlook for non-residential building is expected to weaken towards 2021/22.

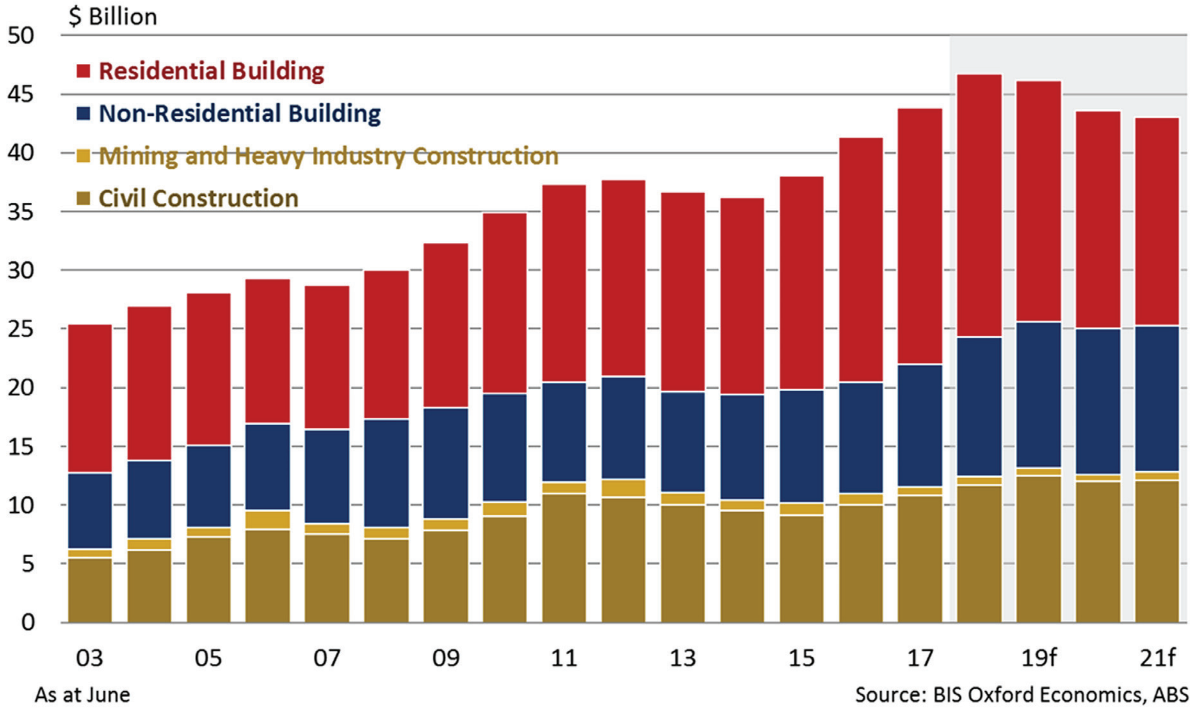
Construction within engineering construction industry has experienced rapid and accelerated growth driven by a range of projects in roads, electricity, water and rail. There were also a handful of projects within mining and heavy industry during the period including the development of the Kipper gas field and the Longford Gas Conditioning Plant. The other contributor has been development of the brown coal mines. Overall, engineering construction is expected to peak at $13.1 billion in 2018/19 driven by road and rail projects before easing in following years.

The overall outlook for construction activity is strong in the short term before weakening from 2018/19 to 2020/21. The period of growth in the short term is attributable to strength in the non-residential building segment and in engineering construction. The weakness from 2018/19 is driven by slower growth in all three segments (residential, non-residential and engineering construction). Despite the Victorian economy being more evenly balanced than when compared to resource rich economies, the simultaneous decline in all three segments will weigh on the State's economy.

Longford Gas Plant
Source: Friends of the Earth, Melbourne

[1] All figures quoted in this section (unless otherwise specified) are expressed in constant 2014/15 prices. This means that changes in the dollar value represent changes in the quantity of work, not changes in price. A discussion of price changes for construction work is presented at the rear of this section.

Figure 2.1: Victorian, Value of Construction Work Done by Segment
$Billion, 2014/15 Constant Prices



Construction Employment

Annual employment growth within Victoria's construction industry has averaged a modest 1 per cent over the past 5 years. Employment in the construction industry is forecast to rise by approximately 20,000 in 2017/18 from the year prior. Yet given the relatively weak outlook for construction, activity over the longer term we expect declines over 2018/19 to 2020/21. Overall, construction employment is expected to remain flat and weak over the 5 years to 2021/22.

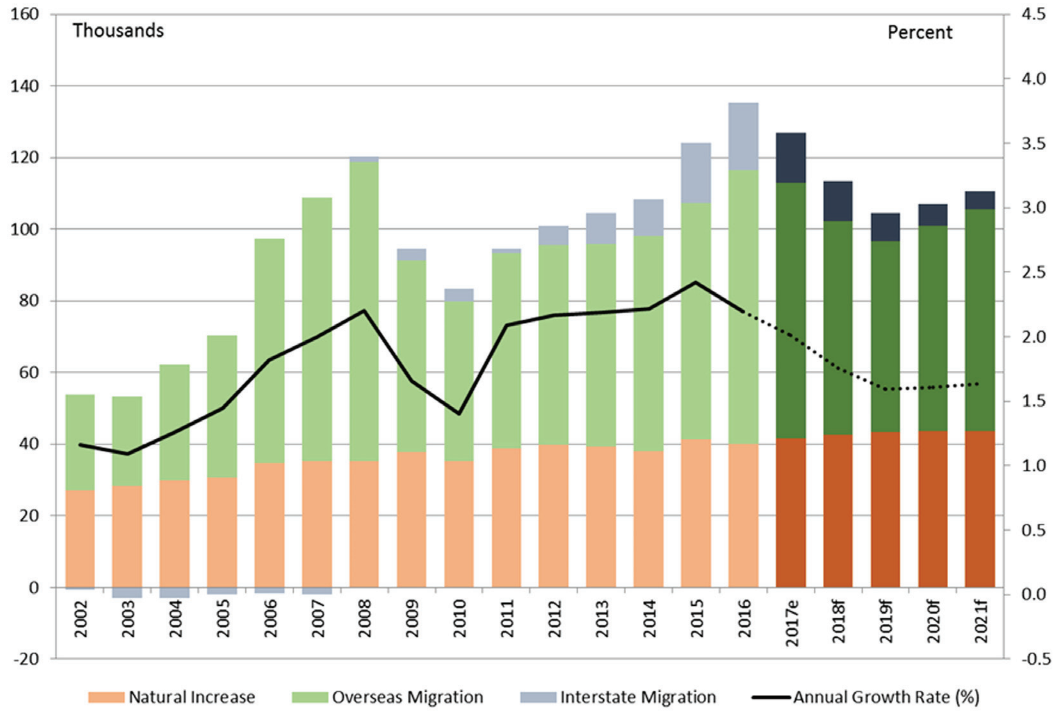
Residential Building

Victoria is the nation's leading population growth and healthy economy have encouraged elevated levels of residential dwelling demand over recent years. Victoria's residential commencements reached a peak in 2015/16, second only to New South Wales. Victoria however has the fastest growing population of the major states at present, with growth of 2.3 per cent in 2016/17. Melbourne accounted for the majority of Victoria's population growth. This has contributed to a rise in the underlying demand for dwellings, supporting the strong growth in residential activity over the last four years. Whilst Melbourne dominated activity, regional areas are expected to rebound after falling 8 per cent in 2016/17 with the July 2017 introduction of an additional $10,000 regional first homebuyer's grant for new dwellings. Regional Victoria's total approvals in September quarter 2017 has already shown strength, up 13 per cent against September quarter 2016. Regions such as Geelong and Hume will benefit the most with their close proximity to Melbourne.

It is expected that 2016/17 will see a drop in dwelling starts even though it would remain quite impressive at above 60,000. Attached dwelling starts should start to fall back sharply from their current unsustainable high level, whilst detached house starts see negative growth for the first time since 2013 as it gradually recedes. Further declines are expected over 2017/18 to 2019/20, taking total new dwellings to bottom of around 47,300, with both detached and attached contributing to the decline over these years. A weakening undersupply of dwellings has felt the weight of new supply in the market, with Victoria expected to develop an oversupply in 2017/18. With population growth holding strong over the forecast period against declines in new oncoming stock, dwelling completions will fall below underlying demand in 2019/20 and an undersupply of dwellings will re-emerge in 2020/21. By 2020/21, commencements will improve slightly from its low base thanks to growth in detached houses returning.

Non-Residential Building
Victoria has recorded a strong result for 2016/17 with non-residential building commencements forecast expanding by 32 per cent. With a series of major office projects scheduled to commence, a further gain is forecast for 2017/18 – a new record. The Melbourne economy is running extremely strongly, helping spur inward migration and business investment. However, weaker results are forecast for 2018/19 and 2019/20 in response to slowing economic conditions, although activity will still hold at what is an elevated level historically and a modest improvement should flow thereafter.

Figure 2.2: Victorian Population Growth (Thousands of Persons & Per Cent)
Source: BIS Oxford Economics, ABS data



STATE OF PLAY AND OUTLOOK FOR INFRASTRUCTURE AND MINING CONSTRUCTION

Victoria's engineering construction profile is more evenly distributed across several sectors, unlike those of resource rich states such as Queensland and Western Australia. Sectors contributing to state activity include roads (the largest sector in the past five years and will continue to be the largest in the next five years); telecommunications (third largest contributor in the past five years, but set to rise to the second largest following investment related to the NBN); electricity sector; and railways (where the level crossing program is set to almost double engineering activity over the medium term). Mining and Heavy Industry sector however, is expected to decline.

Engineering Construction lifted marginally in 2015/16 and set to edge higher in 2016/17

Engineering construction activity has trended down in the three years since reaching a peak of $12.2 billion in 2011/12. Several sectors declined in activity including roads and mining and heavy industry. In aggregate, the completion in major projects led to engineering activity to a trough in 2014/15. In 2015/16, engineering activity rose to $11.0 billion underpinned by increases in telecommunication and railways, which offset declines in other sectors including roads.

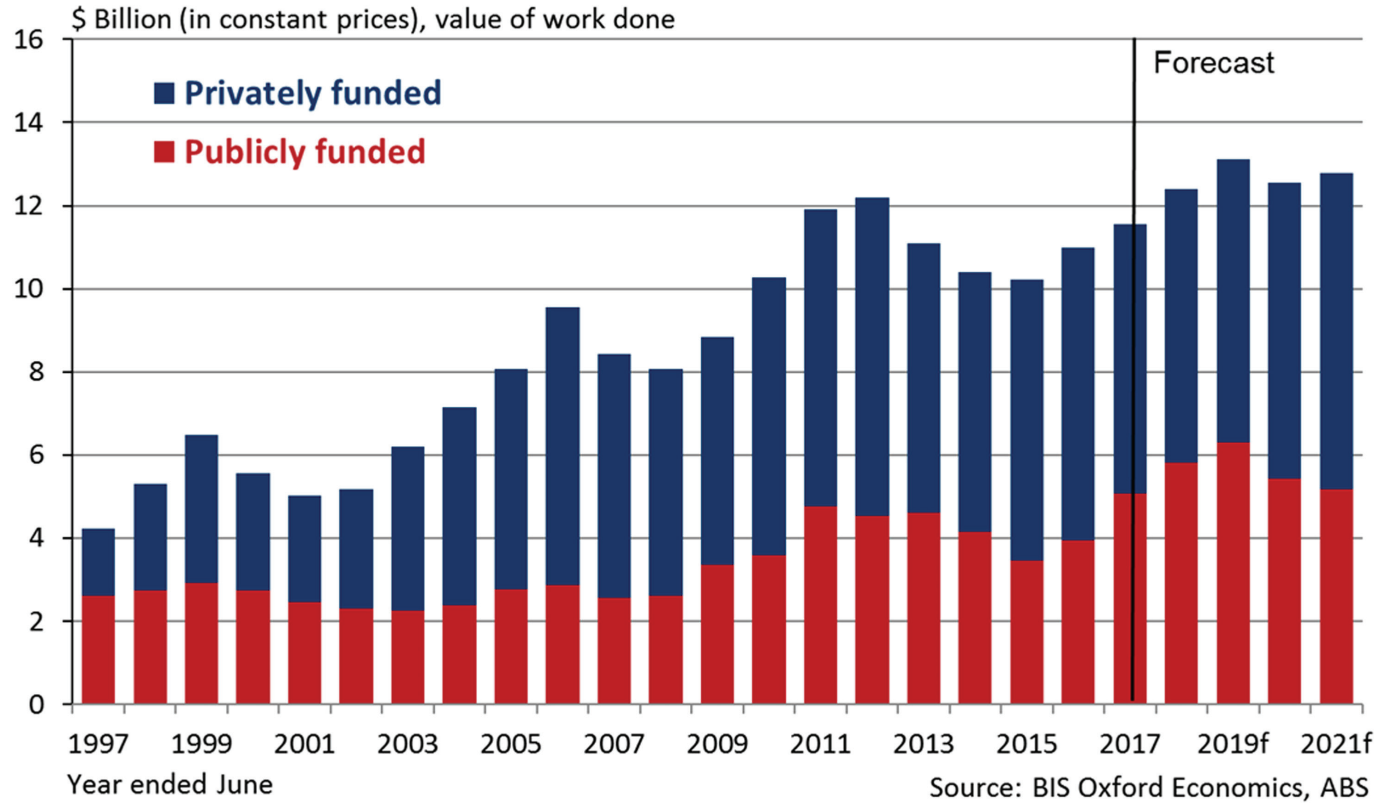
In 2016/17, engineering activity is estimated to increase to $11.6 billion. Sectors contributing to the increase include telecommunication (due to the continued rollout of the NBN and addressing mobile black spots) and, an increase in roads and railways (impacted by the investment in level crossing construction work). However, other sectors are expected to record declines in 2016/17 including water, sewerage and drainage, pipelines and harbours, and mining and heavy industry.

Prioritising public infrastructure projects into the future

The Victorian state government has outlined plans to invest in infrastructure to improve productivity and drive future economic growth. The major public infrastructure committed by the government include the $10 billion Melbourne Metro Rail project, the Level Crossing Removal program and the $600 million extension of the South Morang train line to Mernda.

Over the next five four years, engineering construction activity is forecast to average around $12 billion per year, higher than the $10.9 billion of the previous five-year period. Major activity will be driven by construction within the roads, railway and telecommunications sectors. Publicly funded work done is expected to account for around 45 per cent of total engineering construction activity. This proportion allocated to public funded work has increased from around 38 per cent of the total in the previous five-year period because of large publically funded projects in rail and roads.

Figure 2.3: Victorian Engineering Construction, $Billion, 2014/15 Prices



Transport Infrastructure

Transport infrastructure construction includes the construction of roads, bridges, railways and harbours, and amounted to $4.5 billion in work done during 2016/17 according to ABS data. This is up 20 per cent from the previous year, and is in fact the highest recorded. The scale of the increase is a direct consequence of heightened activity in roads and railways as a number of publically funded projects lift engineering construction work.

Road construction in Victoria tends to be highly cyclical, driven by both major projects and subdivision activity. In 2014/15, growth in road construction of 54 per cent was driven by a strong housing market (leading to a surge in privately funded subdivisions activity). Activity remained at relatively similar levels over 2015/16 as subdivisions activity remained strong.

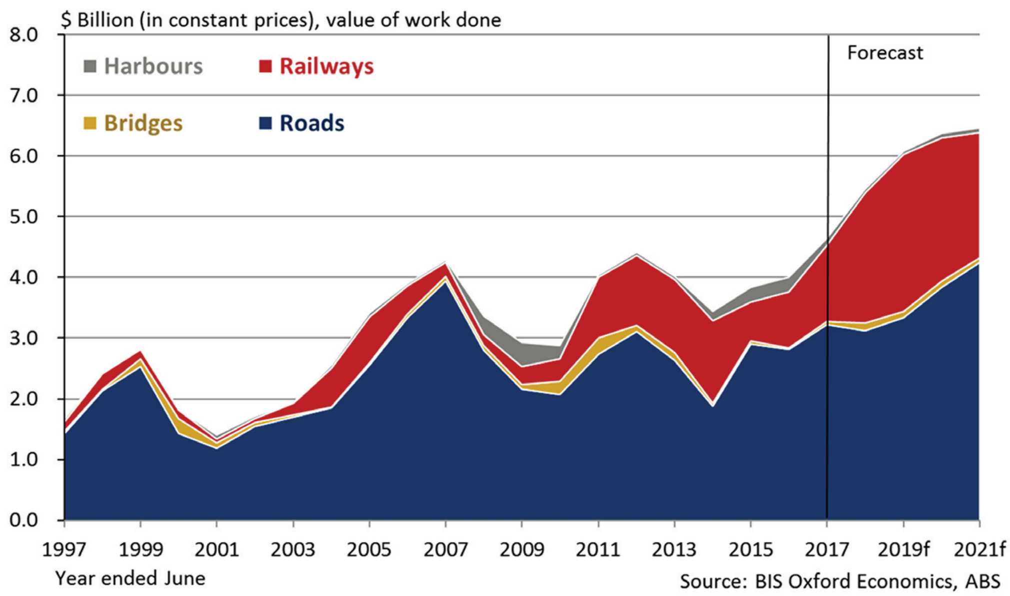
Over the next five years, road construction is expected to rise strongly, reaching a record $4.1 billion in 2020/21 – 43 per cent higher than the 2015/16 total. Growth is expected to be underpinned by the $6 billion Western Distributor project, and an increase in highways and arterials construction. There are two major components to the Western Distributor project; the $1 billion Monash Freeway upgrade and the $5 billion Western Distributor toll road project.

From 2016/17, we expect to see a significant escalation in railway activity, largely attributable to the Level Crossing Removal program and construction on the Melbourne Metro. To a lesser extent, the $600 million extension of the South Morang train line to Mernda will also contribute to engineering construction activity.

The $10 billion Melbourne Metro project will be the largest single contributor to engineering activity for the sector in Victoria. The State government will fund the majority of the project, although initially Federal assistance was sought-after and future assistance from the private sector has been kept open as a possibility. The overall engineering construction activity in railways if forecast to average $2.0 billion over the next four years, peaking at $2.4 billion in 2017/18. Approximately $900 million of engineering construction activity each year within Victoria is attributable to the Melbourne Metro.

Bridges and harbours contribute less to engineering construction in Victoria although in previous years the two segments have increased their work done via one-off projects. For example, engineering construction work within harbours sector increased almost five fold between 2012/13 and 2015/16 largely attributable to the $1.6 billion Port Capacity Project at Port of Melbourne.

Figure 2.4: Victorian Engineering Construction, $Billion, 2014/15 Prices Transport Sectors



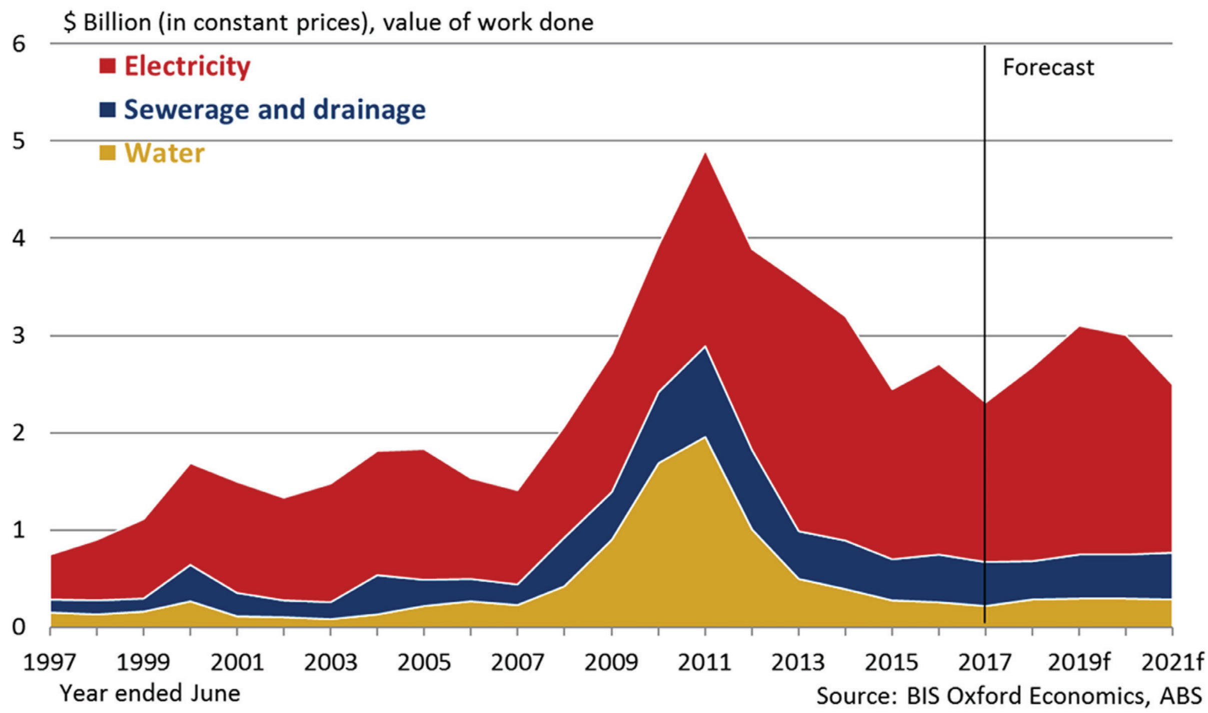
Electricity, Water and Sewerage Infrastructure

Historically, electricity, water and sewerage infrastructure accounted for around 30 per cent of the total engineering construction for Victoria. The water sector peaked in 2010/11 at $2.0 billion during the construction phase of the Wonthaggi Desalination Plant. However, following the completion of the desalination plant, engineering construction in the water storage and supply sector declined sharply, falling to $264 million by 2015/16 – an annual average decline of 33 per cent. Activity within water storage and supply is expected to be around $200 million, below the average annual activity prior to the construction of the desalination plant.

Sewerage engineering construction bounced up by 13 per cent in 2015/16, after posting a decline of a similar per centage magnitude in the previous year. Work in sewerage is tied into the work allocated within the respective Water Authorities, again dominated by Melbourne Water and the Yarra Valley Water Authorities. The activity is partially dependent on the population growth, the urban spread and on the increase in residential building activity.

Over the six years to 2012/13, electricity construction increased strongly driven by investment in the transmission and distribution networks. Since then, however, the requirements for investment declined as demand for electricity slowed. Electricity construction is expected to rise over the three years to 2018/19, underpinned by a number of renewable energy projects. A strong increase in the number of projects starting in Victoria over the two years to 2018/19 is anticipated, underpinned by both the national and state Renewable Energy Target's (RET's).

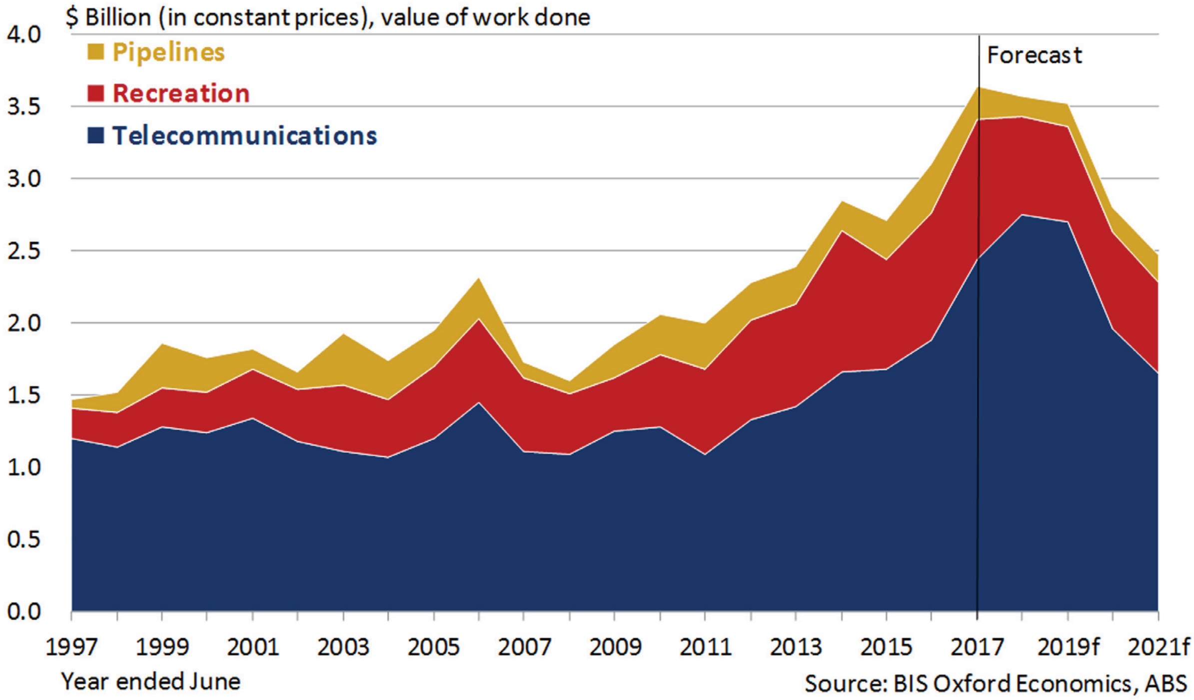
Figure 2.5: Victorian Engineering Construction, $Billion, 2014/15 Prices
Electricity, Water and Sewerage Sectors



Telecommunications, Recreation and (Non-Water) Pipelines Infrastructure

The upgrades to 4G networks and the expansions in network capacity and coverage have supported high levels of construction in telecommunications. Activity has grown for five consecutive years and expect to peak in 2017/18 at $2.7 billion. Following the upgrades, the telecommunications segment is set to experience a steady decline until 2020/21. On the public side, work done is forecast to escalate in line with the continued rollout of the NBN and the need to address mobile black spots.

Figure 2.6: Victorian Engineering Construction, $Billion, 2014/15 Prices
Telecoms, Recreation & Pipelines Sectors



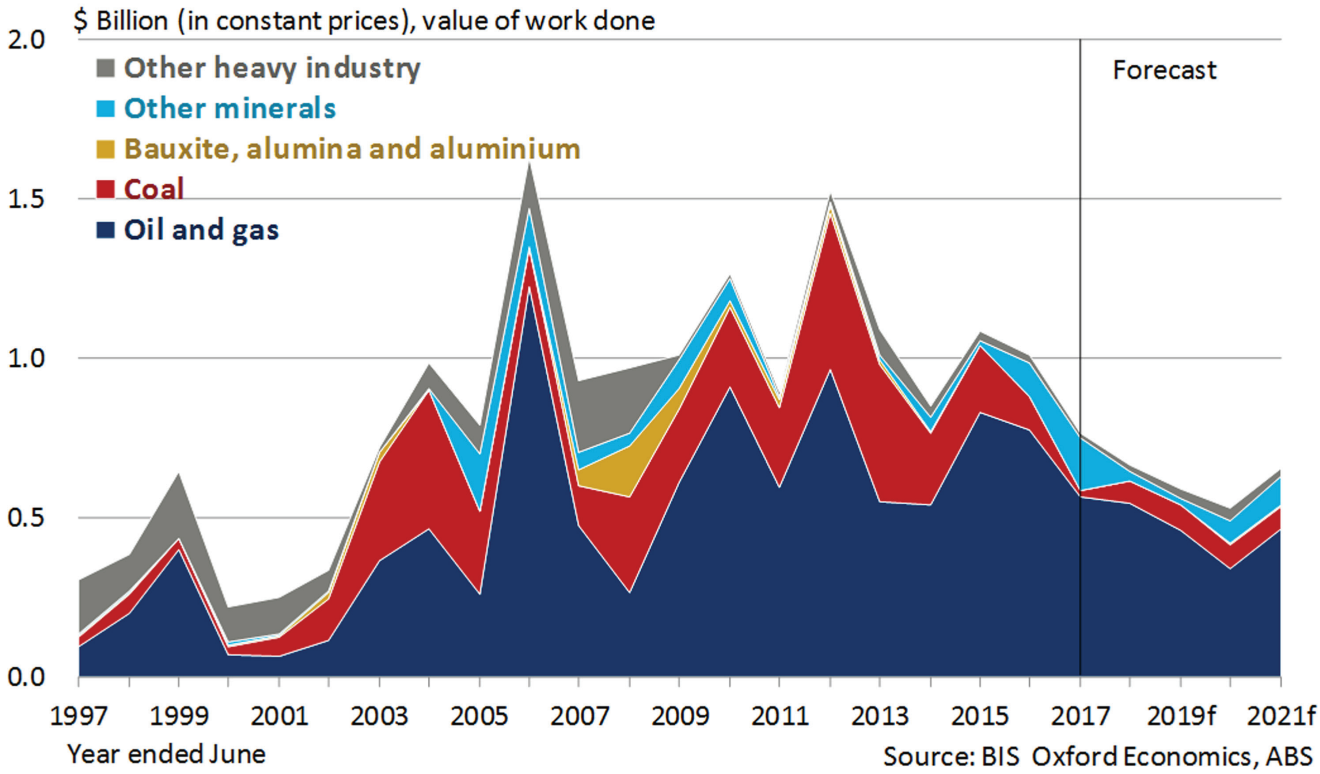
Recreation infrastructure construction is projected to ease over the next few years (driven mainly by the private sector). Meanwhile (non-water) pipelines infrastructure construction has historically been volatile between $100 million and $350 million. However, neither segment would see upswing in activity, as there are no significant projects expected to be on the horizon over the medium term.

Mining and Heavy Industry Construction

Mining and heavy industry in Victoria does not account for a substantial portion of overall engineering construction activity like other resource rich states. The majority of engineering activity within the state is within the oil and gas subsector, which accounted around 75 per cent of the total mining and heavy industry work done in 2015/16. In the previous five-year period, projects that contributed to oil and gas engineering construction included the BHP's Longford Gas Conditioning Plant, the Kipper Gas Field Project and Turrum Project.

The relative dominance of the oil and gas sector in the medium term and limited projects in the other segments that contribute to Mining & Heavy Industry means that total activity is expect total to be volatile over the next five years. The coal sub-sector has declined considerably from the previous five-year period as activity settles at around $70 million annually. Overall, total Mining and Heavy Industry is forecast to average around $600 million in the medium term, below the $950 million averaged in the five years prior.

Figure 2.7: Victorian Engineering Construction, $Billion, 2014/15 Prices
Mining and Heavy Industry Construction Sectors



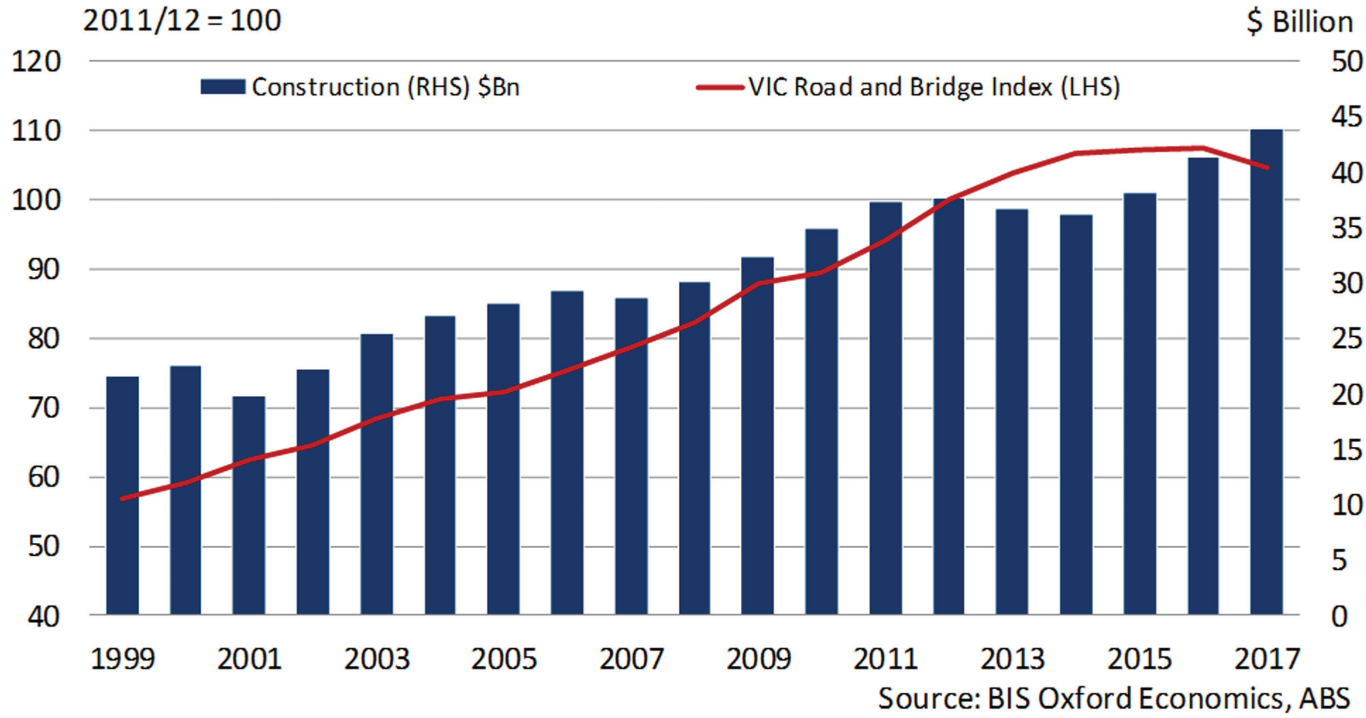
VICTORIAN CONSTRUCTION COST TRENDS

Growth in construction costs tends to be highly correlated with construction activity because high levels of demand in construction activity not only places pressure on the existing supply of inputs, boosting input prices, but also allows construction companies to seek higher margins. The price of key inputs such as steel, oil and other base materials are determined globally and may occur independent of domestic construction activity.

Figure 2.8 illustrates the strong correlation between rising construction activity and construction costs in Victoria since 2000. The construction price data is represented by the Road and Bridge Index (RBI) from the ABS Producer Price Index series. Growth in construction prices was at its strongest during the stronger phase in investment and construction. As a marker of costs in the civil construction sector, growth in the Road and Bridge Index has slowed substantially since 2013. Over 2015/16 and 2016/17, annual average growth in the RBI for Victoria has been below 1 per cent, indicating weaker pricing pressures in the civil construction industry nationally. However, there remains the risk that cost pressures will re-emerge in areas where there is a heavy concentration of construction work, as supplies tighten for local labour and materials.

Overall, nominal price levels for Victoria construction remain around 77 per cent higher than that experienced in 2000. Analysis of margins data coupled with construction prices suggest that construction contractors are absorbing price increases as they compete aggressively for work. This market development is of concern since it can place a contractor's overall operation at financial risk.

Figure 2.8: Victorian Construction and Cost Indexes



3. Challenges, Implications and Recommendations

Figure 3.1 summarises the state of play and outlook for civil construction in Victoria along with the state economy. Several key points are worth emphasising:

- **The key finding of the 2017 Victorian Infrastructure Outlook Report is that measured engineering construction activity will be higher over the next four years than in 2016/17, with a record average of work across the next four years (as shown in Figure 3.1)**.

- **The strengthening civil construction work will be supported by growth in non-residential building and from engineering construction as shown in Figure 3.2**. Residential building is set to trend downwards to 2020/21, while non-residential building will experience robust growth in the next five years. Overall, total construction work done is expected to rise strongly in the short-term, before pulling back marginally in the three years to 2021/22.

- **The gain in positive 'multiplier' effects in the medium term, from stronger investment, government sector spending and non-dwelling construction is expected to keep growth in State Final Demand (SFD) and Gross State Product (GSP)**. In contrast to other "resource rich states", Victoria's SFD was weaker during the peak of the mining boom, when compared to the years prior to 2008. This is partly because the appreciation of the Australian dollar during the resources boom weakened the state's trade exposed sectors including manufacturing, agriculture and tourism. In the post-boom era, a lower dollar, combined with higher investment and construction activity, has helped drive a strong recovery in Victoria's SFD since 2014.

- **The largest driver of growth in non-mining civil work recently and over the short term is the rise in transport infrastructure investment: specifically, roads and rail construction**. After dipping briefly in 2013/14, investment in road has staged a strong recovery while rail construction has surged since experiencing a trough in 2014/15. Investments will trend higher for roads over the medium term, although growth is set to reduce by 2022. On the other hand, peak rail investment is expected in 2018/19, before declining. Both segments are driven by public sector investment and although growth slows, the levels are still high in historical terms.

- **Utilities investment has also contributed to growth in Victorian civil construction work in recent years**. Here, the biggest single investment is the rollout of the National Broadband Network (NBN), but there is also investment and construction in electricity (driven by renewable energy projects). Water and sewerage infrastructure spending will remain within the ranges seen in the previous five-year period. The risk remains that utilities construction will diminish as a portion of total civil work as the NBN moves beyond the peak rollout phase and as electricity projects move past peak levels of construction.

- **Victoria's resources sector is relatively small when compared to resource rich states and as a result, the State did not see the same degree of volatile activity from the boom and bust in resources investment**. The investment in this segment will be driven by a handful of projects that lift the level of work done during construction. Apart from the temporary fluctuations, in the next five years, investment in the resources segment is expected to remain weak or declining.

Burke-North-McKinnon-Centre Level Crossing Removal
John Holland, KBR, VicRoads, Public Transport Victoria, Metro Trains Melbourne, and Level Crossing Removal Authority

Figure 3.1 Key Economic Indicators Victoria: State Final Demand, Gross State Product and Engineering Construction Activity, 2014/15 Constant Prices

Source: BIS Oxford Economics, ABS data

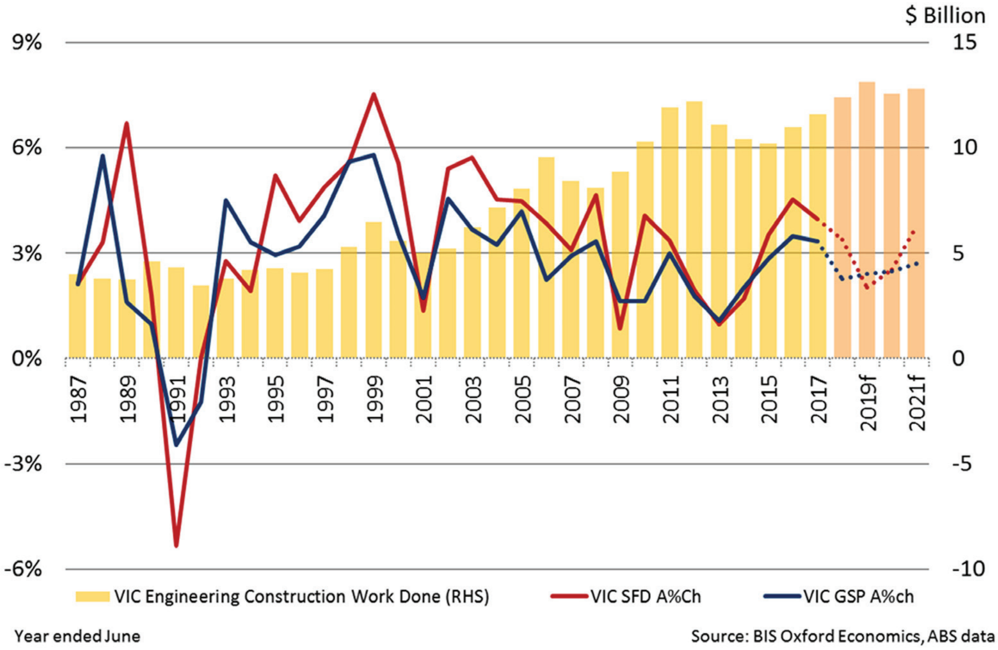
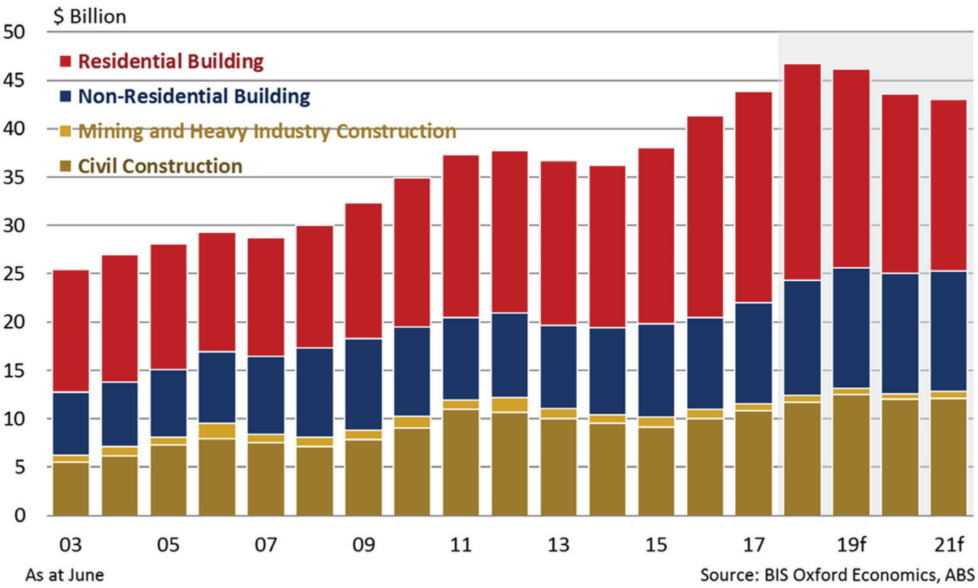


Figure 3.2: Victorian, Value of Construction Work Done by Segment $Billion, 2014/15 Constant Prices



IMPLICATIONS AND CHALLENGES – A VICTORIAN AND NATIONAL PERSPECTIVE

Victorian economy has been relatively strong during the post-mining boom era; however, the State does face several challenges and risks. While the national economy and "resource rich" states face a number of rather different challenges of their own (mainly transitioning away from a resources investment led boom to a less labour intensive production cycle), Victoria's risks stem from exposure to trade exposed industries and resource allocation during the construction cycle.

In the short term, investment cycles have large impacts on economic growth – particularly via multipliers affecting the rest of the economy. Examples include when local materials and labour are required to boost an economy's net capital stock. In the medium to long term, investment cycles affect the sustainability of growth; that is, spending on new productive capacity effectively creates the upper bound for economic growth.

From a Victorian perspective, the infrastructure task is high over the next five years, and challenges can lead from rising costs of construction, particularly since the construction phase within the state coincides with rising construction activity nationally. A need to employ skilled staff during this period will be a challenge particularly when skill transferability is limited and the demand for a certain skill set increases within the industry during heightened periods of activity. In fact, this can become a concern within the industry particularly if contractors bidding for work are not cautious about rising costs and fail to either disregard or factor in cost variability in the bidding process. In the past, higher than anticipated cost has eaten away margins placing at risk a contractor's operational viability. A factor in price is wage increases. For Victoria, construction wage growth came through at 2.8 per cent for 2016/17 and is forecast to grow reflecting the squeeze on prices across the economy. Stronger construction activity in Victoria will ensure strength in wages. Here, growth levels are set to experience an acceleration from the current level of around 2 per cent to 4 per cent over the next five years as the benefits of increased construction activity are realised by workers.

The resources investment boom and bust – though not focused in Victoria – has certainly affected the State economy, and this was not costless.

In Victoria, the associated rise in the Australian dollar drove a structural change away from dollar-exposed industries and thereby weakening the economy. Now, during the investment bust, the associated fall in the Australian dollar is reversing that structural change away from mining industries and regions and rebuilding activity in dollar-exposed and services regions and therefore positively impacting Victoria's economy. Irrespective of the benefits or otherwise of currently fluctuation, being exposed to trade exposed industries will inevitably open Victoria's economy to challenges.

The pace of Victoria's economic growth has eased over the past year, after it accelerated over 2014/15 and 2015/16. While still strong, State Final Demand (SFD) pulled back in 2016/17, after recording increasing growth in the previous two financial years. Victoria, along with New South Wales are currently the "high speed" economies driven by much stronger levels of non-mining investment, while Queensland, South Australia and Western Australia remain in the "low speed" zone.

At the national level, resources investment is not expected to reach rock bottom until 2018/19 when the total impact of the $200 billion wave of LNG mega-projects finally wash through. The downturn in resources investment has provided other states that were badly affected by the resources boom – such as New South Wales and Victoria – an opportunity to resource their next round of investment in infrastructure. For Victoria (and also for New South Wales), tough decisions were made early regarding the funding and financing of infrastructure (including undertaking long term asset leases) so that when economic conditions turned they were in a better position to put projects into flight. These states also have a much more diverse and balanced economic base that benefitted from the lower post-boom dollar. As growth in trade-exposed service sector employment recovered alongside impressive plans for reinvigorating infrastructure investment, population growth returned, itself fuelling investments in housing and commercial building and boosting State property tax revenues.

Indeed, thus far, the transition (at the national and state level) to more balanced economic growth has been assisted by new residential investment, in turn spurred by the lower Australian dollar and loose monetary policy from the Reserve Bank. However, there is only so much lower interest rates can do to spur private investment, particularly if sectors are already oversupplied, demand growth is weak and there is a general lack in business confidence. The residential boom is already running out of puff at a national level, and will also fall back in Victoria. BIS Oxford Economics expects residential investment to undergo substantial correction towards the end of the five-year period. Future demand will be impacted by an "oversupplied" housing market, higher house prices, rising household debt, tighter lending restrictions and foreign capital controls, and weak income growth.

Overall, growth in the national economy will stay soft until non-mining business investment picks up momentum sufficiently to become a primary driver of growth. So far, growth in general non-mining business investment remains weak, simply catching up on deferred investment and maintenance after the GFC setback. Stronger growth will not eventuate until business psychology switches to investing for growth.

A Role for Public Infrastructure Investment

In this transitionary environment, public investment in productivity-enhancing infrastructure continues to be a sensible policy option across all states and territories. In certain circumstances, this policy push can be enhanced by debt funding according to IMF research[1], real exchange rate depreciation and productivity enhancing reforms[2].

These themes have been revisited by the Reserve Bank Governor, Philip Lowe, in public speeches through 2017. In February, he noted several issues and challenges facing Australia and stated:

"The first is **to reinvigorate productivity growth**. Australia, like many other advanced economies has experienced **slower productivity growth over the past decade**. In our case, this has been **partly due to a large increase in mining investment** in response to soaring commodity prices.

In recent years though, **as the new production** made possible by all this investment has **come on stream, the productivity figures have improved**. This is clearly good news, **although underlying productivity growth remains relatively modest**.

A number of **structural factors are at work** here. If we do not address these factors, then **we will have to adjust** to noticeably slower growth in our average incomes than we have become used to. In some ways, this **adjustment has already started and it is proving difficult**.

On the more positive side, there is no shortage of things that could be done to lift our performance. The **challenge is that most of these ideas require difficult political trade-offs**."[3]

As a means of enabling productivity to lift, Philip Lowe highlighted the need for "**adequate high-quality infrastructure to help our citizens be as productive as they can** and enjoy a high quality of life".

"The growth in population is growing strongly which is a source of dynamism for our economy. But this growth can put strains on our infrastructure, including on transport infrastructure. These strains can reduce public support for a growing population. They can also impair our ability to compete and to be as productive as we can be. **Good transport infrastructure, for example, opens up opportunities for people and opens markets.** It also improves communities. Investment in transportation infrastructure can also play an important role in addressing housing affordability, which is an increasingly important issue."[4]

[1] IMF (2014) World Economic Outlook, October, pp.xvi, p77.
[2] Garnaut, R. 2015 "We Need a Plan to Revive The Economy" Australian Financial Review, 8th April, p8.
[3] P. Lowe, Dinner Remarks to A50 Australian Economic Forum, Sydney, 9th February 2017.
http://www.rba.gov.au/speeches/2017/sp-gov-2017-02-09.html
[4] Ibid.

The question of funding infrastructure projects is again being brought into focus. In earlier speeches, the previous Reserve Bank Governor, Glenn Stevens, suggested that governments were in fact in a far better position to "take on more debt and spend" than, say, households, given substantially lower leverage. Although, he also stated that he was "not advocating an increase in deficit financing of day-to-day government spending." Stevens went on to state that:

"The case for governments being prepared to borrow for the right investment assets – long-lived assets that yield an economic return – does not extend to borrowing to pay pensions, welfare and routine government expenses, other than under the most exceptional circumstances.

A similar sentiment was shared by Philip Lowe in which he notes that there are no shortages of finance for the "right projects" but the task was to:

"**...identify the best possible projects**, harness the planning capacity of government, design the best deal structures to attract private finance where it makes sense to do so, make sure that the construction process is as efficient as possible and price use appropriately."

Raising public debt to pay for infrastructure could become a concern if the gap in the recurrent budget continues to widen, and thus Lowe highlights the need to ensure that "public finances are on the right track". He re-emphasised Australia's "good" financial historical record stating that:

"Net government debt, as a share of GDP, is still low, although it is higher than it used to be. Our good record has provided us with a form of insurance. It meant that when difficult times did strike last decade, fiscal policy had the capacity to play a stabilising role. We had options that not all other countries enjoyed."

Therefore, at both at the State and Commonwealth level the importance of budgetary reforms to eliminate structural deficits in the budget is critical to ensure that there is sufficient funding for the right projects. However, there are some hurdles. For example, the classification of recurrent and capital expenditures are often grouped together in Budgets, thereby not providing clear arguments regarding the desirability or otherwise of budget deficits to fund large projects. Moreover, this can lead to the same weight given for cuts to infrastructure funding as cuts to recurrent expenditure, thus running the risk of confusing budget deficits (regardless of purpose) as unsustainable.

What is important for budget sustainability in the long term are the following two conditions:

- **Match recurrent expenditures in line with recurrent revenues** (over an economic cycle) through either recurrent expenditure cuts, taxation increases or a combination of the two. This allows recurrent budgets to dip into deficit naturally in weak economic conditions, so long as it is balanced by recurrent budget surpluses in the stronger part of the cycle. The budget acts as an "**automatic stabiliser**". During economic downturns, the budget cushions impact of public spending while in the upturns public sector saving measures are enforced.

- Government should **direct investment into productive assets that yield a positive economic return**. A focus should be kept on returns exceeding the cost of capital. This condition requires that all capital decisions by governments should be addressed on their merits in achieving positive economic returns. The separation of State and Commonwealth Budgets spending into capital (capex) and recurrent (opex) components is also necessary to allow assessment of the success or failure of policy that promotes investment.

Although rising public debt and deficits still attracts considerable attention, budget repair should not necessarily come at the expense of public investment. While it is the Commonwealth budget that attracts the majority of the media attention, the State budget usually matters the most for total public spending.

The Australian dollar remains a key growth 'X factor', certainly for the Victorian economy. With the relatively lower post-boom Australian dollar, the non-mining dollar-exposed industries in Victoria are beginning to recover – particularly tourism and agriculture. Ultimately, a relatively low Australian dollar will drive investment in non-mining sectors although this is expected to be a lengthy process. Recent strength in commodity prices (due mainly to changes in Chinese policies, as well as a longer than anticipated 'normalisation' in US interest rates) have seen the Australian dollar lift back towards US$0.80. While this may be temporary, the risk remains that a stronger Australian dollar will hurt Victoria's competitiveness and, ultimately, will act to curb investment and economic growth than if the dollar were lower.

Overall, the key challenges facing the Victorian economy are:

• **Further appreciation of the Australian dollar**.
The 30 per cent depreciation of the Australian dollar (against the US dollar) over the past three years is providing a significant boost to the Victoria's key trade-exposed industries, namely agriculture, manufacturing, international student education, tourism and some business services. Although the dollar has risen to over US76 cents recently, the overall improved competitiveness should underpin further growth and investment. However, should the Australian dollar appreciate in value, then the Victorian economy will likely experience challenges as it had during the mining boom when the Australian dollar reached parity with the US dollar.

• **Population growth weakens further**.
While picking up during 2015, population growth is expected to trend downwards, falling below 2 per cent annual growth from 2018 onwards. The increasing age of the population and more dispersed nature of population makes the provision of services typically more expensive. This includes an increased reliance on the Commonwealth Government for funding the provision of services as well as infrastructure. Weaker population growth could also be driven by interstate migration to resource rich states such as Queensland and Western Australia if the mining industry strengthens more than expected and earlier than anticipated. Moreover, attracting skilled employment should also be a priority, particularly in boosting Victoria's innovation, research and development industries.

• **Some of the recent and current drivers of growth will weaken, or reverse, over the next two years, while the next crop of growth drivers will be slow to gather momentum including:**
- After being a key growth driver over the past three years, an emerging housing oversupply will lead to declines in housing construction over the three years from 2017/18.

- Private engineering construction has declined sharply over 2016/17 and is set for a further decline in 2017/18, before turning around in later years (from 2018/19).

- Slower employment growth will see household consumption expenditure weaken over the next two years.

- Victoria is a net exporter of goods and services to other states and will likely be affected by sluggish national growth for the next 2-3 years.

- The end of domestic car manufacturing by Ford in October 2016, and Holden and Toyota in October 2017 will have a significant negative impact on the entire manufacturing industry. The shutdown of Hazelwood power station in late March 2017 and issues with gas and other electricity supplies will also have negative impacts on manufacturing and potential investments in the state.

- Increasing energy prices can have a significant negative impact on industry profitability, economic viability and employment

• **Nationally, low productivity growth remains a structural challenge to improved economic outcomes**.
As highlighted by many economists (and successive Reserve Bank Governors), Australia's productivity performance has been poor over the past decade, and well below the much stronger rates of productivity growth experienced during the 1990s. Indeed, much of Australia's economic growth in recent years (as weak as it is) can be attributed to high population growth as opposed to being smarter about the way inputs such as capital and labour are being used in production. GNE growth has averaged 1.4 per cent per annum since 2011/12, but in per capita terms, GNE has declined nearly 1 per cent over the same period. Similarly, economic performance across Australia is tending to move where the population is moving. Ultimately, it is growth in productivity that provides the space for sustainable increases in real incomes and living standards, not economic growth per se.

• **Good public policy can play a crucial role in this regard**.
The return to growth in direct public investment in infrastructure is helping to offset the ongoing downturn in private investment at the national level. Although Victoria's private investment is predicted to remain strong in the five years, positive impact on productivity is to be had if projects are chosen wisely. A weaker growth in public investment entrenches lower rates of growth in domestic demand and employment in the short term, and is not keeping up with the longer-term productivity challenge.

AN OPEN POLICY CONVERSATION IS NEEDED TO DRIVE SUSTAINABLE LONG-TERM GROWTH

BIS Oxford Economics expects Victoria's economic growth to slow further over the next two years, before a late decade, recovery sees growth strengthen and return to historical averages early next decade. While new road and rail infrastructure investment in the State Budget is welcome – as is achieving budget repair – the fluctuations in activity brought about by the start and then the completion of projects in a handful of sectors is likely to pull back momentum on sustained longer term economic growth for the state.

An open and transparent discussion on the long-term economic strategy for Victoria (and indeed for other states and nationally) should concentrate on leveraging from (or improving) core (or potential) strengths. For Victoria, this includes its iconic Australian tourism destinations and enviable lifestyle benefits. State Government strategy has focused on boosting programs to bring new businesses to Victoria including the $90 million investment to help create and retain jobs in priority industry sectors including manufacturing and aviation. A core aim of the economic strategy should be to attract businesses and people to Victoria.

Overall, the public sector investment in total engineering construction is a sizable component in Victoria, and this proportion is expected to move higher to peak in 2018/19 before trending downwards mid-2020s. Having such a sizable proportion, achieving longer-term economic goals will depend crucially on how the public sector can develop policies to stimulate private decisions on where to invest and live.

Victoria's medium term outlook highlights strong pipeline of infrastructure in transport and utilities. However, sustained investment in productive infrastructure will remain a critical component of a broader economic strategy of Victoria to ensure cities and regional centres offer competitive benefits and help keep cost of living (and cost of business) pressures contained. It also means investing in critical infrastructure for new growth regions – which will benefit from the lower post-boom Australian dollar – to 'crowd in' private business investment decisions.

The availability of funding for sustainable productive infrastructure investment should not derail investment itself and the State Government should utilise other funding levers available to it. Asset recycling has benefitted Victoria's government coffers, and remains a potential source of funding for future infrastructure projects, so long as there is effective post-sale regulation of privatised assets to ensure prices remain competitive. Introducing tolling on major roads (possibly in the form of, or introducing time- of- use tolling to manage peak demands) or more fundamental reform such as a broad-based road user charge, could also help fund future infrastructure projects – as well as potentially pushing out the timing for reinvesting in crowded roads networks.

Finally, developing a more constructive relationship with the Commonwealth Government will also be crucial, and this extends beyond the use of the Commonwealth's balance sheet. With effective business case planning and vetting for specific infrastructure projects, this may see greater Commonwealth contributions flow for state infrastructure projects.

Beyond public investment itself, State and Federal Governments should also be looking at ways to encourage the return of private investment (by far the bigger part of the investment 'pie') and re-establish the positive growth mindset. This can be achieved through good public investment choices which 'crowd in' private investment (e.g. building better transport links which encourage broad regional investment by the private sector, or investing in lower cost energy to attract industry and other business). Perhaps more importantly, governments should also set clearer messages about future policy to give the private sector confidence to invest. Unfortunately, the record here has not been consistent, with arguments over energy policy, financing, and tax and spend policies likely to have had a deleterious impact on business confidence.

PUBLIC INVESTMENT IS CURRENTLY RISING

Nationally, public infrastructure investment rose in tandem with the resources investment cycle during the 2000s. However, as resources investment began shrinking, publically funded infrastructure investment also declined, particularly between 2010/11 (the peak) and 2014/15 (the trough) inclusive. While Australia performed relatively well against global peers with regards to infrastructure investment during the second stage of the resources boom (2008 and 2013), the performance was less than satisfactory regarding the quality of infrastructure spending, not to mention the downward trajectory in public investment since 2010[5].

This situation is turning again. Public investment rose in 2016/17, on top of a small increase in 2015/16. Forward projections from the 2017-18 Commonwealth and State Budgets, along with BIS Oxford Economics' own analysis of major projects, indicate that public investment will rise further in 2017/18, albeit at a much weaker pace than in 2016/17, but will then level out and decline once more.

Much of this growth (both in the 2000s and now) reflects the ongoing catch-up in infrastructure investment required to keep pace with (albeit weaker) population growth and an ageing asset base. While not perfect measures, several studies have pointed to underinvestment in infrastructure in previous decades resulting in infrastructure gaps at the national level. Engineers Australia estimated that the infrastructure shortfall is $800 billion while Infrastructure Partnerships place the shortfall at $770 billion[6]. The May 2015 release of the Australian Infrastructure Audit by Infrastructure Australia also found evidence of an infrastructure deficit noting that existing infrastructure gaps in urban transport and regional water will continue to widen unless infrastructure investment is increased[7]. This outcome was reinforced in Infrastructure Australia's Australian Infrastructure Plan published in February 2016 and the latest Priority List published in November 2017 which included a list of high priority and priority initiative infrastructure projects that Australia needs over the next 15 years across roads, railways, water, wastewater and energy.

In Victoria, the following is listed as High Priority Projects (where a full business case has been completed and positively assessed by Infrastructure Australia Board). A High Priority Project addresses a major problem or opportunity of national significance.

- Melbourne Metro Rail (Medium term delivery timescale)
- M80 Ring Road upgrade

High Priority and Priority Initiatives (where business cases are yet to be completed and assessed) include for the near and medium term:

- Murray Basin Rail Project
- Hoddle Street capacity upgrade
- Cranbourne & Pakenham rail lines upgrade
- Improve the connection between the Eastern Freeway and City Link
- Preserve corridor for Melbourne Outer Metropolitan ring Road / E6
- Melbourne level crossings removal
- Melbourne Airport to CBD public transport capacity
- Melton Rail Line upgrade
- Complete Metro Ring Road from Greensborough to the Eastern Freeway
- Melbourne outer northern suburbs to CBD capacity upgrade
- Melbourne Airport third runway
- Melbourne container terminal capacity enhancement

[5] McKinsey Global Institute (2016) Bridging Global Infrastructure Gaps, p10-12.
[6] http://www.afr.com/opinion/the-australian-infrastructure-deficit-that-isnt-20160307-gnd36n
[7] Infrastructure Australia 2015, "Australian Infrastructure Audit", Commonwealth Government, Canberra

FINANCING PRODUCTIVITY-ENHANCING INFRASTRUCTURE REMAINS A CRITICAL ISSUE

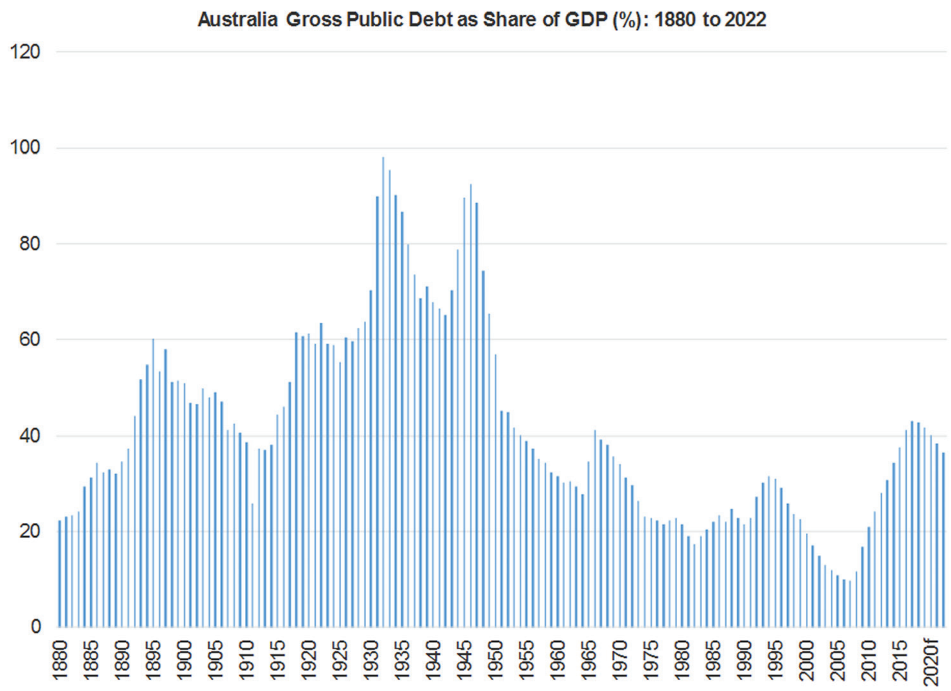
Both State and Federal Governments continue to face challenges with financing new infrastructure, but, importantly, there have been positive developments in this space in recent years. In particular, there has been a marked change in messaging from the Commonwealth Government regarding its **ability to utilise debt to finance productive infrastructure**.

Crucially, the Commonwealth Government is beginning to differentiate between ‘good’ and ‘bad’ debt, rather than focusing on the stock of debt overall as a constraint to public investment. Prior to the mid-year economic update in December 2016, the Treasurer noted that “bad debt is debt used for current spending purposes, no different than in a household” and that “borrowing for this type of recurrent expenditure at the Commonwealth level is not sustainable and it is vital that we reduce our borrowing for day-to-day government spending.”[8]

Furthermore, there was recognition that Australia had comparatively low levels of public debt compared to other AAA rated economies (as shown in Figures 3.3 and 3.4), although they could be considered high by recent national historical standards.

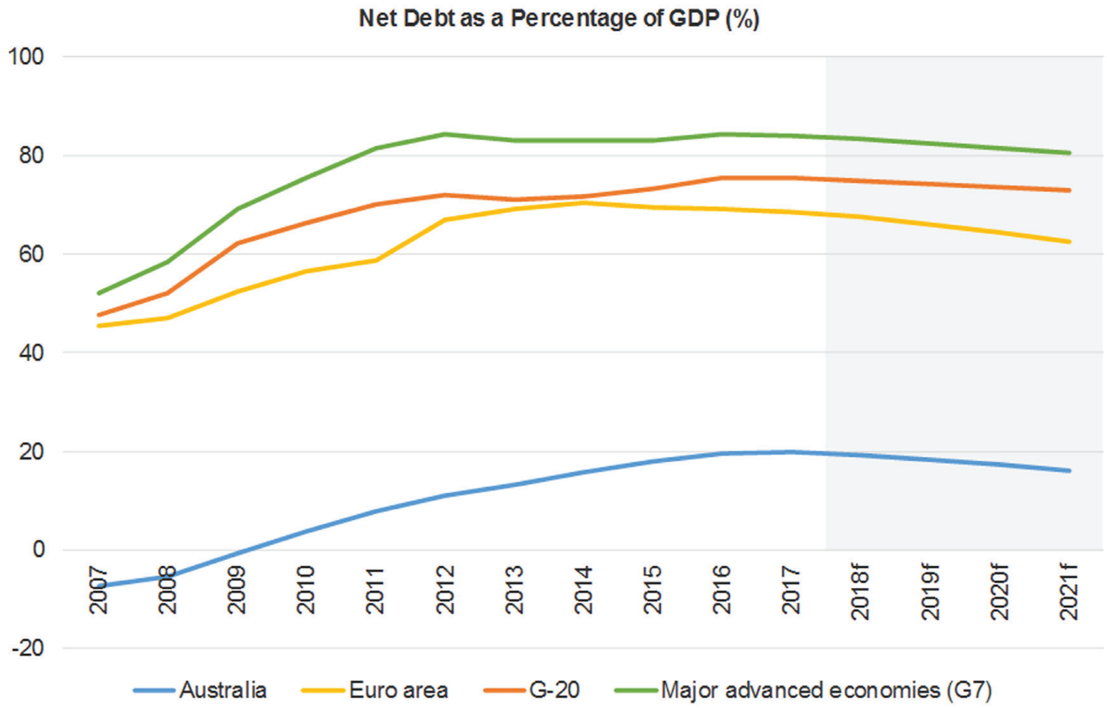
Importantly, this rhetoric was backed by action in the 2017-18 Budget, with separate reporting of the ‘recurrent’ and ‘total’ Budget deficit, as well as an increase in debt funding across the forward estimates for the *Infrastructure Investment Program*. This included increased funding for rail projects and the establishment of a new $10 billion National Rail Program – as well as two very significant off-Budget funding measures: large equity injections to develop the $10 billion+ Inland Rail project (through the Australian Rail Track Corporation) as well as up to $5.3 billion in equity funding to build the Western Sydney Airport (through a new Government-owned company, WSA Co).

Figure 3.3 Australian Public Sector Gross Debt as a Percentage of GDP: 1880 to 2022
Source: IMF Fiscal Monitor, April 2017



[8] Belot, H. “Scott Morrison draws good and bad debt distinction ahead of budget update”, ABC News, 14th December 2016, viewed 25th August 2017 http://www.abc.net.au/news/2016-12-14/morrison-seeks-to-define-good,-bad-public-debt/8119976

Figure 3.4 Public Net Debt as a Proportion of GDP (%): International Comparisons
Source: IMF Datamapper



Increased Commonwealth infrastructure funding has been joined by new infrastructure funding at the State Government level, particularly in Victoria and New South Wales, where the proceeds from long-term asset leases are being recycled into new infrastructure development, along with windfall proceeds from property taxes as these states reap the benefits of stronger population and economic growth. Further long-term leases of public assets are expected over coming years at the national level given the perceived success of capital raising to date, including potentially the entire $16.8 billion WestConnex toll road in Sydney before construction is completed.[9] While Western Australia and Queensland have so far shied away from “asset recycling” as a capital raising initiative for financing productivity-enhancing public infrastructure, this option remains open to future governments given the number and size of assets still under public ownership.

While asset recycling is helping to solve infrastructure-financing issues at the state level, the solution is not costless. As demonstrated by the Federal Court’s August 2017 ruling on pricing at the recently-privatised Port of Newcastle[10] governments need to do a better job in balancing the aims of maximising sale proceeds (of what are often essentially monopoly assets) and ensuring strong regulation of these assets post sale so that future users (and broader economic activities) are not disadvantaged by unreasonable price increases.

Ultimately, long term, sustainable public funding for infrastructure still requires sensible tax and expenditure reforms.

[9] http://www.smh.com.au/nsw/sale-of-entire-westconnex-motorway-project-on-table-for-government-20170524-gwc2n2.html
[10] http://www.theherald.com.au/story/4859740/ugly-hit-that-came-back-to-bite-port/

While asset sales have helped supercharge public investment recently, it may not necessarily be the best long-term financing strategy. Not all public infrastructure is amenable to privatisation, particularly where the benefits from ownership cannot be effectively commercialised (i.e. where there is greater competition or network externalities present). Rising prices subsequent to privatisation can stymie economic activity. Furthermore, the market appetite for public assets (which tend to be less risky and lower growth) may wane in a world where interest rates and expected returns begin to rise. Because of this, it still makes sense for governments to look to alternative financing mechanisms (e.g. user charges and value capture, where appropriate) and to ensure that Budgets are balanced over the economic cycle so that governments can cheaply and effectively tap into global capital markets when necessary to finance productivity-enhancing infrastructure.

Unfortunately, the tax and expenditure reform process remains relatively unchanged since last year (and for much of the last decade) with successive Federal Governments still unable to grasp the nettle on the full range of comprehensive reform measures recommended by the Henry Tax Review (2008) and other subsequent reviews including:

- Apolitical infrastructure planning, including the widespread use of road-user charging (despite the issue being highlighted recently by Infrastructure Australia and other key agencies)
- Lower company tax rates
- The removal of stamp duties on residential property
- Tax treatment reform of interest and capital gains
- Overhaul of state-based royalties
- Market-based solutions for climate change mitigation and long term investment in the energy sector
- A broader base and higher rate of GST

As a direct consequence of this reform inertia (in conjunction with weak growth in domestic demand and wages affecting tax revenues) the Commonwealth Government's Budget position continues to deteriorate, although recent strength in commodity prices and corporate profits have seen better than expected increases in revenues.

The 2017-18 Commonwealth Budget showed the net operating balance (the difference between recurrent revenues and expenditures) rising to an estimated $38.7 billion deficit in 2016/17, or 2.2% of GDP. While this is forecast (perhaps, heroically) to weaken significantly in coming years, it is not expected to turn positive until 2019/20, with negative consequences for the build-up of net debt in the interim. Given the somewhat rosy predictions for growth in wages and tax revenues in the Budget, the risk remains that the path to surplus on the recurrent account may take longer to eventuate, potentially limiting fiscal headroom for productive infrastructure investment.

Melbourne's crowded Flinders Street Station
Source: International Business Times AU

The Victorian Government is currently pursuing a series of infrastructure investment projects in response to recent surges in population growth. Victoria has the fastest growing population among the Australian states and territories, adding large increases in population in the June quarter of 2017. This rapid growth over the past five years is evident in the recent housing price boom in Melbourne, and the Victorian government is trying to keep up with the growing demand for public infrastructure including roads, rail, health and education. The Government has committed $30 billion in infrastructure investment over the next 3 years. The 2017-18 State Budget shows that net debt of the non-financial public sector jumped from $32.9 billion to $40.1 billion over the past financial year, and now represents around 60 per cent of revenues and 10 per cent of GSP.

"VICTORIA HAS THE FASTEST GROWING POPULATION AMONG THE AUSTRALIAN STATES AND TERRITORIES, ADDING LARGE INCREASES IN POPULATION IN THE JUNE QUARTER OF 2017."

An increasingly toxic political environment, in State and Federal Government, does not help the progress of tax and expenditure reform, where good policy ideas from one party are far more likely today to be opposed outright by others, rather than seeking areas of common ground. Ken Henry himself noted in a speech to the Committee for Economic Development of Australia (CEDA) in February 2017 that:

"Today's dysfunction stands in marked contrast to earlier periods of policy success – where politics was adversarial, every bit as partisan – but when the tribal tensions within parties were generally well managed and the political contest appeared to energise policy, not kill it. Almost every major infrastructure project announced in every Australian jurisdiction in the past 10 years has been the subject of political wrangling. In the most recent federal election campaign, no project anywhere in the nation – not one – had the shared support of the Coalition, Labor and the Greens.

Every government proposal of the last 10 years to reform the tax system has failed."[11]

The lack of bipartisanship in infrastructure policy has not only seen different projects and programmes being advanced, but has also led to increasing sovereign risk as contracted projects have been cancelled following elections – a situation that could threaten future private participation in infrastructure delivery.

Given the long road to tax reform, the mismatch between tax collections (which is mostly undertaken by the Commonwealth Government) and infrastructure provision (which is mostly managed by the States) creates an inefficient and complex horizontal fiscal equalisation grants process. Moreover, this mismatch also affects Commonwealth-State relations. Political party change can result in difficulties and delays in agreements. Nonetheless, it is important that reforms be designed so that the changes to the tax/transfer system satisfy basic efficiency and equity criteria.

PRIVATE SECTOR INFRASTRUCTURE FUNDING ALSO ON THE RISE

While much of the infrastructure investment task is currently focused on public sector funding, it is important to remember that the private sector plays an increasingly important role in infrastructure finance and delivery in Australia, albeit at a lower level than during the resources boom. Currently there are a number of significant projects that either are under construction or proposed across all states. Government mechanisms to facilitate investment within the private sector still need work, however, with relatively few "unsolicited proposals" from the private sector (from the hundreds submitted) actually moving to a delivery phase. Despite this, privately funded civil infrastructure construction is expected to stabilise in 2016/17 at around $20 billion at the national level.

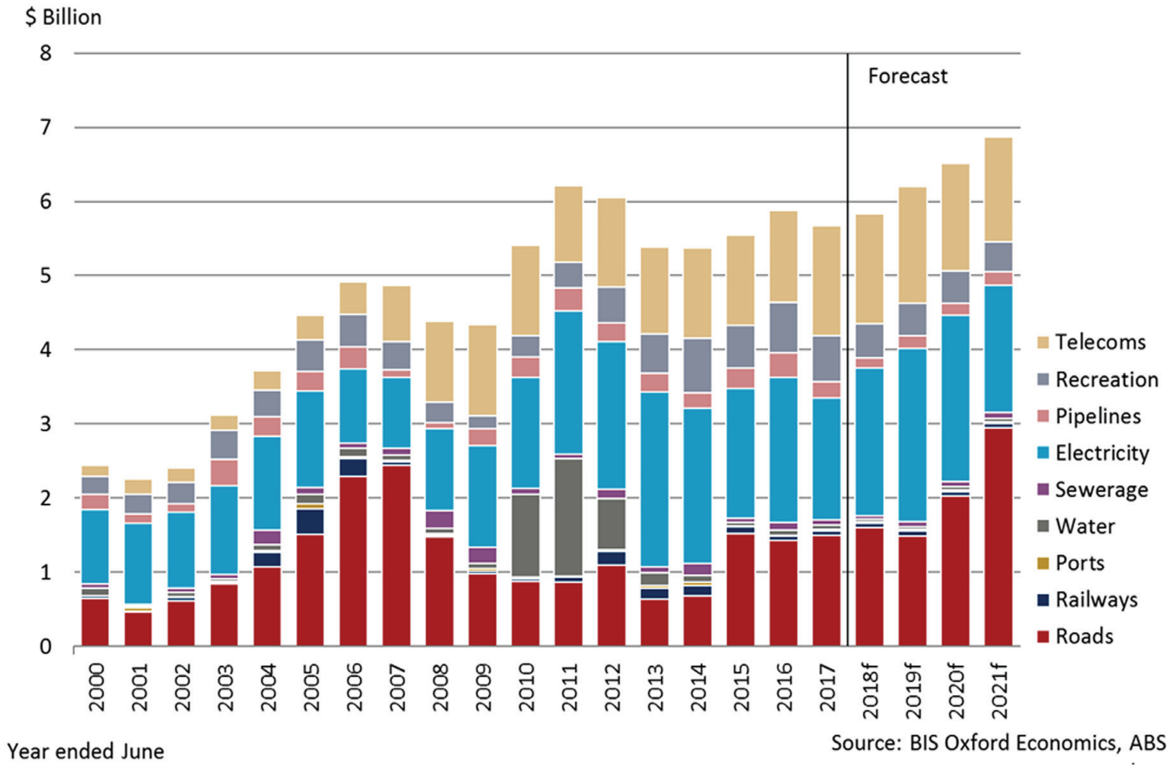
Much of the higher level of privately funded infrastructure construction (compared to the levels of the early 2000s) can be attributed to the long period of privatisation of former publicly held assets (e.g. Telstra, electricity networks and ports). However, BIS Oxford Economics' analysis suggests that the private sector, as with the public sector, is ready to invest more in infrastructure, with key examples being:

- Rapid growth in private investment in renewable energy generation – despite climate policy uncertainty and the prospect of further direct government intervention in the generation market – driven by the speed of technological change (which is improving the fundamental economics of renewable generation) as well as public funding through agencies such as ARENA which is crowding in private capital.

- Another strong cycle in private telecommunications investment – particularly 5G and wireless network investment – which is complementary to the roll out of the National Broadband Network.

[11] http://news.nab.com.au/nab-chairman-ken-henrys-speech-at-ceda/

Figure 3.5 Engineering Construction Work Done (Excluding Mining and Heavy Industry Construction), Private Sector Funded, Victoria, $Billion, 2014/15 Prices
Source: BIS Oxford Economics, ABS data



RISING INFRASTRUCTURE SPENDING BRINGS CAPACITY AND CAPABILITY RISKS – AND NEED FOR PLANNING

As discussed in previous sections of this Report, while total construction activity in Victoria will be sustained at very high levels overall (before easing late this decade as residential building work subsides) relatively stronger growth is anticipated in key infrastructure segments including roads, railways, electricity and (in the near term) telecommunications with the ongoing rollout of the NBN. Furthermore, this experience is not limited to Victoria, with BIS Oxford Economics forecasting rising civil infrastructure construction activity in other states and territories, particularly New South Wales, with new public investment the main driver.

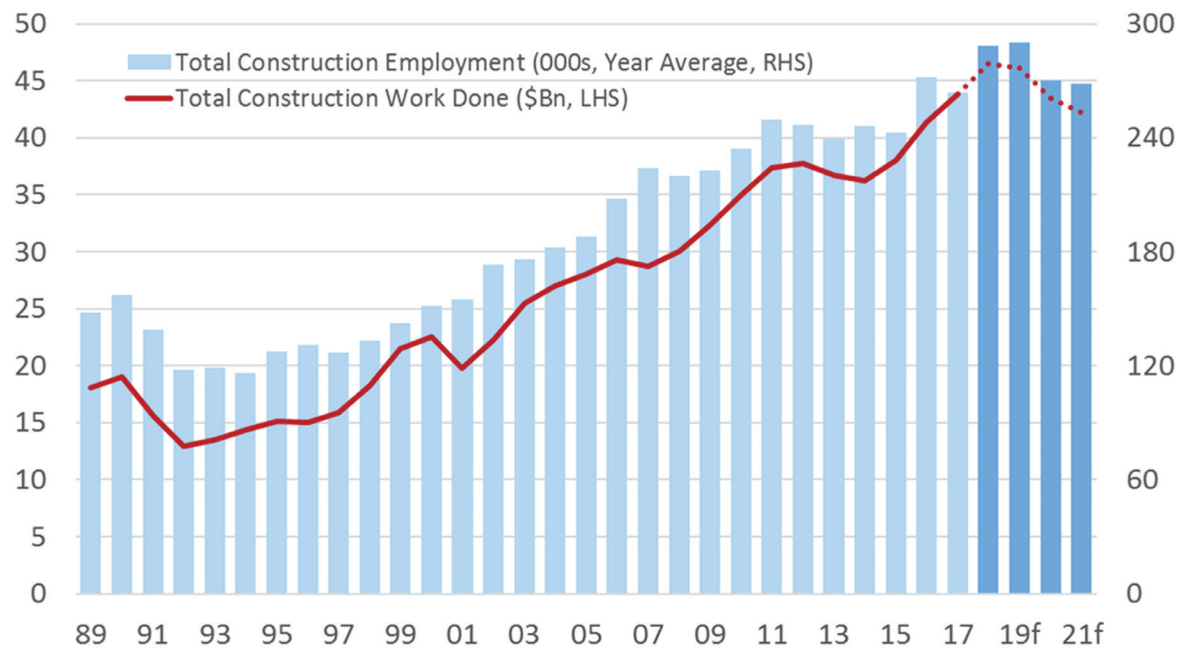
Increasing levels of civil infrastructure investment across Australia is expected, in turn, to increase demands for key materials and skills in the civil construction industry.

In recent years, Victoria's construction industry has mostly (though not entirely) been able to avoid capacity and capability constraints by tapping into spare capacity in skills and equipment from states such as Western Australia and Queensland as the mining investment boom subsided. However, with civil construction activity (excluding oil and gas work) stabilising (and then picking up) in these states over the next five years – and New South Wales civil work expected to remain hot – Victoria will need to implement a range of strategies across construction skills and training, ensuring adequate equipment and materials supply, and developing construction logistics and transport solutions to avoid bottlenecks and constraints in the delivery of work and materials to and from construction sites.

The recent mining boom showed what could happen when construction industry capacity and capability is put under pressure. While civil construction projects embarked on during this period (by both governments and the private sector) were eventually completed, construction costs[12] escalated rapidly as industry and government raced to source scarce skills, materials and equipment. The result was a well-documented blowout in total project costs, major delays in the delivery of projects, and various other failures across both projects and businesses. So, in pushing ahead with an ambitious infrastructure investment program over the next five years, Victoria cannot afford to be complacent with respect to capacity and capability risks. While civil construction cost escalation is still relatively subdued, it is anticipated to accelerate in coming years as civil construction activity rises nationally and supply chain risks are exposed.

Ensuring that Victoria's construction industry has the necessary skills and capability will remain one of the greatest challenges through the next five years. In recent years, total Victorian construction industry employment has risen substantially to meet rising construction demand. From 252,000 persons in mid-2015, construction employment has risen to 290,000 persons as at November 2017, an increase of around 38,000 persons or 15%. However, maintaining this upward trend is likely to prove challenging, particularly given the weakening outlook for residential building (and related skills) through the next five years which has been the key driver of the employment upswing so far.

Figure 3.6 Victorian Construction Activity and Construction Employment
Source: BIS Oxford Economics, ABS data



[12] As evidenced by sharp increases in cost indices such as the ABS Road and Bridge Index and the Engineering Construction implicit price deflator during the period.

Indeed, BIS Oxford Economics anticipates that total construction industry employment in Victoria will decline through the next few years towards a trough of 267,000 persons by 2020/21 as the residential building downswing takes hold. In this respect – and in the context of lower manufacturing employment in the state – it will be vital that skills development programs are in place so that skills can translate within and across industries to support higher levels of civil work.

While Victoria already has a 10% skills guarantee covering employment of apprentices and trainees for all current and future State Government funded projects above $20m, arguably much more could be done to ensure skills are developed and retained in the civil construction industry. This may involve expanding the scope of the existing skills guarantee, considering new re-training initiatives to provide opportunities to those who may be newly unemployed from other industries or other construction segments, and promoting and boosting funding for additional places for civil trades in tertiary institutions to encourage a greater take up of civil trades skills amongst younger people and school leavers.
Given the ageing of the workforce across many civil construction industry occupations, there is an increasing need to highlight the opportunities ahead for civil trades in Victoria, where skills supply will not only be required to meet rising demand, but also to replace many employees reaching retirement age. This, in turn, entails placing a greater value on technical skills in high schools and a higher focus on technical careers.

More broadly, the pressures which are now being brought to bear on the broader construction industry in Victoria provide an opportunity to innovate and create a long term positive legacy for future state development. In planning for infrastructure investment through the next five years, the Victorian State Government and various agencies should consider implementing the following measures:

- **Provide a clearer and more comprehensive long term project pipeline** – including public and private sector projects – to give the civil construction industry the best possible chance of planning for and meeting demands by region across the state.

- **Implement further civil construction workforce development initiatives** to meet demand for key skills through the next five years.

- **Boost transport agency resources to deal with the inevitable disruption to networks** that planned large civil infrastructure projects will bring. This will reduce risks to both construction activity and the broader Victorian economy.

- **Understand potential risks in the supply of local construction materials** and equipment given the pipeline of civil projects planned by the public and private sectors. This can particularly impact on project costs if gaps in materials capacity emerge and, finally,

- **Ensure that the procurement process itself is achieving true and sustainable long term value for money, is competitive, and provides industry opportunities to innovate**. In an environment where there may be constraints to the supply of future skills and materials, it is vital that industry can offer innovative construction solutions that create efficiencies in demand and project delivery.

CONCLUSIONS AND RECOMMENDATIONS

The Victorian economy is set to perform well when compared to other states. However, there is further room for improvement particularly to sustainable growth in demand, employment and incomes.

While government debt has increased substantially in recent years, the cost of servicing this debt has been ameliorated by historically low interest rates. At both the state government and Commonwealth level, there is still much that can be done to boost domestic demand and productivity, with infrastructure investment a potential key plank in transitioning the economy for stronger growth. If investment is focused on projects that make economic sense, there are significant benefits (as measured and recommended by the IMF as well as many other agencies and prominent economists) in taking advantage of low interest rates and economic slack and boosting weak domestic demand and employment through debt-funded productive infrastructure investment. Outside of debt funding, there are other positive approaches to infrastructure funding available including setting up long-term asset leases as well as considering direct private investment proposals (both of which are now benefiting New South Wales and Victorian infrastructure investment).

With a relatively small resources industry, Victoria's has always looked to other industries to drive growth. A core objective of Victoria's long-term economic plan should be to attract business and people into the state by slashing costs of doing business and providing a long-term vision for investment and growth in the industries that are now emerging. This can be achieved through appropriate investment in productivity-enhancing infrastructure, but also through further cuts to business taxes and charges and deregulation where it can be shown to remove disincentives to invest in Victoria. With these perspectives in mind, this Report makes the following recommendations:

A. Developing a Long Term Infrastructure Program

Recommendation 1: Given that the current profile of public and private investment is unlikely to be sustained, the Commonwealth and Victorian Governments should plan to sustain a rolling infrastructure investment program that provides industry confidence and certainty. This should focus on projects with proven productivity benefits.

Recommendation 2: The Victorian Government should engage with industry to develop clear and comprehensive longer-term (15 to 20 year) infrastructure plans, with bipartisan support, with a clear ranking of projects so they can be prioritised or deprioritised according to prevailing economic conditions.

Recommendation 3: Both short term and long term public investment programs should be based on maximising economic benefits through transparent cost benefit analysis (CBA). This, in turn, requires (i) the publication of CBA supporting the public investment decision so it can be rigorously and independently tested, but also (ii) improvement in the quality of the data collected by the Australian Bureau of Statistics (ABS) which form key inputs to the CBA process, particularly surrounding the value of capital stock, investment, construction, construction costs and productivity.

B. Funding Productive Infrastructure

Recommendation 4: While projected to gradually increase over time, interest rates should remain relatively low by historical standards and should not constrain Commonwealth debt funding of productive infrastructure in Victoria.

Recommendation 5: Given the fiscal headroom of the Commonwealth Government, the vertical fiscal imbalance embedded in Commonwealth-State relations, and the relative benefits of using debt to fund productive infrastructure investment, the Commonwealth Government should guarantee the debt of any expanded infrastructure program by State Governments to a defined maximum figure so long as those projects are shown to be productive through the transparent CBA process.

Recommendation 6: The Commonwealth Government should provide five yearly-pooled infrastructure funding to the States and reduce the use of project specific or tied (conditional) s96 grants as outlined by the National Commission of Audit report in 2014.

Recommendation 7: Given relatively successful lease processes in New South Wales, Victoria and South Australia, further long-term asset leases to fund infrastructure investment should be considered – but only after rigorous analysis to demonstrate that the benefits outweigh the costs and those effective regulatory processes are in place.

Recommendation 8: The Commonwealth Government should reactivate its 15 per cent Asset Recycling Initiative to encourage State Governments to fund new productive infrastructure and which compensates for the loss of the future income stream of publicly held assets.

Recommendation 9: The Victorian State Government should further develop policies for encouraging and assessing unsolicited infrastructure investment proposals from the private sector.

C. Boosting efficiency and reducing costs

Recommendation 10: To maximise efficiencies in public infrastructure provision and reduce costs, both the Commonwealth and State Governments should follow through with reforms to the public infrastructure procurement process, as outlined by the Productivity Commission's review in 2014. This includes governments investing more in initial designs; contributing to bid costs where innovation is genuinely in prospect; leaving more of the detailed planning and design to the preferred tenderer (rather than all bidders at the tender stage); getting to a preferred tenderer status more quickly (such as through Early Contractor Involvement procurement models); packaging projects into contract sizes that foster broader competition and a sustainable contracting industry, including SME contractors; and removing unnecessary, duplicative or otherwise inefficient approvals processes or regulations.

Recommendation 11: Procurement policies and approaches should be harmonised across all levels of government within jurisdictions – and, where possible, across jurisdictions – including the use of open (rather than closed) tenders, local content rules, and de-bundling large infrastructure projects to boost competition and the sustainability of the civil construction industry.

Recommendation 12: Commonwealth and State Governments should look to increase funding for infrastructure maintenance as a more cost effective way of sustaining the existing asset stock and reducing future requirements for costly asset replacement.

Recommendation 13: Both Commonwealth and State Governments should continue to make concerted efforts to eliminate structural deficits in their Budgets (which entail borrowing to fund recurrent expenditures across the economic cycle) through wholesale tax and expenditure reforms. This would be assisted, in turn, by improvements in the quality of Budget reporting to better isolate capital and recurrent expenditure items and the degree to which each are effectively funded through debt.

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