

BANKWEST CURTIN ECONOMICS CENTRE

BEYOND THE BOTTOM LINE

Government debt in Australia

Focus on the States Report Series, No.3
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About the Centre

The Bankwest Curtin Economics Centre is an independent economic and social research organisation located within the Curtin Business School at Curtin University. The centre was established in 2012 through the generous support from Bankwest (a division of the Commonwealth Bank of Australia), with a core mission to examine the key economic and social policy issues that contribute to the sustainability of Western Australia and the wellbeing of WA households.

The Bankwest Curtin Economics Centre is the first research organisation of its kind in Western Australia, and draws great strength and credibility from its partnership with Bankwest, Curtin University and the Western Australian government.

The centre brings a unique philosophy to research on the major economic issues facing the state. By bringing together experts from the research, policy and business communities at all stages of the process – from framing and conceptualising research questions, through the conduct of research, to the communication and implementation of research findings – we ensure that our research is relevant, fit for purpose, and makes a genuine difference to the lives of Australians, both in WA and nationally.

The centre is able to capitalise on Curtin University's reputation for excellence in economic modelling, forecasting, public policy research, trade and industrial economics and spatial sciences. Centre researchers have specific expertise in economic forecasting, quantitative modelling, micro-data analysis and economic and social policy evaluation. The centre also derives great value from its close association with experts from the corporate, business, public and not-for-profit sectors.

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Foreword



Beyond the Bottom Line is the third report in the Bankwest Curtin Economics Centre's *Focus on the States* series. The report examines the highly topical and politically sensitive subject of government debt in Australia and seeks to provide a balanced and evidence-based assessment of this hotly contested issue.

Australian government debt is low when compared to other OECD countries, ranked 21 out of 25. Yet the trajectory of government debt in the post-GFC period has been exponential, with Federal public sector debt as a share of revenues climbing to 47 per cent on latest figures – a 15 year high. This can become a burden to the Australian economy, increasing the risk of creditor downgrading and limiting the ability of governments to govern.

Government debt is a growing issue for Australia's states and territories too. Many have seen a marked increase in indebtedness in recent years. South Australia, Victoria and Queensland now record debt to revenue ratios in excess of 50 per cent. Western Australia saw its debt as a share of revenue rising above 50 per cent in 2013, a period which also saw the state lose its AAA credit rating.

The most challenging conditions faced by governments at all levels are caused by a trifecta of sharply declining revenues, large budget deficits and high levels of debt. Revenues typically react quickly to changing economic conditions. However, sticky public expenditures with recurrent commitments locked in over the medium term offer limited scope to turn around spending to react to such changes in revenue. This can lead rapidly to difficulties in balancing government budgets, and where no option exists to pay down debt from surplus cash balances, governments can be forced to consider the sale of assets as a last resort to rebalance the books.

Using the most recent information available from Federal and state budget papers, Australian Bureau of Statistics data and national accounts statistics, the report examines the composition, depth and trajectory of public debt at both Federal and State level. The report poses a series of critical questions: What are the pros and cons of government debt as a policy instrument? What purpose does debt serve? How should debt be most effectively managed across the economic cycle? When is it good economic policy to increase debt? At what level does debt become a problem?

I thank you for your interest in this *Focus on the States* report, and hope the findings are both thought-provoking and illuminating.

A handwritten signature in black ink, appearing to read 'Alan Duncan'.

Professor Alan Duncan

Director, Bankwest Curtin Economics Centre
Curtin Business School, Curtin University

Executive summary

This third report in the Bankwest Curtin Economics Centre's *Focus on the States* series addresses an issue that has provoked intense debate among policy makers, academics and the media – government debt.

The concept of public debt and the importance of contextualising debt within the business cycle are considered. Australia's current and historical debt positions are examined and questions around whether fiscal pressures are stemming from the expenditure or revenue side of the equation explored. How State and Territory governments are faring in respect to levels and changes in indebtedness is examined along with spending on servicing debt.

The precariousness of forward estimates and the success with which the future has been predicted accurately is also examined. International comparisons along with potential debt sustainability options for Australia are explored.

Key findings

Concepts of Public Debt

- Defining and conceptualising public debt is important in order to measure adequately the extent and consequences of public indebtedness, its drivers, and potential policy responses.
- Public indebtedness can be assessed in a number of ways: by type of financial instrument; level and institutional sector of government; and as a share of national income, GDP or government revenue.
- At its most basic, public debt consists of all liabilities that require payment or payments of interest or principal by the government to its creditors.
- Since the Global Financial Crisis, there has been a greater focus on public debt and the adequacy of current debt management controls.
- The IMF recommends that general government gross debt be adopted globally as a headline indicator of a country's fiscal position.

Government Debt and the Business Cycle

- Any discussion of government debt and Australia's fiscal position must be considered relative to the business cycle.
- A rising level of debt should be expected at certain points in the business cycle and may be desirable, particularly in economic downturns.
- The Structural Budget Balance (SBB) adjusts actual and forecast figures for the underlying cash balance to account for variations in key cyclical drivers.
- Using the SBB, a structural deficit indicates that the Federal budget balance is below expectations given the point in the economic cycle.

Key findings (continued)

- Trend growth has declined since the start of the Millennium and is currently estimated at around 2.5 to 2.75 per cent.
- The Australian economy remains below trend even with this downward adjustment to trend real growth.
- Progress towards a surplus by 2019-20 is predicated on average annual growth of 3.5 per cent over the next five years, yet only five of the last 30 quarterly measures of GDP growth from June 2008 have exceeded three per cent.
- Public non-financial corporations constitute a greater share of net debt at the State level compared with the Commonwealth, with the share having increased gradually over time.
- General government sector debt at both State and Commonwealth levels has increased the fastest in the last ten years.
- From 2004-05 to 2013-14, State general government net debt increased from -13 to 16 per cent as a share of revenue.

Australia's current debt position

- Today's public debt represents the accumulation of consecutive budget deficits post-GFC at both Federal and State levels.
- Total Australian public sector debt (at all levels of government) has climbed to a 15-year high of 18.6 per cent of GDP and 46.8 per cent of total revenue.
- Net general government debt as a share of GDP currently sits at around 12.5 per cent and has climbed rapidly from a low of -3.8 per cent in 2007-08.
- The 2014-15 value of Commonwealth general government net debt has been finalised at almost \$239bn.
- Government net debt as a share of revenue has seen the most rapid increase since the GFC, jumping from -15.2 per cent in 2007-08 to 63.1 per cent in the 2014-15 final budget figures.
- Both Commonwealth and State debt positions have deteriorated post-GFC.

- At the Commonwealth level, general government debt has increased by 14 times the amount ten years ago – from 3.6 to 52.1 per cent of revenue.

Debt Servicing - Commonwealth

- The Commonwealth government spent around \$14.5bn in 2014-15 on public debt interest payments, equivalent to around 0.9 per cent of GDP.
- Public debt interest payments, although rising, are nowhere near the 1996-97 high water mark of 7.1 per cent of total revenue (1.7 per cent of GDP).
- Measured as a share of GDP, the 2014-15 stock of public debt in Australia is worth 86 per cent of debt in 1996-97, yet 2014-15 debt interest payments are only 41 per cent of the 1996-97 payments.
- This reflects the fact that the government pays significantly lower rates of interest on its debt now than in the 1990's.

Is it an Expenditure or Revenue problem?

- Government revenue streams can be highly responsive to changes in the economy, but spending is typically more entrenched and harder to adjust quickly.
- Spending cuts are not always desirable in response to an economic downturn.
- The Commonwealth government received \$378.3bn in the 2014-15 financial year - equivalent to 23.5 per cent of national output.
- There has been a decreasing reliance on individual income tax as a source of revenue, shifting from around 14 per cent of GDP to 11 per cent in 2014-15.
- GST revenue increased from 2 to just over 4 per cent of GDP at the time of the ANTS package, and has remained stable until the last five years, easing to a current share of 3.4 per cent of GDP.
- Company tax revenues increased from 4.5 to 7.2 per cent of GDP during the period of economic growth between 2001-02 and 2007-08.
- Company tax revenues have fallen since 2007-08 – apart from a short recovery in 2009-10 - and currently stand at 4.1 per cent of GDP.
- Commonwealth government spending totalled nearly \$418bn in 2014-15, or 26 per cent of GDP – this translates to around \$46,000 per household or \$17,622 for every Australian resident.
- The combination of social security and health spending comprises more than half of all spending.
- Social security spending has decreased over the last 15 years from 38 to 35 per cent of GDP, while health spending has increased.

Predicting the future

- One of the difficulties faced by successive governments in setting fiscal policy has been to predict accurately future revenue and expenditure.
- Tax receipts were consistently underestimated prior to the GFC and consistently over-estimated post-GFC.
- Despite a long-term revenue trend of 23.5 per cent of GDP - and only two periods prior to the GFC where revenues were significantly atypical - consecutive budget projections of future revenues continue to reach for an above-trend target of around 25 per cent of GDP.

How do the States fare?

- Public non-financial corporations play a much larger role at State than Commonwealth level, and are responsible for more net debt given States' borrowing to fund significant capital works investment.
- States are highly dependent on the Commonwealth for revenue in order to meet their spending needs.
- The Commonwealth provides two types of financial assistance to the states: general-purpose grants and specific-purpose payments.
- These two types of grants commonly provide around 45 per cent of the revenue of all states and territories, split roughly equally between the GST funds and tied funding grants.
- Overall public sector debt held by Australia's states and territories has increased over the past decade.
- In 2013-14 public sector debt for all states and territories combined totalled \$111bn – or 7.3 per cent of GDP.

- Queensland's public non-financial sector net debt increased by 90.3 percentage points, from -25.2 to 65.1 per cent of total revenue of the non-financial sector per cent of revenue in the ten years to 2014-15.
- Western Australia has seen a large increase in net debt relative to state revenue, more than doubling from 25.0 per cent to 67.9 per cent in the ten years to 2014-15. This has seen WA move from third to second place in the ranking of net debt.
- Victoria's net debt has increased from 12.1 per cent to 68.4 per cent in the last ten years.
- South Australia increased its public debt from 15.5 per cent to 61.9 per cent of state revenue between 2004-05 and 2014-15.
- Public debt payments relative to state revenue and output have increased for all states and territories since the GFC, with the exception of Tasmania.
- The current debt position of states and territories is not the worst it has been – debt values during the late 1990's were higher than those observed today.
- Victoria and Queensland have experienced considerable growth in public debt transactions relative to state output since the GFC.
- Queensland and the Northern Territory currently have the highest public debt payments relative to total income.
- Spending on public debt interest in Western Australia started from a relatively low point, but has increased from 0.37 to 2 per cent of state revenue between 2007-08 and 2014-15.
- New South Wales has seen spending on debt servicing increase over time relative to revenue; however, this trend started well before the GFC and remains flat compared to other States and Territories.

International Comparisons

- Australia has consistently ranked low by international standards in terms of gross debt levels relative to national output, with the IMF estimating gross debt-to-GDP at just over 30 per cent.
- This compares starkly with the United Kingdom, where gross debt-to-GDP stands at more than 90 per cent.
- Almost all OECD countries have experienced an increase in public debt relative to national output since the GFC, with Switzerland being an exception.
- The margin between gross and net debt in Australia has fluctuated between 10 and 20 percentage points over the past 25 years, increasing over the course of the GFC, but tapering off since.

The Golden Rule

- The Golden Rule is a device that has been invoked at various times in jurisdictions around the world as a guiding principle for the management of public finances.
- The basic premise of the Golden Rule is that the government budget (net of investment) should balance over the course of the economic cycle
- Governments should borrow only to invest – up to a prudent level – and should not use debt to fund recurrent spending commitments.
- It is important to emphasise that golden rule principals should be applied across the course of the economic cycle.
- A budget deficit is acceptable at low points in the economic cycle, and indeed may be necessary to support recovery.

- However, the quid pro quo is for governments to target budget surpluses when the economy is operating above trend, and for these to be used to balance the budget over the full cycle.
 - In Australia, the prescriptions in the Charter of Budget Honesty Act 1998 lays out a number of principals for sound fiscal management. These include commitments aimed at “maintaining Commonwealth general government debt at prudent levels,” “moderating cyclical fluctuations in economic activity” and “managing risks arising from excessive debt”.
 - While Treasury forecasts a return to structural balance by 2018-19, the IMF figures predict a reversal from 2015-16 to reach a structural deficit of nearly 2 per cent by 2018-19.
 - The divergence between these two estimates of Australia’s trajectory towards structural balance from 2015-16 emphasises how important it is to have confidence in future revenue and expenditure forecasts.
 - Looking at the public finance outcomes over the course of the post-GFC cycle from June 2011 to March 2014, it is hard to escape the conclusion that Australia has departed to a greater degree from the fiscal framework provisions of a balanced budget.
- fiscal policy (increased spending around election time); pro-cyclical fiscal policy (increasing spending in boom times relative to taxes), excessive deficits and unsustainable budgetary plans; and intergenerational inequity.
- These biases can have adverse consequences on the economy, creating output volatility and inhibiting growth.
 - A number of countries have embarked upon prescriptive fiscal strategies, often enshrined in a range of accords, formal agreements and legislative measures.
 - Switzerland introduced a debt brake mechanism in 2003 that places a ceiling on government spending.
 - The basic idea of the debt brake is to limit government spending so that it does not exceed structural revenue.
 - Debt brake mechanisms enforce fiscal disciplines during periods of relatively high economic growth.
 - BCEC modelling of a prospective debt brake mechanism for Australia simulates the potential impact of a debt brake for Australia starting the debt brake regime at three points - 2002, 2008 and 2011.
 - Indicative simulations show that a debt brake for Australia from 2002 would have restricted spending during the growth period from 2002 to 2007 and kept the deficit closer to balance over the more challenging economic period from 2008.
 - According to BCEC simulations, a debt brake would have limited the 2014-15 Federal budget deficit to around \$17bn by 2014-15 – a deficit reduction of more than 50 per cent on the actual deficit.
 - Simulating debt brakes is limited by the difficulty in predicting the effects of spending restrictions on economic performance, demand or revenues.

Fiscal Policy Biases and Solutions

- Without measures in place to hold governments to account on their public financial management, the fiscal disciplines required by those governments are likely to be more loosely adhered to.
- Four potential biases exist around government spending and investment decisions, comprising: politically-driven

Introduction

Government debt has been the subject of an ongoing debate among policy makers, the public and the media. It is not unusual for debt to be portrayed as an outcome of reckless government spending and an ongoing inability to balance the annual budget. Others blame insufficient revenues compared to the demands on government spending, or look to unsustainable tax cuts or inequitable tax breaks. Yet increases in government debt are often a result of economic downturns, with spending used as an instrument to inject new life into the economy in the face of receding revenues. While debates are ongoing about the pros and cons of government borrowing and stimulus spending as an intervention, there is a general consensus that if government spending takes the form of productive investment, it will have longer lasting impacts on economic growth (Reinhart and Rogoff, 2010).

The Rudd government under the direction of Treasurer Wayne Swan embarked on a strategy of debt-financed investment at the time of the 2008-09 Global Financial Crisis by introducing a stimulus package. This policy has been heralded as the main reason Australia did not slip into a full recession, with the economy recording only one quarter of negative growth during Mr Swan's tenure as Treasurer. Others have argued that this wasn't so much a consequence of astute fiscal management, but rather the strong financial position bequeathed by the previous government (Alexander 2013), a growing population, rigorous financial regulation, and the protective role of the resources boom and Australia's trade with Asia. Indeed, continued budget surpluses in excess of expectations and bolstered by the mining boom over the decade leading up to the GFC meant that the Rudd government was in a better position to act. But it also took the initiative.

Despite the potential positive effects of moderate government debt on economic recovery, theory and common sense suggest that large amounts of debt pose a significant threat to a nation's wellbeing. Burgeoning debt can create inflationary pressures and also has the potential to crowd out private investment. An obvious problem with government borrowing is that the costs of servicing debt can crowd out other government activity. McKibbin (2011) argues that if debt as a share of GDP increases at a rate that exceeds the interest rate and budgets continue to be in deficit, a debt explosion is inevitable. Federal general government net debt in Australia currently stands at \$238bn according to the most recent budget papers¹. However, a comparison to national growth and the ability to service this debt through revenue is necessary to make anything of this figure.

This report examines the topical and politically sensitive issue of government debt in Australia and seeks to provide a balanced and evidence-based assessment of the issue. The size of the surplus or deficit has become a focal point for commentary on the health and prudent management of public finances at both Federal and State level. Yet the debate is often more political than economic in nature, with judgements made out of context with public policy objectives or prevailing economic conditions. The concept of public debt and the importance of contextualising debt within the business cycle are considered. Australia's current and historical debt positions are examined, as are questions around whether fiscal pressures stem from the revenue or spending side of the equation. The precariousness of forward estimates and whether it is possible to predict the future with sufficient accuracy is also raised. International comparisons are provided and potential debt sustainability options for Australia are explored.

¹ Final Budget Outcome 2014-15, Appendix B: Historical Australian government data and Statement 10, Table 1.

Concepts

of Public Debt

Concepts of Public Debt

Since the Global Financial Crisis, there has been an increasing focus on public debt and the adequacy of current measures.

Adequately defining and conceptualising public debt is an important exercise to undertake in order to sufficiently measure the extent of public indebtedness, its drivers, consequences and potential policy responses. At its most basic public debt is considered to consist of all liabilities that require payment or payments of interest or principal by the debtor to the creditor at a date or dates in the future (ABS 2014). However, there are a number of ways that public indebtedness can be assessed, including by type of financial instrument; level of government (Commonwealth, State, Local, All); primary government activity (General Government, Public Non-Financial Corporations; Financial Corporations); and through various relativities including to national income or product (GNI/GDP) and government revenue. Debt levels can also be assessed using gross or net metrics with the latter a more commonly used measure. An added complication to the measurement is judging which financial instruments are in scope to compile the measure.

Since the Global Financial Crisis, there has been an increasing focus on public debt and the adequacy of current measures. The IMF in their review of public debt measures illustrated the discrepancies that exist across countries due to the absence of standard nomenclature (Dipplesman et al 2012). They revealed that debt-to-GDP ratios can range from 40 to over 100 per cent depending on the definition applied, and put forward suggestions for standard and headline debt indicators. In particular they recommend that

“gross debt of the general government be globally adopted as the headline indicator supplemented by other measures of government debt for risk-based assessments of the fiscal position”.
(Dipplesman et al. 2012 p.3).

The elements of debt measurement that need to be taken into account are discussed further below.

Gross and Net Debt

Net debt is one of the most common measures used to assess public debt in Australia and is considered appropriate as it takes into account the value of financial assets corresponding to the liability in judging the overall financial health of the government balance sheet. A recent review by the IMF has recommended that gross debt be adopted as a global headline indicator to judge longer term solvency, but have also stated the importance of net debt within a suite of measures used to understand a country's level of debt, debt sustainability, and fiscal risks (Dipplesman et al 2012, p.7).

The Australian Bureau of Statistics (ABS) has since undertaken a review of public debt measures, based upon the IMF's recommendations, particularly in relation to debt instruments and the institutional coverage of debt. They have stated that they are in favour of the proposed representation of public debt and the need to broaden the definition of public sector debt on a gross and consolidated basis. It is currently expected that an internationally consistent measure of gross debt will be incorporated in the forthcoming revision of the Australian System of Government Finance Statistics (ABS 2015).

In-scope financial instruments

The type of financial instruments that are included in the measurement of public debt can play a considerable role in the level of debt reported. Australian public sector debt data are currently reported by the ABS under a narrow instrument definition of debt that includes Debt securities, Loans, Special Drawing Rights (SDRs) and currency and deposits (ABS 2014).

Revision of the ABS government finance statistics, based up recent recommendations by the IMF, will broaden the definition of public sector debt on a gross and consolidated basis to include accounts payable, ISSGs² and financial derivatives. These debt instruments will be consolidated across all government subsectors, including Commonwealth, State and Local levels, along with Public Non-Financial and Public Financial Corporations. This expands the instrument coverage to include derivatives, equating the ABS concept of debt with non-equity liabilities.

Relativities

In order to judge the scale of Federal or state debt – and especially to compare the value of debt over time – we need to compare debt levels to some other contemporaneous economic indicator. The two most common headline measures by which to scale debt are output (GDP) and government revenue. Comparisons to GDP output (or GSP for state data) show how the level of debt is tracking alongside economic growth. Debt to GDP ratios are useful in the sense that they allow us to judge the value of debt stock against the overall size of the economy. GDP is also a common scaling factor for other public finance measure such as tax revenues or the budget surplus/deficit.

Comparisons to revenue on the other hand, particularly when taken alongside interest rates, can be indicative of the government's ability to service debt and the potential for debt expenditure to encroach on other public spending components. Strictly speaking, debt is a stock measure while revenue is a flow. Nevertheless, the ratio of debt to revenue provides a useful measure of the potential serviceability of debt for a given interest rate.

Revenue and output are generally highly correlated, but not perfectly so. The two economic indicators can diverge as the underlying structure of the economy changes. For example, Commonwealth government revenues have reduced from just over 47 per cent of GDP at the start of the millennium to around 40 per cent of GDP on current figures.

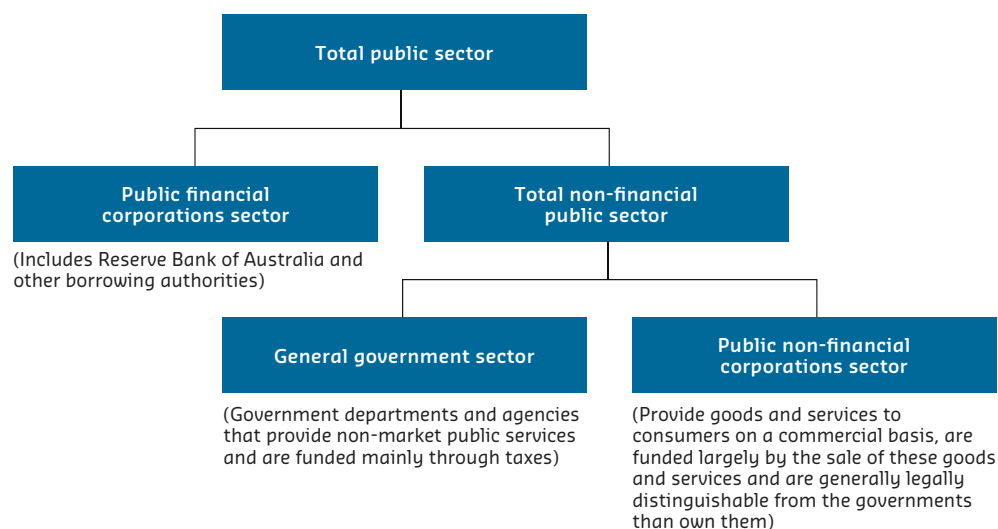
Institutional Sector

Another consideration is the institutional sector that is included when assessing public debt and financial risk. The institutional structure of Australian governments is shown in Figure 1, with the total public sector comprising of non-financial and financial components. Public financial corporations (PFCs) are government owned or controlled enterprises mainly engaged in financial intermediation and include agencies such as the Reserve Bank of Australia and state Treasury Corporations. The non-financial public sector (NFPS) comprises general government (GG) and the public non-financial corporations sector (PNFCs). General government includes government departments that provide non-market goods and services (e.g. roads, hospitals, schools) through revenue from taxes. PNFCs provide market goods and services on a fee for service basis. They include state rail authorities and electricity corporations.

² ISSGs = Insurance, superannuation and standardised guarantee schemes.

Public non-financial corporations play a more significant role in contributing to the overall indebtedness of States compared to the Commonwealth.

Figure 1 Institutional structure of government debt in Australia



Source: BANKWEST CURTIN ECONOMICS CENTRE | Commonwealth of Australia, 2014-15 Federal Budget papers.

The value of public debt across both levels of government and institutional structure, illustrate these differences (Table 1). Total public sector gross debt across all levels of government is valued at \$949bn, whereas net debt is just over \$283bn. Relative to GDP, these amounts are 26.0 per cent and 7.3 per cent respectively. However, when considering total government revenue, the relativities increase to 156.8 per cent and 46.8 per cent.

At the Commonwealth level, General Government debt is more pertinent than liabilities observed in the public financial and non-financial sectors. This is due to the role the smaller role that these two sectors play in delivering quasi-commercial goods and services to the public.

Turning to the States, debt from Public Non-financial Corporations plays a more significant role in contributing to the overall indebtedness, with net debt for all states from PNFC's totalling more than \$100bn in 2013-14. Public Non-Financial Corporations are government owned entities that provide commercial goods and services on a user fee basis and constitute state owned entities such as electricity and rail. As outlined by Makin and Pearce (2014), theoretically PNFC's should operate on a commercial basis in regards to capital expenditure and borrowing, however this is not always the case, with PNFCs receiving substantial subsidisation from general government. These corporations are legally distinguishable from the government, however, lines are not always clearly drawn and ultimately government is responsible for their operations and solvency.

Table 1 Values of debt across levels of government in Australia, 2013-14, by institutional structure

Level of Government			Gross Debt		Net Debt	
	Gross (\$m)	Net (\$m)	% GDP	% Revenue	% GDP	% Revenue
Commonwealth						
General Government	421,463	202,843	27.7	108.2	13.3	52.1
Public Non-financial Corporations	-	4,183	-	-	0.3	1.1
Public Financial Corporations	-	-22,949	-	-	-1.5	-5.9
Non-financial public sector (Cth)	428,849	207,026	28.1	110.1	13.6	53.1
Total Public Sector (Cth)	554,404	184,076	36.4	142.3	12.1	47.2
State						
General Government	171,002	44,503	11.2	61.6	2.9	16.0
Public Non-financial Corporations	-	103,039	-	-	6.8	37.1
Public Financial Corporations	-	-35,928	-	-	-2.4	-12.9
Non-financial public sector (State)	294,705	147,542	19.3	106.1	9.7	53.1
Total public sector (State)	396,446	111,614	26.0	142.8	7.3	40.2
All levels of government - Total public sector	948,915	283,180	62.3	156.8	18.6	46.8

Note: Local governments are included in the All levels of government – Total public sector. Gross debt has been derived from selected liabilities within the government operating statement and should be considered an estimate of the gross level of debt. See Glossary and Technical notes for further information.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations based on ABS Catalogue No. Source: 5512.0 - Government Finance Statistics, Australia, 2013-14.

Government Debt and the Business Cycle

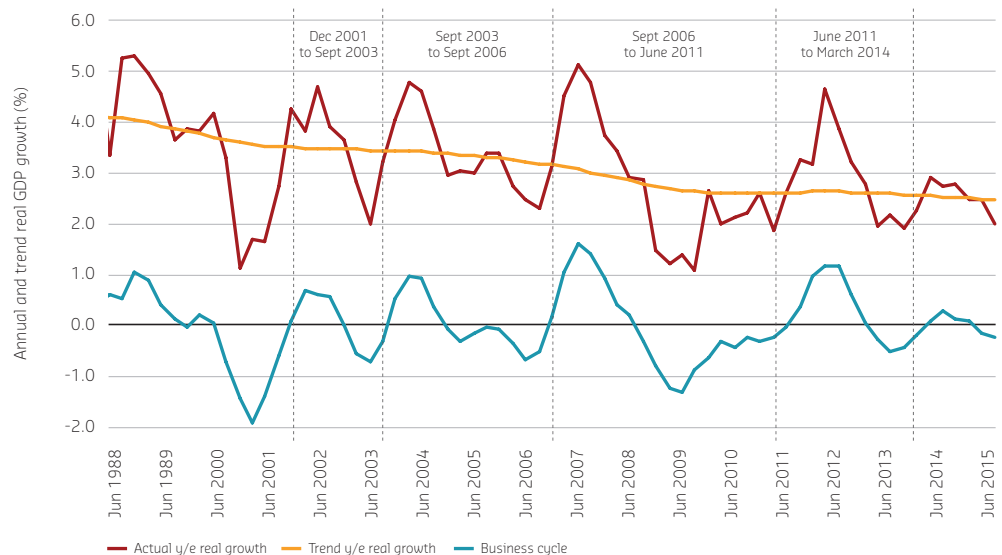
Any discussion of government debt and Australia's fiscal position must consider these elements relative to the business cycle.

Any discussion of government debt and Australia's fiscal position must consider these elements relative to the business cycle. A rising level of debt should be expected at certain points in the business cycle – indeed, it is arguably desirable at certain points in the business cycle to accommodate an increase in the level of debt where economic stimulus is desired/required. To put Australia's current debt position into an appropriate context, it's critical to understand where we stand in the economic growth cycle. Looking back at the history of debt at both federal and state levels, we need to understand whether debt and deficits are a transitory and a natural part of the business cycle or whether or not that debt is structural and systemic in nature.

A number of approaches can be applied to the estimation of trend growth, and to assess whether or not the Australian economy is in structural surplus or deficit. The Federal Treasury publish estimates of the **structural budget balance** (SBB) when assessing Australia's budget position³. The SBB adjusts actual and forecast figures for the underlying cash balance to account for variations in key cyclical drivers of budget balance – principally tax revenues, expenditures and terms of trade. Using the SBB, a structural deficit indicates that the Federal budget balance is above or below expectations given the point in the economic cycle.

In this report, we provide direct estimates of trend GDP growth in Australia, and a projection of the Australian economic cycle (Figure 2). Trend growth is calculated using a long-term smoothed average⁴ of seasonally-adjusted real GDP growth, with growth rates calculated year to date and updated quarterly. The difference between actual and trend growth is used as a representation of the Australian economic cycle.

Figure 2 Actual and trend real GDP growth for Australia, 1998-99 to 2014-15



Note: Annual and trend real GDP growth rates are calculated year to date, updated quarterly. GDP is measured using seasonally adjusted chain volume figures. Trend growth is calculated by applying a Hodrick-Prescott filter to quarterly real GDP data, with a smoothing parameter (lambda) of 1600. Estimates of the (growth) business cycle are produced using a smoothed difference between actual and trend growth, again using a Hodrick-Prescott filter (lambda = 10).
Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations using ABS Cat No. 5206.0.

³ Parliamentary Budget Office (2013), Estimates of the structural budget balance of the Australian Government: 2001-02 to 2016-17. Parliament of Australia.

⁴ Specifically, we apply a Hodrick-Prescott filter to quarterly real GDP data with a smoothing parameter (lambda) of 1600. Estimates of the (growth) business cycle are produced using a smoothed difference between actual and trend growth, again using a Hodrick-Prescott filter with a lambda of 10.

Three findings are worthy of note from the results reported in Figure 2:

Firstly, a straightforward estimation of the long-term path of real GDP in Australia indicates that the trend growth has declined reasonably consistently since the start of the Millennium from around 3.25 to 3.5 per cent between 2002 and 2008, to growth rates post-GFC that have sat more in the 2.5 to 2.75 per cent range. This is consistent with a simple count of GDP growth figures from published national accounts - only five of the last 30 quarterly measures of GDP growth from June 2008 have exceeded 3 per cent, while eleven of the last 30 have exceeded 2.75 per cent and fourteen exceeded 2.5 per cent.

Secondly, the downward adjustment to trend growth occurred over the course of an economic cycle lasting a little over four and a half years from September 2006 to around June 2011 – a period during which Australia endured the adverse impact of the global financial crisis. The data provide some support for the theory that the economy has undergone a structural shift to a new, lower growth trend. We may see the Australian economy return to a higher growth trajectory in future years – certainly the 2015 Federal budget bases its forward estimates of revenue and spending on an assumption of 3.25 per cent GDP growth. However, as shown above these sorts of growth figures have been something of a rarity over the last decade.

Thirdly, the Australian economy remains below trend even with the downward adjustment to trend real growth. The general view among commentators is that it may be two years or more before the Australian economy returns to something near 3.25 per cent GDP growth. A more modest growth target of 2.75 per cent will be reached sooner, but accepting this as the new trend growth figure would require some revision to the Federal government's view of our cyclical position.

BCEC figures lend support to comments from the Reserve Bank of Australia Governor Mr Glenn Stevens about the economy's future potential growth. As recently as June 2015, Mr Stevens suggested that Australia needs to revise the long-held belief that its trend real growth rate sits at between 3 per cent and 3.25 per cent (Stevens 2015). His view was informed by the observation that real growth in gross domestic product has exceeded 3 per cent for only five of the past 30 quarters since June 2008.

This revision to trend growth is important given the assertion in the 2015 Federal budget that the Australian economy will return to surplus in 2019-20.⁵ For the Australian economy to remain on track to surplus may well require average growth rates to remain significantly above the latest trend for the next five years. Progress towards this aim – and specifically the taxation and spending decisions announced in the 2015 Federal budget – have been predicated on average annual growth of between 2.75 and 3.5 per cent over the next five years. Should growth to remain lower than expected, and more aligned to a new trend of 2.75 per cent, there would need to be a downward adjustment to government spending to accommodate lower taxation revenues. We should see this downward adjustment in the 2015 Mid-Year Financial Outlook due to be released in December.

Trend growth has been declining since the start of the Millennium and is currently estimated to be around 2.5 to 2.75 per cent.

⁵ According to Treasury (2015) Commonwealth Budget papers 2015-16 (Budget Paper 1, Statement 3: Fiscal Strategy and Outlook).

Only five of the last 30 quarterly measures of GDP growth have exceeded 3 per cent.

The Australian economy has a long distance to travel to reach the higher growth targets of 3.5 per cent over the forecast period as laid out in the 2015 Federal budget. The “three P’s” - productivity, participation and population - would need to come strongly into play as key drivers of economic growth. There is some comfort to be drawn from better than expected jobs figures for the majority of states. Prime Minister Malcolm Turnbull has also committed to focus on productivity, innovation and the harnessing of new and disruptive technologies as specific targets to underpin Australia’s forward economic trajectory. However, for consistent GDP growth of above three per cent to be a realistic outcome will require a significant reversal of recent trends.

Australia's

current debt position

Introduction

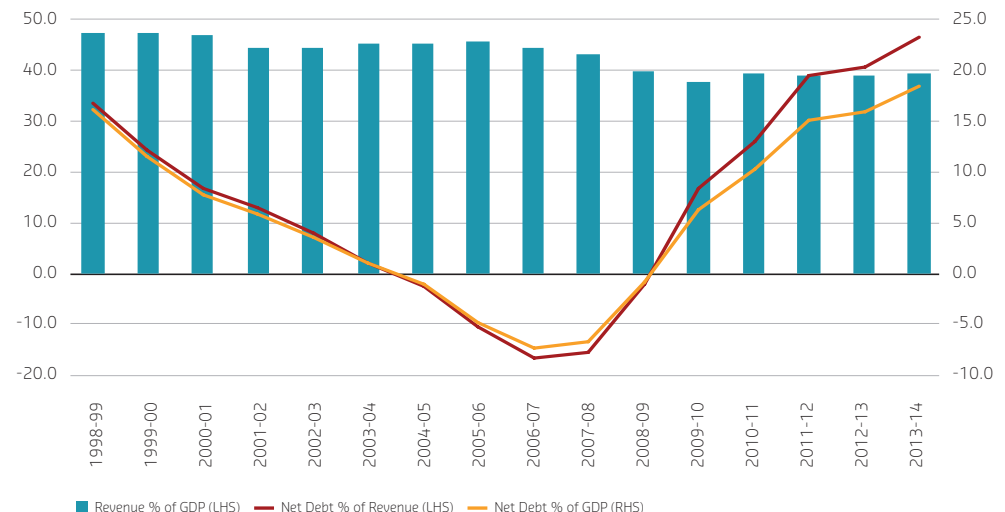
Total Australian public sector debt has climbed to a 15-year high of 18.6 per cent of GDP and 46.8 per cent of revenue.

Government revenue relative to GDP has been falling over the last 25 years – from 47.6 per cent to 39.7 per cent.

Today's public debt represents the accumulation of consecutive budget deficits post-GFC at both Commonwealth and State levels. Prior to the GFC, Australia's strong fiscal position allowed public debt to be paid down using the healthy government budget surpluses earned through most of the Millennium decade up to 2007-08 – a period during which the Australian economy was reaping the rewards of the mining boom and positive terms of trade.

However, the GFC in 2008 and 2009 brought about a sharp reversal in this trend. Since then, total Australian public sector debt has climbed to a 15-year high of 18.6 per cent of GDP and 46.8 per cent of revenue (Figure 3). Similarly high levels were evident in the late 1990s; however this latest period of debt growth is different in at least two respects. First, the speed of growth of public debt over the past decade has been significantly more marked; and second, something of a separation between revenue and GDP relativities has emerged. Net debt as a share of GDP and revenue tracked closely together up until the GFC. Since this time revenue as a proportion of GDP has fallen almost 8 percentage points over the last twenty five years, from 47.6 to 39.7 per cent of GDP. This trend is demonstrated by the divergence between the two relative measures of net debt from 2009-10 onwards.

Figure 3 Net Total Public Sector Debt as a proportion of GDP and government revenue, ALL government levels, Australia 1998-99 to 2013-14



Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14, All levels of government tables.

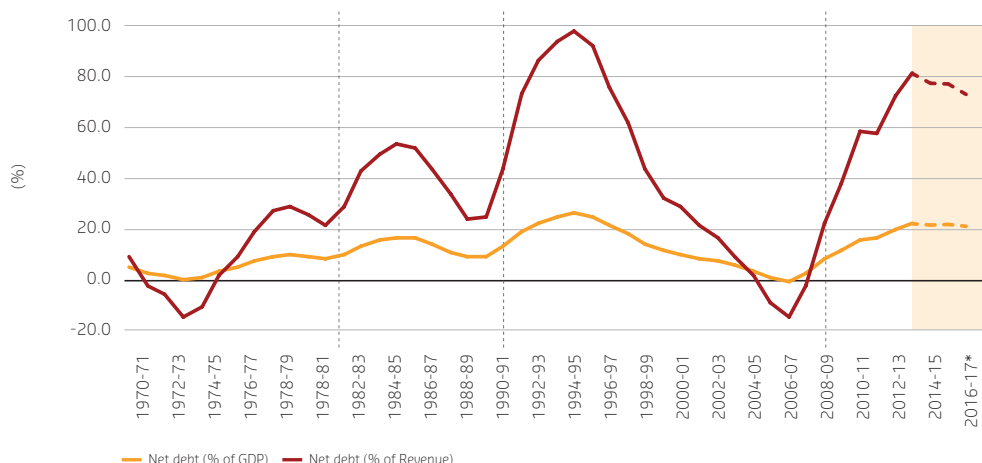
Taking a longer term view, and confining our analysis to the Commonwealth general government sector only, we examine patterns of debt relative to GDP and revenue from 1970-71 to Treasury forward estimates of 2017-18 (Figure 4). As with total public sector debt, Commonwealth general government net debt has been rising at a considerable pace since 2007-08, particularly with respect to revenue. Net general government debt as a proportion of GDP currently sits at around 12.5 per cent and has climbed rapidly from a low of -3.8 per cent in 2007-08. The 2014-15 value of Commonwealth general government net debt has been finalised at almost \$239bn.

Government net debt as a share of revenue has seen the most rapid increase since the GFC, jumping from -15.2 per cent in 2007-08 to 63.1 per cent in the 2014-15 final budget figures.

While both measures remain below those observed in the early to mid-nineties, there is a concern that the serviceability of government debt could become unsustainable if the current trajectory continues. Estimates produced by Federal Treasury maintain that over the next two to three years, this rising trend in net debt will subside. However, history tells us that such projections are wrought with a high level of uncertainty, particularly in relation to GDP and revenue growth.

Both Commonwealth and State debt positions have deteriorated post-GFC.

Figure 4 Net General Government debt as a proportion of GDP and government revenue, Australia 1970-71 to 2017-18



Note: * 2015-16 to 2017-18 are Treasury estimates and projections. Net debt is equal to the sum of deposits held, government securities, loans and other borrowing minus the sum of cash and deposits, advances paid and investments, loans and placements.

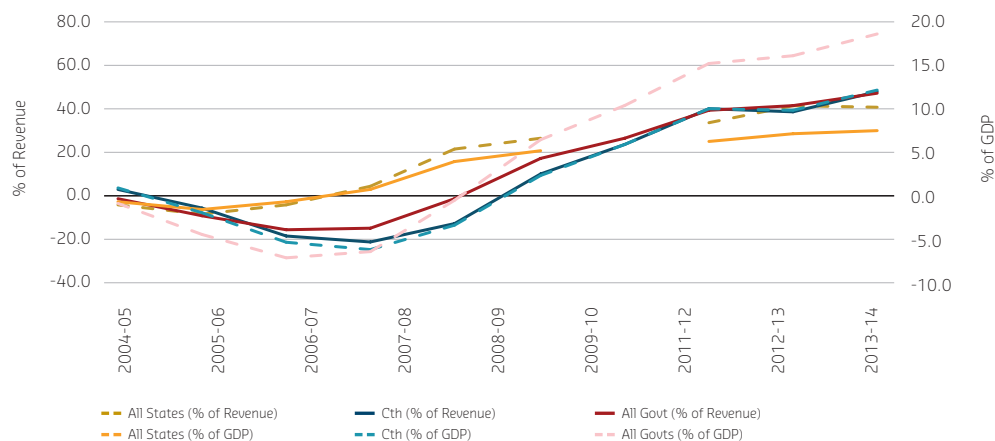
Source: BANKWEST CURTIN ECONOMICS CENTRE | Table B5, Final Budget Outcome 2014-15, Appendix B: Historical Australian government data and Statement 10, Table 1 2014-15 Budget Papers.

Comparing jurisdictions over time, we find that government debt positions at both Commonwealth and State level have deteriorated post-GFC (Figure 5). For the Commonwealth, the shares of net debt as a proportion of GDP and revenue over the post-GFC period have matched relatively closely, even though Commonwealth revenues declined over the period relative to GDP.

State revenue represents a smaller share of GDP, with shares remaining relatively stable over the period at between 18 and 19 per cent. Nevertheless, the divergence remains at the State level, with State net debt as a proportion of GDP increasing at a slower rate compared to net debt relative to revenue.

General Government debt has been increasing the fastest over the last ten years at both State and Commonwealth levels.

Figure 5 Total Public Sector Net Debt as a proportion of GDP by jurisdiction 2004-05 to 2013-14

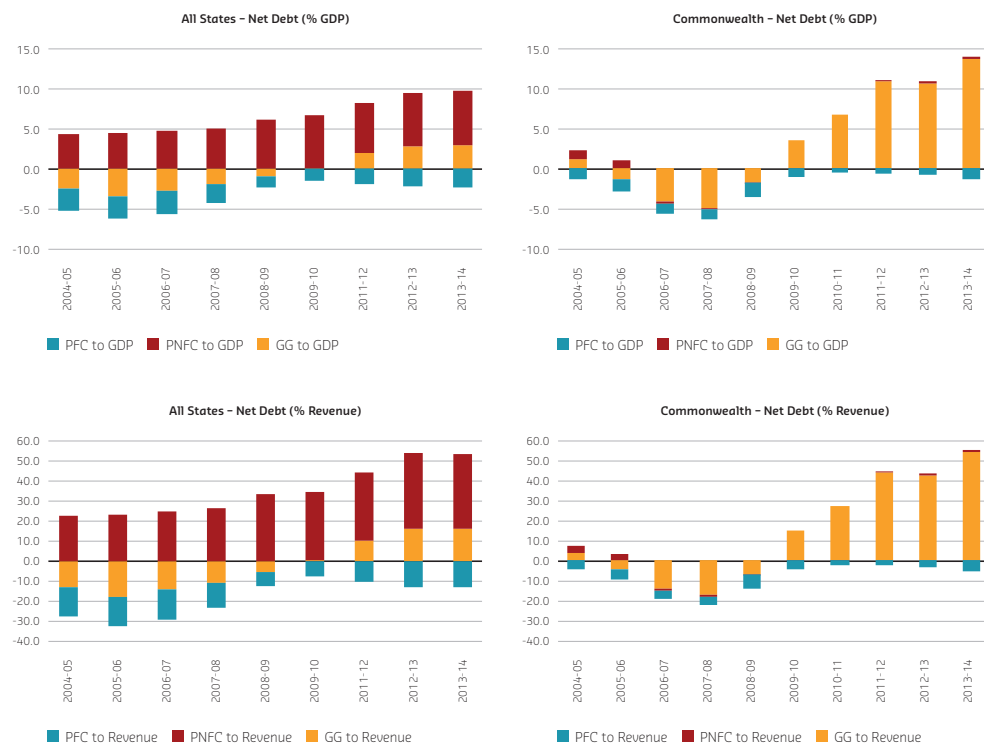


Note: 2010-11 figures were not available for publication from ABS GFS.

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14.

Turning to government institutional structures, the distinction between State and Commonwealth finances when examining debt are apparent and disaggregation is necessary to understand the current position of and potential drivers of public debt (Figure 6). Public non-financial corporations constitute a greater proportion of net debt at the State level compared with the Commonwealth, with this gradually increasing over time. However, General Government sector debt at both State and Commonwealth levels has increased the fastest in the last ten years. Between 2004-05 and 2013-14 State General Government net debt as a proportion of Revenue increased from -13.0 to 16.0 per cent. At the Commonwealth level, general government net debt has increased by 14 times the amount ten years ago – from 3.6 to 52.1 per cent of Revenue.

Figure 6 Public Sector Net Debt as a proportion of GDP and Revenue by Government Sector, All States and Commonwealth 2004-05 to 2013-14



Note: 2010-11 figures were not available for publication from ABS GFS.

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14.

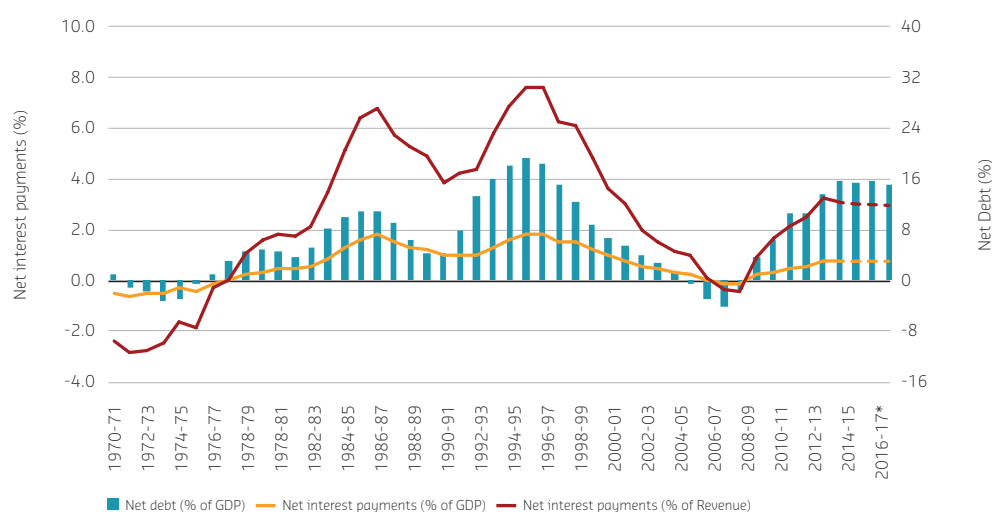
Debt Servicing

The Commonwealth government spent around \$14.5bn in 2014-15 on public debt interest payments, equivalent to around 0.9 per cent of GDP.

The Commonwealth government spent around \$14.5bn in 2014-15 on public debt interest payments, equivalent to around 0.9 per cent of GDP. Net spending on public debt - the difference between government debt interest payments and interest receipts - in 2014-15 came to around \$10.9bn.

To put these payments into some sort of context, Figure 7 shows how spending on net debt interest payments has changed over time. Debt payments are expressed both as a share of GDP, and as a share of total government revenues (the latter providing a more focused measure of debt serviceability). For reference, Figure 7 also reports the value of the stock of net debt as a share of GDP. Net debt interest payments have increased consistently since the GFC, rising from net receipts of around \$1bn in 2008-09 to a net payment of \$10.9bn in 2014-15 (equivalent to 2.9 per cent of total revenues, or 0.7 per cent of GDP). Although public debt interest payments are rising, it is worth noting that current debt payments are nowhere near the 1996-97 high water mark of 7.1 per cent of total revenues (1.7 per cent of GDP).

Figure 7 Net General Government debt interest payments and Net Debt as a proportion of GDP and government revenue, Australia 1970-71 to 2017-18



Note: *2015-16 to 2017-18 are Treasury estimates and projections. Net interest payments are equal to the difference between interest paid and interest receipts.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Table B5, Final Budget Outcome 2014-15, Appendix B: Historical Australian government data and Statement 10, Table 1 2014-15 Budget Papers.

Net debt interest payments are driven by three main components: the accumulated stock of debt; the interest rate (cost of borrowing); and inflation. The greater the stock of debt, or the higher the rate of interest on borrowing, the greater will be the government's debt interest payments.

The Commonwealth borrows by issuing two main types of Treasury bonds - nominal bonds and inflation-linked bonds. Around 90 per cent of Commonwealth government bonds are nominal rather than inflation-linked - the market value of nominal Treasury bonds as at March 2015 was \$375bn, compared with \$38.7bn for index-linked bonds.⁶ The total market value for all Government securities reached \$420.6bn in March 2015.

⁶ The Commonwealth government program for issuing inflation-linked bonds ceased in 2003, but resumed in late 2009 because of the need to finance the growing budget deficit post GFC.

Because most Treasury bonds are nominal rather than index-linked, higher inflation will erode the real value of the existing debt stock and lower real borrowing costs. That said, the more the government issues index-linked rather than nominal Treasury bonds, the less reactive will the value of debt and debt repayments be to inflation.

As a share of GDP, the 2014-15 stock of public debt in Australia is worth around 86 per cent of the 1996-97 debt stock. However, debt interest payments on 2014-15 debt are only 41 per cent of the 1996-97 payments. This reflects the fact that the government is paying significantly lower rates of interest on its debt now than in the 1990's. The current Commonwealth 10 year bond rate is 2.6 per cent (October 2015) compared with a rate of 7.15 per cent in June 1997. The fact that borrowing is relatively cheap means that conditions for public capital investment are good – more so if borrowing is on fixed interest rate terms. However, there is a risk of higher debt interest repayments in the future if the government is holding a significant proportion of its debt on variable rate terms.

The ability of governments to service relatively high levels of debt may be sustainable, but may not necessarily be desirable. At any level of government, structural budget deficits that extend beyond the scope of economic cycles are clearly unsustainable, and undesirable. Borrowing to invest (but not to support recurrent spending) is supportable when the real return on investment exceeds the cost of capital, and adds to the future economic growth trajectory of that jurisdiction⁷. However, there will be a point where interest payments on public debt start to crowd out expenditures on other essential services. This concern motivated the sustainable investment rules invoked in the United Kingdom that constrained total government debt to remain below 40 per cent of GDP at any point in the cycle.

Because most Treasury bonds are nominal rather than index-linked, higher inflation will erode the real value of the existing debt stock and lower real borrowing costs.

⁷ Measuring the true rate of return on public investment is an inexact science at best, and fraught with difficulty. However, a recent report from the Productivity Commission questioned the “efficiency of public infrastructure investment” and argued that public investment in capital infrastructure could be improved (for larger projects in particular) to deliver higher returns to investors [Productivity Commission, 2015].

Is it an Expenditure

or Revenue problem?

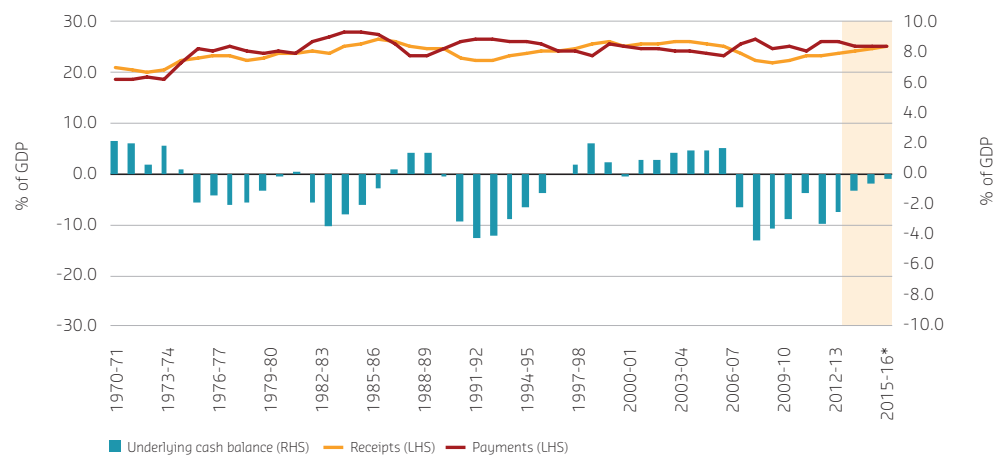
Introduction

Revenue has consistently averaged less than expenditure over the last forty years.

Recent political rhetoric around Australia's fiscal position and rising public debt has focussed on a central question – Does the problem exist on the revenue or expenditure side of the equation? The answer to this question is not necessarily straightforward. As outlined above, accumulation of public debt is perfectly consistent with the prudent management of government finances over the course of a business cycle. Revenue streams that governments are able to draw from to provide public goods and services can be highly responsive to changes in the economy. In periods of high economic growth, taxation revenue often grows faster than predicted while in economic downturns, revenue can contract rapidly. Expenditure on the other hand is more entrenched and often difficult to adjust quickly and may not always be a desirable response to an economic downturn. Further, economic downturns often result in increased expenditure on social security and welfare stemming from job losses and wage decreases.

The interwoven relationship between government receipts and payments over the last 40 plus years is shown in Figure 8. There are more periods where government payments have exceeded receipts over the period, with receipts averaging 23.5 per cent of GDP from 1970-71 to 2014-15, while payments have averaged a slightly higher proportion of 24.2 per cent. There have been a number of periods throughout this timeframe when government payments have significantly exceeded receipts, notably the economic recessions of the early 1980s and 1990s, and again recently in the Global Financial Crisis.

Figure 8 Commonwealth general government receipts, payments and underlying cash balance, 1970-71 to 2017-18



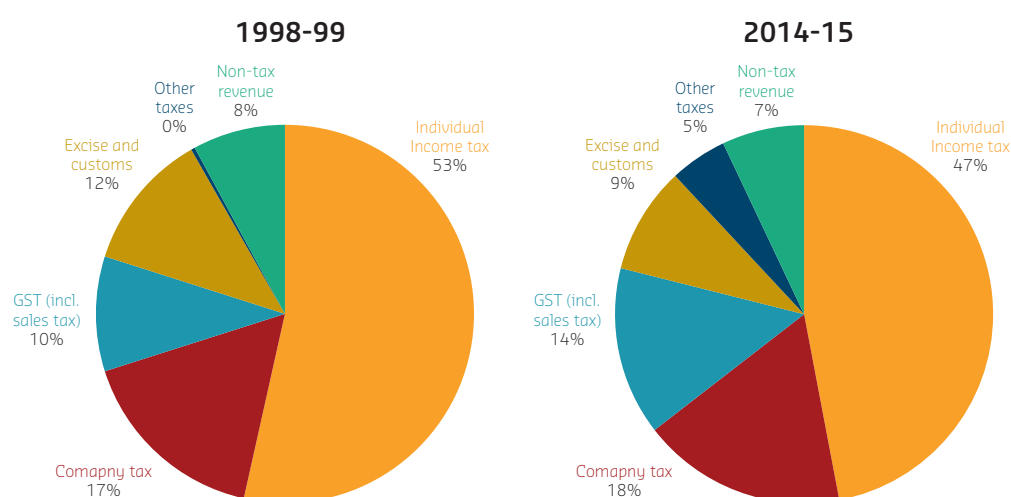
Note: *2015-16 to 2017-18 are Treasury estimates and projections. Receipts are equal to cash receipts from operating activities and sales of non-financial assets. Payments are equal to cash payments for operating activities, purchases of non-financial assets and net acquisition of assets under finance leases. Underlying cash balance is equal to receipts less payments, less net Future Fund earnings.
Source: BANKWEST CURTIN ECONOMICS CENTRE | Table B5, Final Budget Outcome 2014-15, Appendix B: Historical Australian government data and Statement 10, Table 1 2014-15 Budget Papers.

The underlying cash balance (difference between receipts and payments) was at similarly low levels at the height of the GFC in 2009-10 compared to levels experienced in 1992-93 – at around -4.2 per cent of GDP. Improvements in the cash balance since 2009-10 have been observed and in the recent two periods have shifted from -3.1 percent of GDP to -2.4 per cent of GDP. Treasury has estimated a more positive situation over the coming years, with receipts and payments aligning by 2017-18.

Revenue

Governments are heavily reliant upon tax revenue as their principal source of income, with non-tax revenue currently constituting only around 7 per cent of total Commonwealth government revenue (Figure 9). Between 1998-99 and 2014-15 there have been some changes in the composition of revenue sources, most notably a decrease in individual income tax shares – from 53 to 47 per cent; and an increase in sales tax as a source of revenue stemming from the introduction of the GST in July 2000. Goods and services taxes now constitute 14 per cent of total revenue, compared with 10 per cent fifteen years ago. Non-tax revenue and excise and customs duties have declined in importance relative to other revenue streams over the period.

Figure 9 Primary components of Commonwealth government revenue, 1998-99 to 2014-15



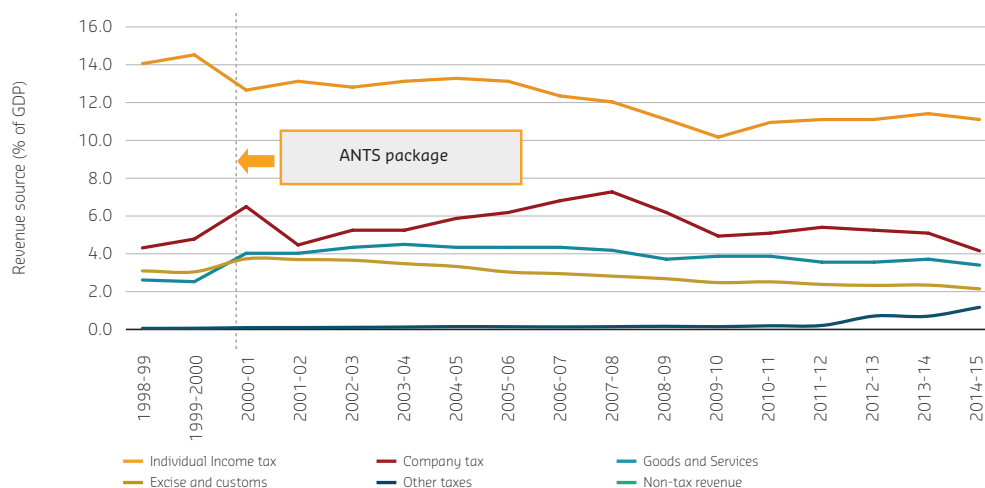
Note: Other taxes consist of taxes on employer's payroll and labour force, taxes on property and taxes on the use of goods and performance activities.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Taxation Revenue components are sourced from ABS Cat No.5506. Non-taxation Revenue is sourced from ABS Cat No.5512.0. Latest figures have been sourced from 2014-15 Treasury Budget papers.

Changes in the strength of revenue components relative to GDP over the last fifteen years illustrate a steadily decreasing reliance on individual income tax, shifting from around 14 per cent of GDP to 11 per cent in 2014-15 (Figure 10). Revenue from goods and service taxes has changed very little relative to national output, increasing from 2 to just over 4 per cent at the time of the ANTS package and remaining relatively stable over the period, easing off somewhat in the last five years to 3.4 per cent. Company tax relative to GDP has fluctuated the most widely, which is expected given the responsiveness of business profits to the economic cycle. A sharp fall in revenue from company tax was observed directly following the two decreases in the company tax rate, taking it from 36 to 30 per cent between 2000 and 2003. Revenue from company taxation increased as the economy began to grow rapidly increasing from 4.5 to 7.2 per cent of GDP between 2001-02 and 2007-08. Company tax revenues fell rapidly as a share of GDP between 2007-08 and 2009-10, followed by a short recovery, but have since declined and currently stands at 4.1 per cent.

The Commonwealth government received \$378.3bn in the 2014-15 financial year and spent \$417.9bn.

Figure 10 Revenue source as a proportion of GDP, 1998-99 to 2014-15



Note: Other taxes consist of taxes on employer's payroll and labour force, taxes on property and taxes on the use of goods and performance of activities.
Source: BANKWEST CURTIN ECONOMICS CENTRE | Taxation Revenue components are sourced from ABS Cat No.5506. Non-taxation Revenue is sourced from ABS Cat No.5512.0. Latest figures have been sourced from 2014-15 Treasury Budget papers.

Values and relativities of Commonwealth general government revenue sources illustrate the heavy reliance on individual income tax (Table 2). The Commonwealth government received \$378.3bn in the 2014-15 financial year, equivalent to 23.5 per cent of national output. This translates to around \$41,600 per household or \$15,953 for every Australian resident. In 2014-15 receipts from individual income tax were more than \$177bn, constituting 47 per cent of all Commonwealth revenue. Company tax is the second highest component at around \$66bn, followed by revenue from the GST, which currently stands at \$54bn.

Table 2 Commonwealth revenue streams, 2014-15

Revenue Area	\$ (m)	Proportion of all revenue (%)	\$ per household	\$ per person	Proportion of GDP (%)
Individual Income tax	177,860	47.0	19,559	7,500	11.0
Company tax	66,174	17.5	7,277	2,791	4.1
GST (incl. sales tax)	54,542	14.4	5,998	2,300	3.4
Excise and customs	34,568	9.1	3,801	1,458	2.1
Other taxes	18,530	4.9	2,038	781	1.2
Non-tax revenue	26,626	7.0	2,928	1,123	1.7
Total	378,301	100	41,600	15,953	23.5

Note: Resident population estimate in 2014-15 is 23,714,000 from ABS Cat No. 3101.0 March 2015. Number of Australian households estimated at 9,093,668 from ABS Cat No. 3236.0, Household and Family Projections, Australia, 2011 to 2036, Table 1.1.

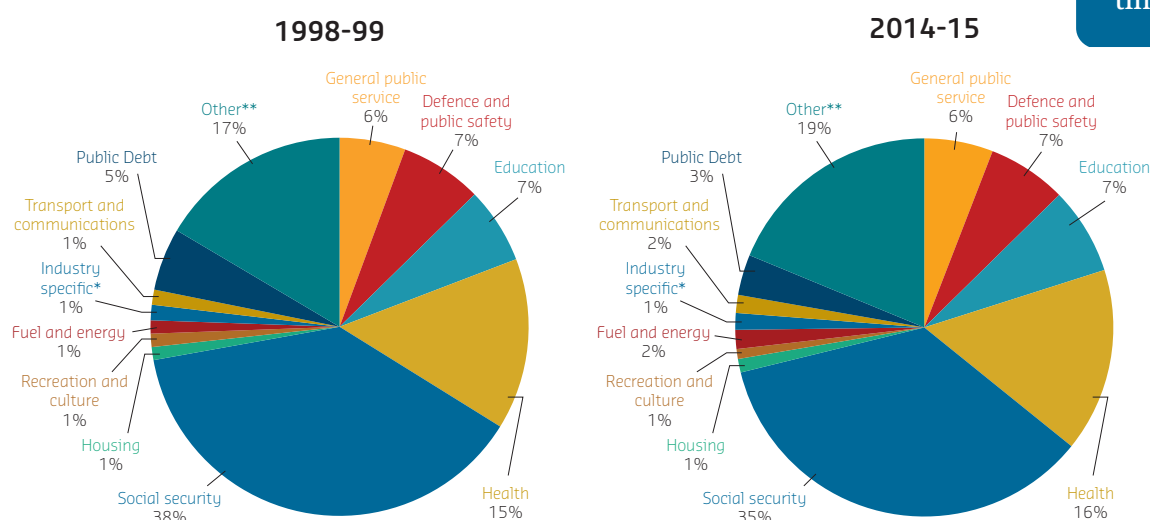
Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14. Latest figures have been sourced from 2014-15 Treasury Budget papers.

Expenditure

The composition of Commonwealth general government expenditure has remained relatively unchanged over the last 15 years (Figure 11). Social security, health and other expenditure remain the big ticket items, comprising more than two-thirds of all expenditure. The expenditure share of social security has decreased over the period from 38 to 35 per cent, whereas other expenditure and health have increased.

Social security expenditure relative to national output has been decreasing over time.

Figure 11 Commonwealth government expenditure by primary purpose, 1998-99 to 2014-15



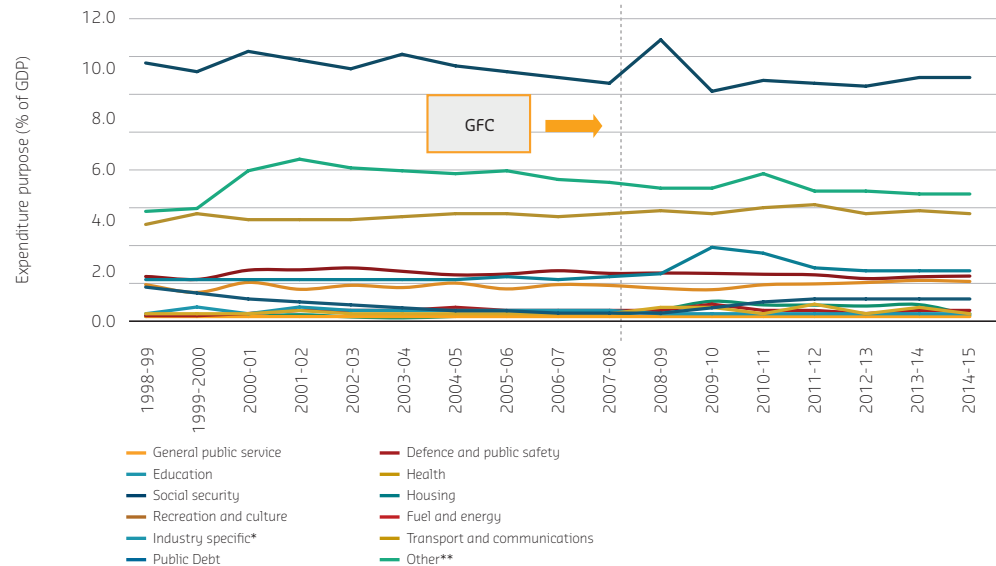
Note: *Includes Agriculture, forestry and fishing and Mining, manufacturing and construction, ** Includes other economic affairs; nominal interest on superannuation and other purposes.

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14. Latest figures have been sourced from 2014-15 Treasury Budget papers.

Changes in expenditure components over the last fifteen years illustrate that most expenditure items have remained relatively flat relative to national output (Figure 12). Social security expenditure is the highest component relative to GDP, however, this has been slowly decreasing over the last fifteen years from around 10 to 9 per cent. A temporary diversion from this trend was observed at the height of the GFC, where social security expenditure increased by \$27bn between the 2007-08 and 2008-09 financial years. Other expenditure, which includes other economic affairs; nominal interest on superannuation and other purposes have also been decreasing over time from around 6 per cent of GDP in 2001-02 to 4.9 per cent in 2014-15. Health expenditure relative to national output has remained relatively stable over the 15 year period at around 4 per cent of GDP.

Expenditure on education relative to national output has been slowly increasing over the period from 1.6 per cent of GDP in 1998-99 to around 2 per cent in 2014-15. A jump in education expenditure was observed in 2009-10 to 2.8 per cent of GDP and continued on to 2010-11. This was largely through increased spending on primary and secondary schools related to the economic stimulus package.

Figure 12 Expenditure purpose as a proportion of GDP, 1998-99 to 2014-15



Note: *Includes Agriculture, forestry and fishing and Mining, manufacturing and construction, ** Includes other economic affairs; nominal interest on superannuation and other purposes.

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat No. 5512.0 - Government Finance Statistics, Australia, 2004-05 and 2013-14. Latest figures have been sourced from 2014-15 Treasury Budget papers.

Table 3 Commonwealth expenditure by primary purpose, 2014-15

Area of Expenditure	\$ (m)	Proportion of all revenue (%)	\$ per household	\$ per person	Proportion of GDP (%)
General public service	24,605	5.9	2,706	1,038	1.5
Defence and public safety	28,233	6.8	3,105	1,191	1.8
Education	31,101	7.4	3,420	1,312	1.9
Health	65,696	15.7	7,224	2,770	4.1
Social security	147,787	35.4	16,252	6,232	9.2
Housing	4,835	1.2	532	204	0.3
Recreation and culture	3,534	0.8	389	149	0.2
Fuel and energy	6,799	1.6	748	287	0.4
Industry specific*	5,961	1.4	656	251	0.4
Transport and communications	6,433	1.5	707	271	0.4
Public Debt	14,491	3.5	1,594	611	0.9
Other**	78,426	18.8	8,624	3,307	4.9
Total	405,949	100	45,519	17,434	26.6

Note: Resident population estimate in 2014-15 is 23,714,000 from ABS Cat No. 3101.0 March 2015. Number of Australian households estimated at 9,093,668 from ABS Cat No. 3236.0, Household and Family Projections, Australia, 2011 to 2036, Table 1.1.

* Includes Agriculture, forestry and fishing and Mining, manufacturing and construction, ** Includes other economic affairs; nominal interest on superannuation and other purposes.

Source: BANKWEST CURTIN ECONOMICS CENTRE | 2014-15 Treasury Budget papers.

Predicting the future

While public revenues can switch quickly in the face of changes to the economic climate, it is typically the case that recurrent public spending decisions are far harder to reverse. One of the difficulties faced by successive governments in setting fiscal policies has been to predict accurately future revenue streams against which to set public spending parameters. These difficulties are further compounded by difficulty in forecasting revenues and spending over the course of the cycle. We can see these issues by comparing spending and revenue out-turns at the Commonwealth level with the forward estimates presented at each Federal budget.

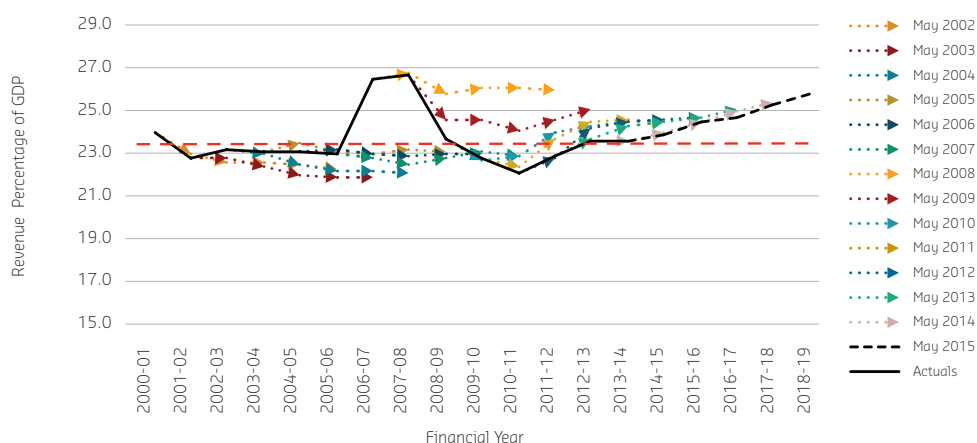
Revenues can be highly responsive to domestic and global economic conditions, and can be challenging to predict. When we compare actual revenues with the forward estimates presented at each Federal budget since May 2002 (Figure 13), we observe that tax receipts were consistently underestimated prior to the GFC, and consistently over-estimated post-GFC. For budgets from May 2002 to 2004 revenue receipt estimates were around one percentage points lower than actual observed receipts, relative to GDP. A large discrepancy between estimates and actuals came about in the lead up to the GFC, where actual values for 2006-07 and 2007-08 were around 4 percentage points higher than budget estimates. These two years of above trend revenue growth and their underlying components were then incorporated into forward estimates in the May 2008 and May 2009 budgets. Despite a long-term average trend of 23.5 per cent of GDP and only two recent periods where the trend was significantly atypical, consecutive budget estimates of future revenue keep reaching for an above trend target of around 25 per cent of GDP.

“Prediction is very difficult, especially if it’s about the future”.

*Nils Bohr,
Nobel laureate*

Tax receipts were consistently underestimated prior to the GFC and consistently over-estimated post-GFC.

Figure 13 Commonwealth Revenue – Actual versus Estimates, 2000-01 to 2018-19

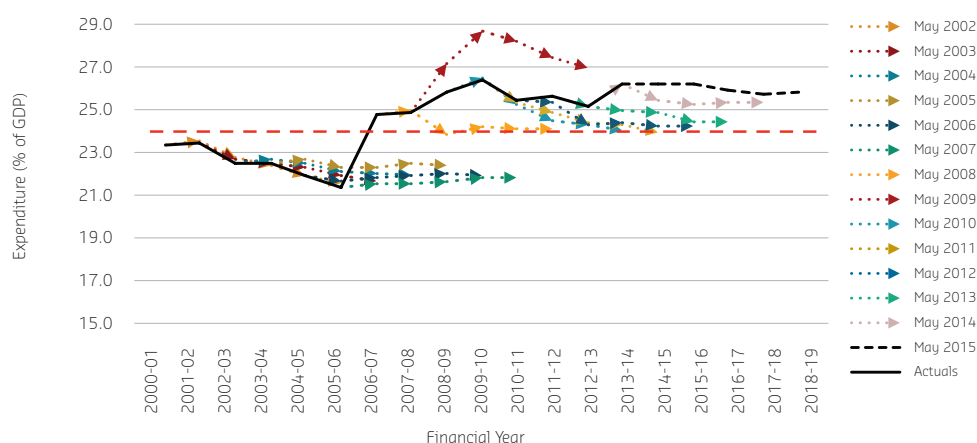


Source: BANKWEST CURTIN ECONOMICS CENTRE | Commonwealth Budget papers.

Any projection of future tax revenues and expenditure over the four year period of forward estimates is highly likely to differ from actual receipts.

One could consider that spending would be easier to predict than revenues, but over the period from 2005-06 through to the period beyond the Global Financial Crisis in 2009-10, successive budgets significantly under-estimated expenses relative to the out-turn (Figure 14). The impact of the stimulus package on the difference between estimated and actual expenditures is evident in the 2008 and 2009 May budgets. Expenditure was underestimated by around 2 percentage points in the May 2008 budget, but overestimated by May 2009. Since the GFC expenditure forecasts have been underestimated by around 1 percentage point. In the May 2015 budget expenditure expectations have been shifted upwards from previous year's estimates, with expenditure as a proportion of revenue currently expected to average around 26 per cent of GDP in the years out to 2018-19.

Figure 14 Commonwealth expenditures – Actual versus Estimates, 2000-01 to 2018-19

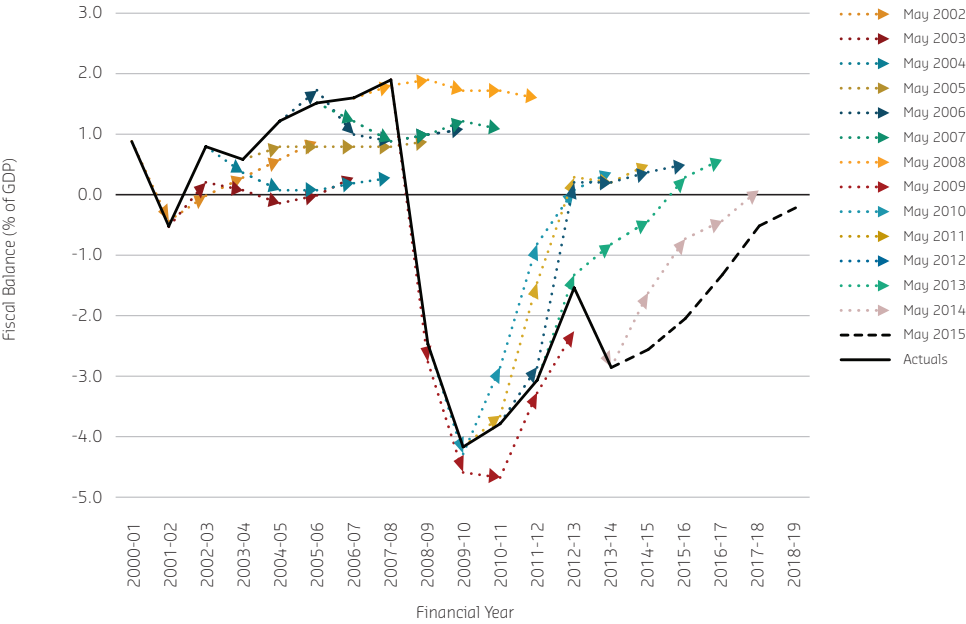


Source: BANKWEST CURTIN ECONOMICS CENTRE | Commonwealth Budget papers.

The outcome of the over and under estimation of expenditures and revenues across Federal budgets from 2002 to 2015 is demonstrated in actual values compared to estimated values of the underlying cash balance shown in Figure 15. The Federal budgets in 2010, 2011 and 2012 consistently attempted to reach the same elusive target of a neutral budget position by 2012-13. This ambitious target attempt from an underlying cash balance position of -4.1 per cent of GDP demonstrates the likely political biases that exist when setting fiscal policy, as a Treasurers current marker of success is the achievement of a budget surplus within a timeframe that is constrained by political cycles. Recent budgets have also been quite ambitious when considering the starting point, with an expectation of a rapid improvement in the underlying cash balance, irrespective of where Australia is positioned within the business cycle.

The central point here is that any projection of future tax revenues and expenditure over the four year period of forward estimates is highly likely to differ from actual receipts. If getting the forecast wrong means that both revenue and expenditure turn out to be different from the forward estimates, then we've been wrong pretty consistently on evidence stretching back to the start of the millennium.

Figure 15 Underlying cash balance – Actual versus Estimates, 2000-01 to 2018-19



Source: BANKWEST CURTIN ECONOMICS CENTRE | Commonwealth Budget papers.

How do

the states fare?

Introduction

States are highly dependent on the Commonwealth for revenue in order to meet their expenditure needs.

Debt is an issue that governments at all levels – national, state, territory and local – must deal with. In this section, we look at state and territory governments (for convenience we often refer to ‘states’ but this normally covers states and territories). State governments are different from the Commonwealth government in dealing with budget, debt and deficit issues in a number of important respects. First, the Commonwealth budget is much larger. Commonwealth revenue and expenditure is between three and four times that of the states and territories combined. For example, in 2013-14, Commonwealth operating expenses were \$414bn, compared to a combined amount for states and territories of \$122bn.

Second, and relatedly, the Commonwealth budget is generally regarded as an important tool of macro-economic policy. Indeed the Commonwealth budget is often framed around the impact which it is forecast to have on economic indicators such as growth, employment and inflation. Through its control over income and company taxes, and of unemployment and welfare payments, the Commonwealth has several ‘automatic economic stabilisers’ that assist in maintaining economic activity during times of economic slowdown, as well as the ability to set tax and spending policies that will impact on the economy as a whole. By contrast, state budgets are much less likely to be framed as tools of economic policy, as state expenditure and revenue is a much smaller share of the total economy. States also do not control the major redistributive revenue and expenditure programs that constitute the automatic stabilisers. However, state government revenues in particular are often subject to large fluctuations due to forces largely outside their control, as they tend to be more narrowly based on the property market or commodity prices.

Third, the states tend to spend a greater amount on net capital investment, reflecting their responsibility for service delivery that involves significant capital works, such as electricity, water and transport. State ‘public non-financial corporations’ accordingly play a much larger role than those at the Commonwealth level, and are responsible for more net debt as they borrow to fund much of their capital works investment. In 2013-14, for example, the states’ net capital investment was \$9.5bn compared to the Commonwealth’s \$3.9bn.

Fourth, the states are highly dependent on the Commonwealth for revenue in order to meet their expenditure needs. Due to a combination of factors, states raise less revenue than they spend, and rely on transfers of funds from the Commonwealth. This is a consequence of Australia’s federal system.

Fiscal Federalism

The Australian federation is highly centralised by world standards. Centralisation has taken the form of increasing Commonwealth involvement and influence in policy matters which were originally regarded as the responsibility of the states.

Perhaps the most important explanation for centralisation is vertical fiscal imbalance (VFI). As is explained below, the Commonwealth collects over 80 per cent of revenues but spends only around half of what it collects for its own purposes. The converse is true for the states and territories, which require funding from the Commonwealth to perform their functions. Under section 96 of the Constitution, “the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.” Over time, the Commonwealth has used this provision to enter new policy areas and influence – if not dominate – more and more policy fields, as well as spending funds directly on purposes such as roads, capital works, and community grants.

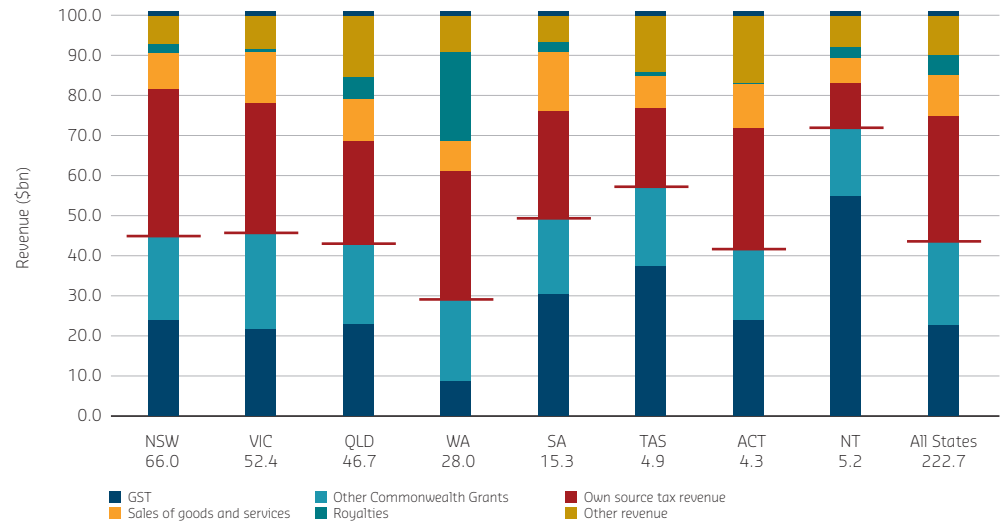
This centralisation process has been facilitated by High Court decisions that have allowed the Commonwealth to enter – and sometimes take over – policy areas that had been preserves of the States. The most important was a High Court decision during World War II that enabled the Commonwealth to monopolise income taxation.

Following that decision, the Commonwealth has had a de facto monopoly over levying income and company tax. Largely as a result, state expenditures have far exceeded income derived from state revenue sources (e.g., royalties, stamp duties, and payroll tax). Subsequent High Court decisions invalidating state and territory taxes on the grounds that they imposed excise duties have exacerbated the situation and restricted the revenue-raising opportunities for states.

The Commonwealth provides two types of financial assistance to the states: general-purpose grants with no strings attached (sourced, since 2000, from GST revenues and distributed to states and territories according to a horizontal equalisation formula recommended by the Commonwealth Grants Commission) and specific-purpose payments (SPPs) under section 96 of the Constitution. These two types of grants commonly provide around 45 per cent of the revenue of all states and territories combined, split roughly equally between the GST funds and the tied grants. SPPs have long been a bone of contention for state governments, which generally regard them as eroding state policy and program autonomy. They also impede their budget flexibility.

However, as the figure below shows, the extent of VFI varies between states, with some being more dependent on Commonwealth funding than others. In 2013-14, the NT relied on Commonwealth funding for around 70 per cent of its revenues, compared to around 30 per cent for WA.

Figure 16 Vertical fiscal Imbalance



Source: BANKWEST CURTIN ECONOMICS CENTRE | COAG Federal Reform of the Federation White Paper, p.31.

WA's share of funding from the Commonwealth is low primarily because its GST share has been falling due to the application of the horizontal fiscal equalisation (HFE) formula set by the Grants Commission, which aims to offset differences between each state and territory's revenue raising capacity and expenditure needs. As WA's mining royalty revenues increased over the past decade, WA's share of GST fell. As royalty revenues fall, WA's GST share will rise. However, there is a lag in assessing and applying the GST payments which means that currently, WA has been experiencing falling revenues from both GST and royalties.

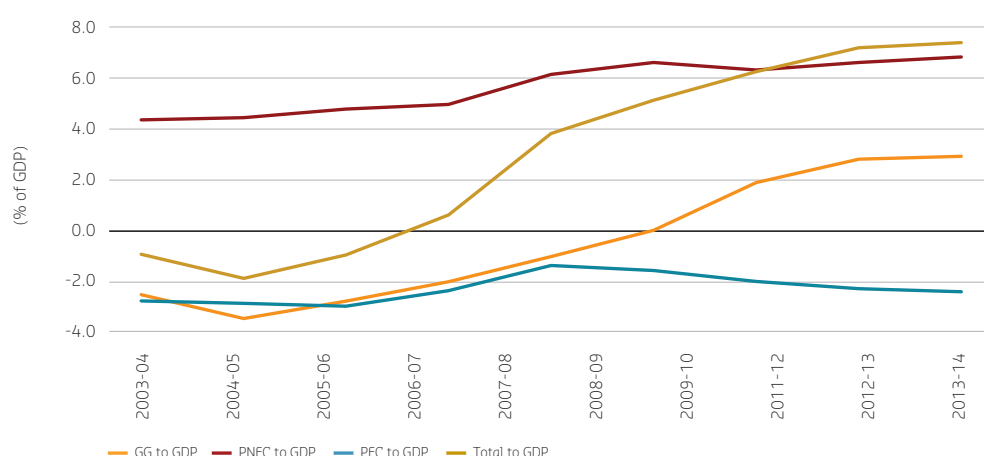
Net debt across the States

There is no universal agreement on the most appropriate debt measure which states should target. Gross debt, net debt, net worth, and net debt as a proportion of GSP or as a proportion of revenue, and net interest payments as a proportion of operating expenses, are just some of the options. There is also the question of whether the general government sector (most departments and agencies which depend on consolidated revenue) or the broader public sector which also includes public corporations, is more appropriate. Below, we mainly consider net debt and the public non-financial sector, which includes general government and public non-financial corporations.

Overall public sector debt held by Australia's states and territories has been increasing over the past decade. In 2013-14 public sector debt among State and Territories totals \$111bn – or 7.3 per cent of GDP (Figure 17). The Non-Financial Public Sector and in particular General Government has seen the biggest increase in public debt post-GFC, from -3.4 to 2.9 per cent of GDP. When assessing State net debt against revenue, an increase from -4.8 per cent of total state revenue in 2004-05 to 40.2 per cent in 2013-14 is observed (Figure 5).

In 2013-14 public sector debt among State and Territories totalled \$111bn – or 7.3 per cent of GDP.

Figure 17 All State and Territory government net debt as a proportion of GDP, by institutional sector, 2004-05 to 2013-14



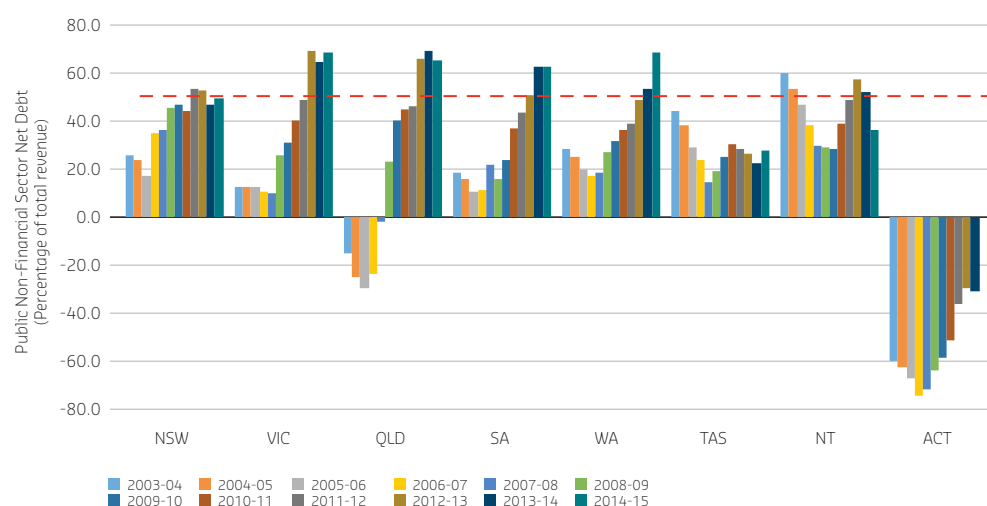
Note: 2014-15 values were not available for all government institutional sectors within state budget papers. 2010-11 figures were not available for publication from ABS GFS.GG = General Government, PNFC = Public Non-Financial Corporations, PFC = Public Financial Corporations, Total = Combined sectors. See Glossary and Technical Notes for further detail.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates from ABS Cat No.5512.0 – Government Finance Statistics, Australia 2013-14 and state and federal Budget papers.

The ratio of government debt to revenue is often used as an indicator for international creditor ratings. A general rule of thumb that many governments follow is that debt to revenue ratios above 50 per cent could see confidence in an economy falter and ratings downgraded. At a national level, Australia has managed to maintain its triple-A credit rating despite debt to revenue ratios recently exceeding 50 per cent. However, Goldman Sachs has warned that Australia's gold star rating is at risk (Scutt 2015).

The country's top performer – Western Australia – has experienced such a fall, with its AAA rating downgraded to AA+ in September 2013, a period that also saw the state's debt to revenue ratio exceed 50 per cent (Figure 18). Over the last ten years, net government debt as a proportion of total revenue has increased across all state and territories, following a similar path to that of the Commonwealth. Some states have increased at a faster rate than others, particularly post-GFC. South Australia, Victoria and Queensland have seen net debt increases outpace the rest of the state and territories in recent times, with all three states well above the 50 per cent mark when considering public non-financial sector debt.

Figure 18 State and Territory Public Non-financial Sector Net Debt as a proportion of total revenue, Australian states and territories, 2003-04 to 2014-15



Note: Government net debt is defined here as the total of general government and public non-financial corporations net debt. Total revenue is the sum of GFS general government and GFS public non-financial corporation revenues. 2014-15 figures for the Public Non-Financial Sector were not available for the ACT.
Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates from ABS Cat No.5512.0 – Government Finance Statistics, Australia 2013-14 and state and federal Budget papers.

Changes in State rankings of public non-financial sector net debt relative to State revenue reveal some large shifts over the last ten years (Table 4). Queensland net non-financial public sector debt has increased by 90.3 percentage points, from -25.2 per cent to 65.1 per cent of revenue in the ten year period to 2014-15. This has seen Queensland shift its ranking from seventh to third place in terms of its level of net debt among Australia's states and territories.

Western Australia has also seen a large deterioration in its level of PNFS net debt relative to state revenue, more than doubling from 25.0 per cent to 67.9 per cent in the ten year period. This has also seen the state move from third to second place in its ranking.

Victoria has also seen a considerable worsening in PNFS net debt with respect to the states revenue, moving from sixth to first place, and net debt increasing from 12.1 per cent to 68.4 per cent in the last ten years. South Australia has increased its public

debt, from around 15.5 per cent to 61.9 per cent of state revenue between 2004-05 and 2014-15.

New South Wales has dropped from fourth to fifth place, with PNFS net debt relative to state revenue increasing by 26.1 percentage points. The Northern Territory and Tasmania have seen strong improvements in their overall net debt position relative to revenue. The Northern Territory has moved from first to sixth place in the last ten years and net debt has fallen from 53 to 35.7 per cent of revenue. Tasmania has moved from being ranked second to seventh among state and territories, with PNFS net debt reducing from 37.6 to 27.1 per cent of state revenue.

Table 4 State rankings of Public Non-Financial Sector Net Debt as a proportion of Revenue, 2004-05 to 2014-15

State	Public Non-Financial Sector Net Debt (% Revenue)		Change in PNFS Net Debt as a % of Revenue (Percentage point)	State Ranking of net debt as a % of Revenue		
	2004-05	2014-15		2004-05	2014-15	Change
NSW	23.2	49.3	-26.1	4	5	-1
VIC	12.1	68.4	-56.3	6	1	5
Qld	-25.2	65.1	-90.3	7	3	4
SA	15.5	61.9	-46.4	5	4	1
WA	25.0	67.9	-42.9	3	2	1
Tas	37.6	27.1	10.5	2	7	-5
NT	53.0	35.7	17.3	1	6	-5
Commonwealth	6.8	65.5	-58.7			

Note: Public Non-Financial Sector combines General Government and Public Non-Financial Corporations. See Glossary and Technical Notes for further detail. 2014-15 figures for the Public Non-Financial Sector were not available for the ACT.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates from ABS Cat No.5512.0 – Government Finance Statistics, Australia 2013-14 and state and federal Budget papers.

Queensland has increased its net debt relative to revenue to 65.1 per cent in the last ten years, a change of 90.3 percentage points.

Changes in State rankings of public non-financial sector net debt relative to each states output (gross state product) are shown in Table 5. Overall, the net debt position of all states and territories has deteriorated over the last ten years to 2014-15. Queensland experienced the greatest deterioration, from a positive net debt position relative to state output of -2.3 per cent, to a negative position of 12 per cent in the last ten years. This shift has also seen Queensland ranked first among states and territories in 2014-15 in terms of their net debt position relative to state output.

Starting from a relatively low PNFS debt position of 1.4 per cent of state output, Victoria has seen a marked increase in public sector debt, which has increased to 10.2 per cent according to the states latest budget papers. South Australia and New South Wales have followed similar patterns over the last ten years, with PNFS net debt increasing rapidly.

Tasmania has fallen four places in terms of rankings, however this does not mean that their current debt position has improved substantially, but rather how rapidly other state positions have worsened. Net debt as a proportion of gross state product actually improved from 8.6 per cent to 8.3 per cent over the ten year period.

The Northern Territory was ranked first in terms of the PNFS net debt position in 2004-05, however, ten years on the territory has fallen back to fourth place and net debt relative to output has fallen in the last ten years.

Western Australia's PNFS net debt position relative to gross state product has also deteriorated considerably, doubling from 5.2 per cent of GSP in 2004-05 to 11.3 per cent in 2014-15. This shift has also seen Western Australia's ranking increase from third to first place.

Table 5 State rankings of Public Non-Financial Sector Net Debt as proportion of Gross State Product, 2004-05 to 2014-15

State	Public Non-Financial Sector Net Debt (% GSP)		Change in PNFS Net Debt as a % of GSP (Percentage point)	State Ranking of net debt as a % of GSP		
	2004-05	2014-15		2004-05	2014-15	Change
NSW	3.1%	7.5%	-4.5%	4	7	-3
VIC	1.4%	10.2%	-8.8%	6	5	1
Qld	-2.3%	12.0%	-14.3%	3	1	2
SA	2.5%	11.1%	-8.6%	5	3	2
WA	5.2%	11.3%	-6.0%	3	2	1
Tas	8.6%	8.3%	-0.3%	2	6	-4
NT	12.7%	10.9%	-1.8%	1	4	-3
Commonwealth	1.3%	11.8%	-10.5%			

Note: Public Non-Financial Sector combines General Government and Public Non-Financial Corporations. See Glossary and Technical Notes for further detail. 2014-15 figures for the Public Non-Financial Sector were not available for the ACT.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' estimates from ABS Cat No.5512.0 – Government Finance Statistics, Australia 2013-14 and state and federal Budget papers.

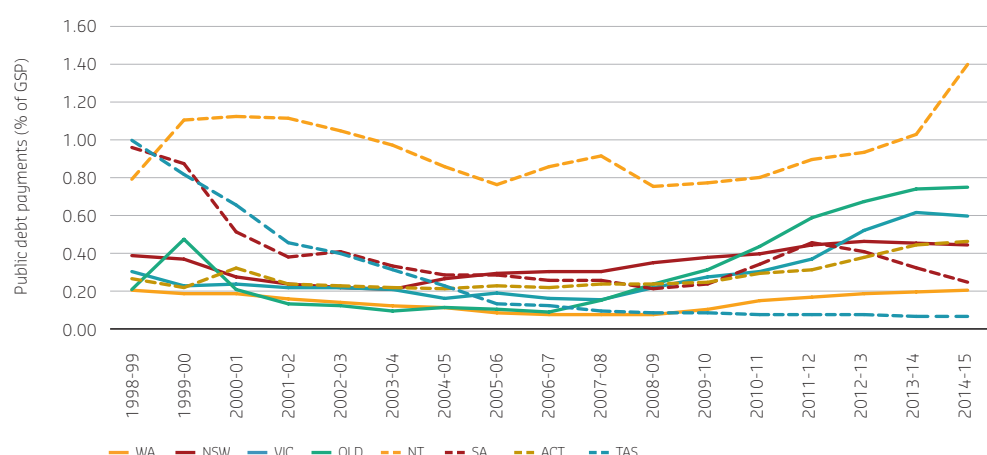
Debt servicing across the States

Public debt payments consist of interest payments and expenses for government loans and can be considered an indicator of the debt burden of states and territories. Ratios of general government public debt payments as a percentage of gross state product between 1998-99 and 2014-15 are presented in Figure 19.

Notwithstanding the differences between state and territories, a general trend can be seen that since the GFC expenditure on public debt has been increasing. While the ratios for Victoria and Queensland have been increasing rapidly, Western Australia and New South Wales have experienced more moderate increases. Another interesting observation is the high rate of public debt payments relative to GSP for Northern Territory, which currently stands at around 1.4 per cent of the Territory's output. This is equivalent to \$316 million in 2014-15.

After almost a decade of relatively constant ratios of public debt expenditure, since 2008-09 Victoria and Queensland's public debt payments increased significantly and currently stand at 0.59 and 0.75 per cent of state product respectively. Tasmania is the only state where public debt payments have fallen throughout the last fifteen years relative to state product.

Figure 19 State Public Debt payments as a proportion of GSP, 1998-99 to 2014-15



Note: Public Debt payments consists of: interest payments and expenses for underwriting and floating government loans which includes interest on government securities or under special credit arrangements with other countries and excludes administrative costs of public debt management.

Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat 5512.0 and ABS 5220.

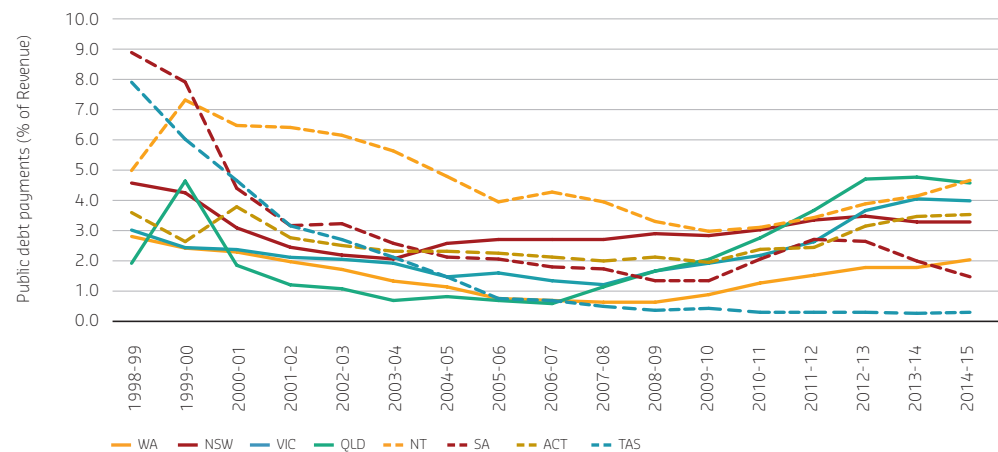
We see similar trends when looking at public debt payments as a share of state total revenues (Figure 20). These shares are greater than debt payments relative to GSP simply because total revenues are a fraction of the full value of state output. Nevertheless, the measure is arguably more appropriate as an indication of the resources available to service state debt.

Public debt relative to state revenue have increased for all states and territories since the GFC, with the exception of Tasmania. However, the current position of states and territories is not the worst it has been, with values at the end of the 1990s typically higher than those we observe today.

Victoria and Queensland have experienced considerable growth in public debt payments relative to state output since the GFC, however, the rate of growth has since come off and looks to be decreasing according to the latest budget figures. Queensland currently has the highest public debt payments relative to state income, equal with the Northern Territory.

Spending on public debt in Western Australia, while starting from a relatively low point has increased markedly from 0.37 to 2 per cent of the state's revenue between 2007-08 and 2014-15. New South Wales have also seen debt servicing payments increase over time as a share of revenue. However, this trend started well before the GFC and remains relatively flat when compared to other states and territories.

Figure 20 State Public Debt payments as a proportion of Revenue, 1998-99 to 2014-15



Note: Public Debt payments consists of: interest payments and expenses for underwriting and floating government loans which includes interest on government securities or under special credit arrangements with other countries and excludes administrative costs of public debt management.
Source: BANKWEST CURTIN ECONOMICS CENTRE | ABS Cat 5512.0 and ABS 5220.0.

International comparisons

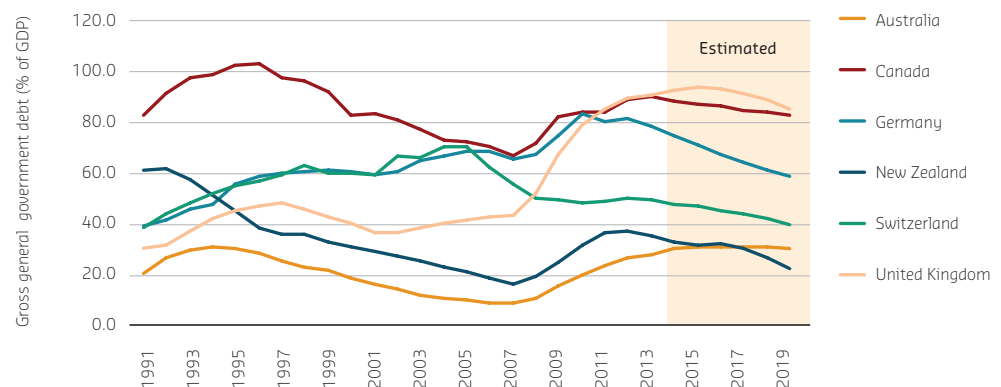
Introduction

Australia has consistently ranked low among OECD countries in terms of both gross and net debt levels.

International comparisons are often used to assess public debt levels and fiscal sustainability. Taking into consideration the limitations of national comparisons of public debt outlined earlier, here we assess Australia's debt position compared with selected OECD countries – Canada, Germany, New Zealand, Switzerland and the United Kingdom. These countries currently have in place debt stabilisation policies, many of them recently established or revised to contend with the aftermath of the GFC.

Among these countries, Australia has consistently ranked low in terms of gross debt levels relative to national output, with the International Monetary Fund estimating gross debt-to-GDP at just over 30 per cent (Figure 21). This compares starkly with the United Kingdom, where gross debt-to-GDP stands at more than 90 per cent. The Institute for Fiscal Studies has noted that the United Kingdom have achieved only 12 budget surpluses since 1948 and have suggested that “budget surpluses are not a prerequisite for a successful economy” (IFS 2015). However, the GFC has demonstrated just how exposed the UK was to external shocks, with gross debt doubling within a five year period. This rapid increase in public debt saw the UK Treasury quickly abandon its sustainable investment rule that capped debt to GDP at 40%. Canada and Germany also have high gross debt rates stemming from the general government sector – around 86 and 70 per cent respectively, with rates expected to fall over the coming years.

Figure 21 Gross General Government debt as a proportion of GDP, selected OECD countries, 1991-2019



Note: Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus, all liabilities in the GFSM 2001 system are debt, except for equity and investment fund shares and financial derivatives and employee stock options. Debt can be valued at current market, nominal, or face values (GFSM 2001, paragraph 7.110). Estimates commence at 2013.

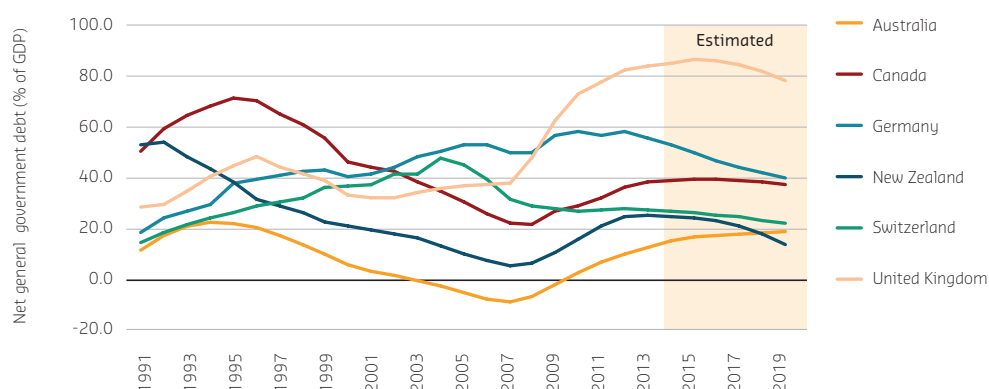
Source: BANKWEST CURTIN ECONOMICS CENTRE | International Monetary Fund, World Economic Outlook Database, April 2014.

An interesting observation is that all selected countries have experienced an increase in public debt relative to national output since the global financial crisis, with the exception of one - Switzerland. Instead, Switzerland's gross public debt trajectory has been declining since 2004, from around 70 to 47 per cent of GDP. This incongruence is likely to be linked closely with the Swiss' implementation of a prescriptive debt stabilisation policy – “Schuldenbremse,” which was enacted in 2003. Germany has also since initiated a more rigid fiscal policy that seeks to contain public debt within prescribed parameters.

Unsurprisingly, general government net debt follows a similar pattern to gross debt relative to national output, with financial assets related to the debt offsetting magnitudes (Figure 22). This is the case for most countries, with the exception of the United Kingdom, where little difference exists between gross and net debt levels proportionate to GDP (Figure 23).

All selected OECD countries have experienced an increase in public debt relative to national output since the GFC except Switzerland.

Figure 22 Net General Government debt as a proportion of GDP, selected OECD countries, 1991-2019

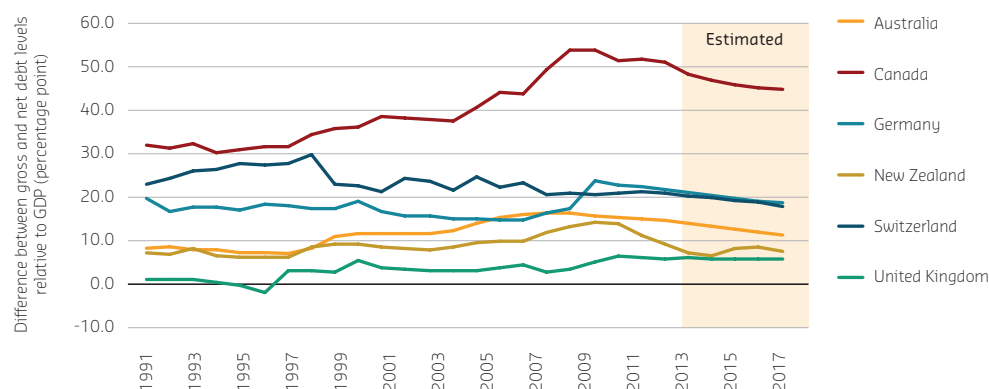


Note: Net debt is calculated as gross debt minus financial assets corresponding to debt instruments. These financial assets are: monetary gold and SDRs, currency and deposits, debt securities, loans, insurance, pension, and standardized guarantee schemes, and other accounts receivable. Estimates commence at 2013.

Source: BANKWEST CURTIN ECONOMICS CENTRE | International Monetary Fund, World Economic Outlook Database, April 2014.

Canada in particular records a large division between gross and net debt values, with gross debt 53.6 percentage points higher than net debt in 2009 - an increase from 30 percentage points in 1991. The United Kingdom averages around 5 percentage points between gross and net debt levels, which suggests that the type of debt instruments the UK has engaged in are not generating corresponding financial assets. The margin between gross and net debt in Australia has fluctuated between 10 and 20 percentage points over the past 25 years, increasing over the course of the GFC, but tapering off since.

Figure 23 Percentage point difference between Gross and Net General Government debt, selected OECD countries, 1991-2019

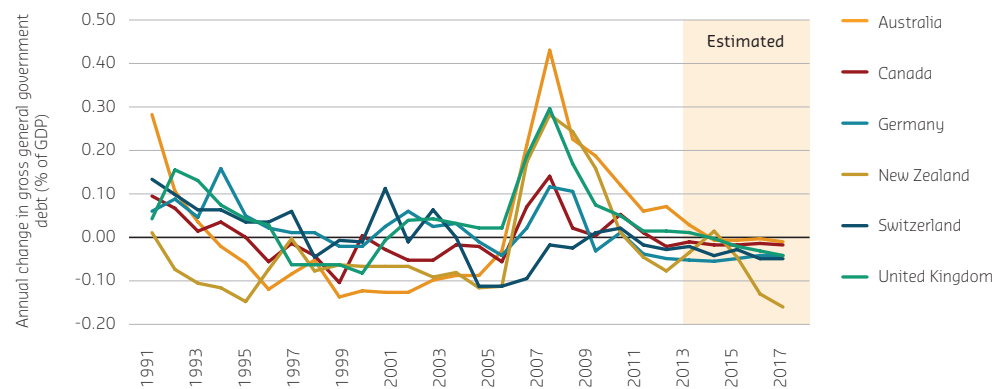


Note: Net debt is calculated as gross debt minus financial assets corresponding to debt instruments. These financial assets are: monetary gold and SDRs, currency and deposits, debt securities, loans, insurance, pension, and standardized guarantee schemes, and other accounts receivable. Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus, all liabilities in the GFSM 2001 system are debt, except for equity and investment fund shares and financial derivatives and employee stock options. Debt can be valued at current market, nominal, or face values (GFSM 2001, paragraph 7.110). Estimates commence at 2013.

Source: BANKWEST CURTIN ECONOMICS CENTRE | International Monetary Fund, World Economic Outlook Database, April 2014.

Annual changes in gross general government debt are presented in Figure 24. The swift impact of the GFC is evident, with Australia experiencing the biggest increase in gross debt at this time, proportionate to national output. Between 2008 and 2009 gross general government debt increased from 11.7 to 16.7 per cent of GDP in Australia – an increase of 43 per cent. Since this time, annual changes in gross debt as a share of GDP have decreased. The United Kingdom and New Zealand experienced similar fluctuations, albeit not reaching the heights that Australia did. Switzerland was not immune to the GFC, with annual changes in gross debt rising between 2005 and 2011. However, given their starting position and fiscal strategies, the change was relatively moderate and short-lived. The IMF's forward estimates suggest that general government debt among these countries will return to similar levels prior to the GFC.

Figure 24 Annual change in gross General Government debt as a share of GDP, selected OECD countries, 1991-2019



Note: Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus, all liabilities in the GFSM 2001 system are debt, except for equity and investment fund shares and financial derivatives and employee stock options. Debt can be valued at current market, nominal, or face values (GFSM 2001, paragraph 7.110). Estimates commence at 2013.

Source: BANKWEST CURTIN ECONOMICS CENTRE | International Monetary Fund, World Economic Outlook Database, April 2014.

Debt Sustainability

Options

The Golden Rule

Golden Rule: Over the course of the economic cycle governments should only borrow to invest and not use debt to fund recurrent spending.

The Golden Rule is a device that has been invoked at various times in jurisdictions around the world as a guiding (or binding) principle for the management of public finances. The basic premise of the Golden Rule is that over the course of the economic cycle,

- Governments should borrow only to invest – up to a prudent level – and should not use debt to fund recurrent spending commitments.

Equivalently,

- The current account budget (net of investment) must be either balanced or in surplus over the economic cycle.

Put simply, the rule asserts that day-to-day public spending – including spending on debt interest payments and depreciation – should be paid out of current revenues, and not through finance leveraged off current revenues. Implicit in the Golden Rule is that governments should not finance recurrent budget deficits through borrowing – to do so would be financially unsustainable.

It is important to emphasise that the principles behind the golden rule are applied across the course of the economic cycle. A budget deficit is acceptable – indeed it may actively be necessary – at low points in the economic cycle, as for example was the case over the course of the financial crisis in 2008. However, the quid pro quo is for governments to target budget surpluses when the economy is operating above trend, and for these to be used to balance the current account over the full cycle.

In this regard, government debt fulfils an important function to smooth expenditure decisions over the course of the economic cycle, in the same way that households use debt to smooth major investment and consumption decisions over the course of their lifecycle.

Some jurisdictions have introduced supplementary or companion rules that place controls on the level of investment debt. For example, the United Kingdom introduced a second **sustainable investment** rule that constrained total government debt to remain below 40 per cent of GDP at any point in the cycle. The purpose of investment is to support economic growth and secure prosperity for future generations. In this regard, the premise behind the golden rule principle is to borrow only for investment in productive capital and infrastructure, with the intention that such investment should generate returns to future generations that more than offset the costs of capital. Capping government debt at any point in the cycle may bring into sharper focus such returns when considering whether investment decisions are merited.

Emergency measures or disaster relief are generally exempt from adherence to 'golden rule' principles for borrowing. The Australian government under Prime Minister Kevin Rudd introduced an economic stimulus package worth \$52bn in two phases between 2008 and 2009, with the intention to combat the impact of the 2008-09 financial crisis and stave off recession. Measures announced by the Rudd government included \$26bn in infrastructure investment, \$2.7bn in support for small businesses, and \$12.7bn in direct cash bonuses to Australian households. In this regard, the package represents something of a composite, with some elements – for

example, infrastructure funding - that adhere to the productive investment tenet, and some - for example, the provision of household cash bonuses - that fit more into the emergency provision mould. There has been ongoing debate on the degree to which the economic stimulus package protected Australia from the worst ravages of the financial crisis. Various commentators have awarded that prize to other protective factors, from strong underlying economic growth (Makin, 2010), a growing population, the resources boom, rigorous financial regulation, and trade with Asia. However, the international consensus was positive, with the measures attracting praise from the Organisation for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF).

What is Australia's current fiscal framework?

Many countries around the world – Australia included – maintain disciplines for the management of public sector debt that draw to a greater or lesser extent from the principles of the golden rule. Most jurisdictions set targets for at least budget balance over the course of a business cycle (Bodmer, 2006). Some – including the United Kingdom, Spain, Germany, France and New Zealand – either have, or had, specific rules either to cap the level of government debt at any point in the cycle, or to reduce the debt balance over a defined period.

In Australia, the prescriptions in the **Charter of Budget Honesty Act 1998**. Although the Charter text falls short of an explicit or definitive requirement to balance the government budget over the course of the economic cycle, it does include commitments aimed at *“maintaining Commonwealth general government debt at prudent levels”* [Section 5, 1(a)], *“moderating cyclical fluctuations in economic activity”* [Section 5, 1(b)(ii)] and *“managing risks arising from excessive debt”* [Section 5, 2(a)].

The 2015-16 Federal budget is more definitive in translating the Charter's principals into a medium term fiscal strategy predicated on strong fiscal disciplines. Specifically, provisions in the 2015 Federal Budget (Statement 3, Medium Term Fiscal Strategy) commit the government to *“achieve budget surpluses, on average, over the course of the economic cycle”* by *“paying down debt”* and ensuring that *“new spending measures [are] more than offset by reductions in spending elsewhere in the budget”*.

Has Australia followed the Golden Rule?

Given the commitments outlined above, it seems relevant to examine the degree to which the Federal government budget surplus and accumulated net debt have aligned with Golden Rule principles over recent business cycles. In this section of the report we compare a number of assessments of the government's budget finances to provide some commentary on how closely the fiscal framework has been followed.

The Federal Treasury publish a series of projections of the underlying budget position that seek to control directly for cyclical and temporary effects – a finance metric known as the **structural budget balance (SBB)**. The SBB is based on the underlying budget balance, with adjustments for cyclical components that impact on revenues or spending over the course of the economic cycle, and temporary factors that introduce short-term or one-off effects on the budget position.

To adjust the actual budget balance for cyclical variations in revenues and/or expenditures, the SBB method first seeks to measure the **output gap** in GDP (which seeks to measure how far short of full capacity the Australian economy is operating). The method then imposes a relationship between the output gap and government revenues or spending. Adjustments for temporary (non-recurrent) factors would accommodate one-off revenue measures or spending provisions changes, as well as short-term shifts in the prices of commodities or assets. The method is in reasonably common use in other jurisdictions, and is used (with slight variations in methodology) by the OECD and IMF.

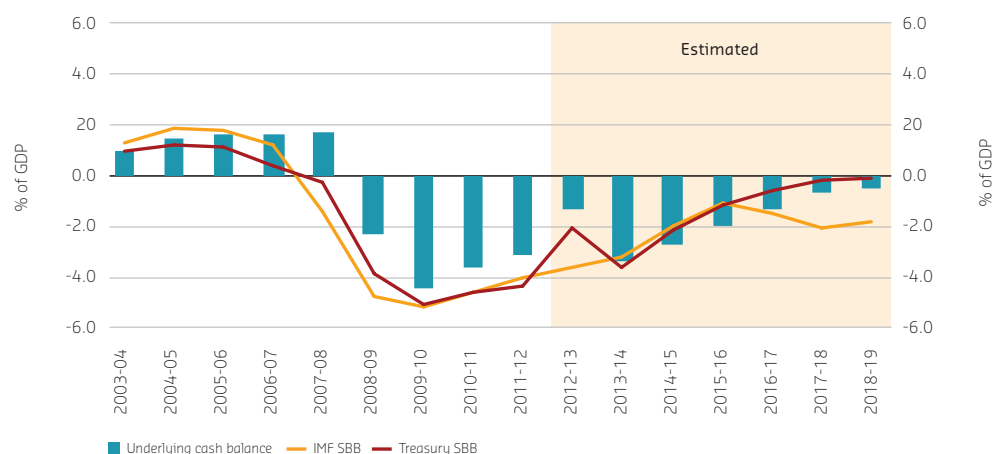
Figure 25 compares Treasury estimates of Australia's structural budget balance with IMF forecasts (alongside the underlying cash balance as a reference point for the comparison). According to both projections, Australia faced a structural budget deficit of nearly 5 per cent of GDP in 2010-11. More pertinently, these estimates suggest that Australia has been in structural deficit of at least 2 per cent of GDP in each year since 2008-09. Although the two SBB series track closely together for most of the period (save for 2012-13), there is considerable divergence in future structural budget balance projections. While Treasury forecasts a return to structural balance by 2018-19, the IMF figures predict a reversal from 2015-16 to reach a structural deficit of nearly 2 per cent by 2018-19.

This comparison shows clearly how measures of the structural budget balance inherit the characteristics (and optimism) of the factors used as inputs. The 2012-13 difference between Treasury and IMF SBB estimates coincided with the Federal election in Australia. If tax revenue forecasts are over-optimistic, or future spending is underestimated, then the structural budget balance will be overstated also. Systematic discrepancies between actual and forecast revenue and expenditure were highlighted earlier in this report. The divergence between the two SBB estimates of Australia's trajectory towards structural balance from 2015-16 emphasizes again how important it is to have confidence in future revenue and expenditure forecasts.

The structural budget balance calculation does seek to control for cyclical and temporary factors in its calculation, but it doesn't make clear where we are in the economic cycle. A more transparent assessment process may be required to better assess how the management of deficit and debt in Australia accords with the country's fiscal framework.

While Treasury forecasts a return to structural balance by 2018-19, the IMF figures predict a reversal in 2015-16 to reach a structural deficit of nearly 2 per cent in 2018-19.

Figure 25 Structural Budget Balance Estimates, 2003-04 to 2024-25



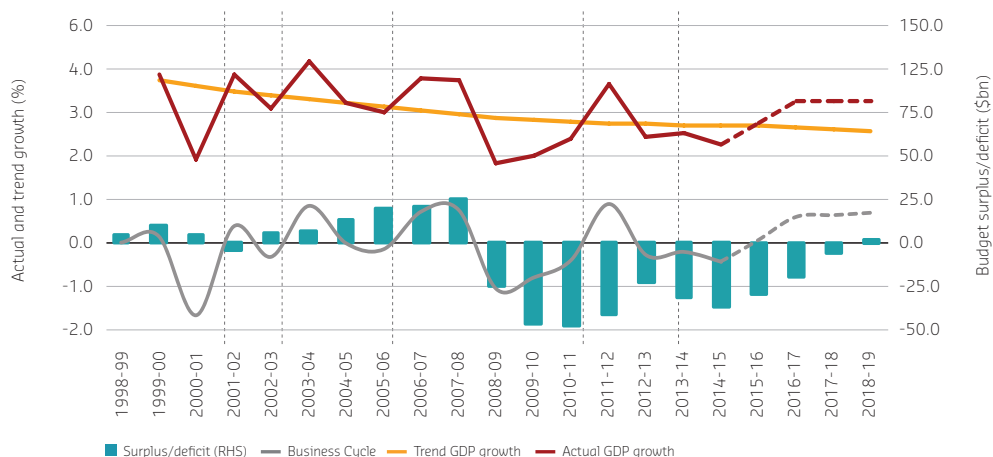
Source: BANKWEST CURTIN ECONOMICS CENTRE | Treasury Budget Papers and IMF World Economic Outlook Database.

As a second assessment of the extent to which Australia has aligned with Golden Rule principles, this *Focus on the States* report follows the changes in surplus/deficit (Figure 26) and net debt accumulation (Figure 27) outcomes over the course of recent economic cycles.

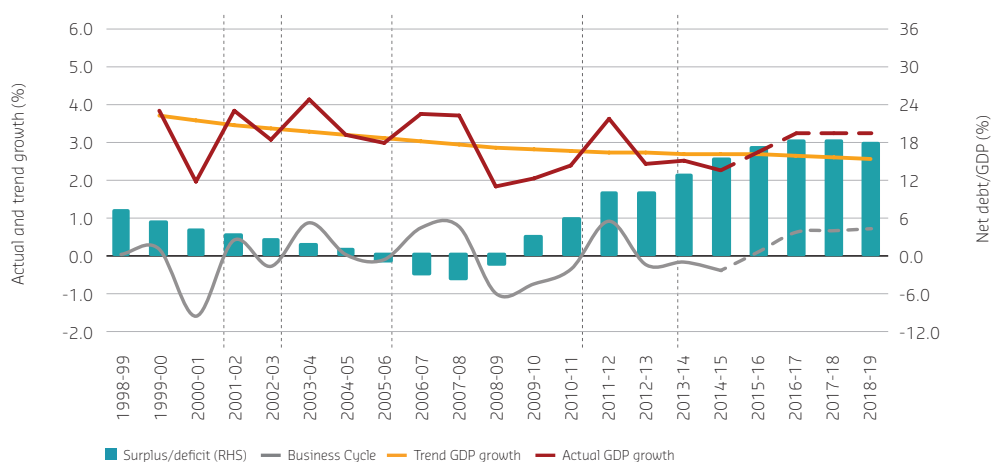
The September 2003 to September 2006 cycle coincided with the acceleration of the resources boom. Budget surpluses were delivered consistently over the period leading to net debt falling from just under 2.4 per cent of GDP at the start of the cycle to a *negative* net debt of 1 per cent of GDP at the end. The prescriptions of the Federal fiscal framework were certainly adhered to during this cycle, although clearly with a strong following wind at the back of the Australian economy.

The period from September 2006 to June 2011 represented one of the most significant business cycles in Australia's recent history. The depth and severity of the Global Financial Crisis in 2008 and 2009 was beyond prediction, and there is no surprise in the large budget deficits and accumulation of debt that occurred during the second half of the cycle. As we argued earlier, this cycle may well have brought about a period of structural change for the Australian economy – leading to lower economic growth, tougher labour markets and more challenging global demand conditions. To have ended the GFC cycle in 2010-11 with net debt of 5.8 per cent of GDP under such exceptional circumstances was defensible, especially given the costs of the emergency stimulus measures introduced by the Rudd government to defend the Australian economy against the worst effects of the GFC. Of course, the extent to which the stimulus package financed productive capital investment with long-term returns rather than shoring up current consumption remains a point of debate (Makin 2010).

If one looks at the public finance outcomes over the course of the post-GFC cycle that ran from June 2011 to March 2014, it is hard to escape the conclusion that Australia has departed to a greater degree from the fiscal framework provisions of a balanced budget. A budget deficit of more than \$40bn was posted in 2011-12 at a time when growth was significantly above trend. This was followed by further deficits of \$23bn and \$31bn in the next two years. Net debt at least doubled to 10 per cent of GDP by 2012-13, and has since continued to rise further through to the end of the last business cycle in March 2014 and on into the current cycle.

Figure 26 Business Cycles versus Government Surplus

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' Calculations from ABS Cat No 55120 and 55206.

Figure 27 Business Cycles versus Government Net Debt

Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' Calculations from ABS Cat No 55120 and 55206.

The fiscal framework laid out in the 2015-16 Federal budget papers clearly commit the government to achieve balance over the course of the economic cycle. However, our findings suggest that during the post-GFC cycle from June 2011 to March 2014 Australia moved further away from the fiscal framework and achieving budget balance.

A transparent assessment of budget balance being achieved over the economic cycle is practically impossible when definitions of the cycle remain so vague in public finance reporting. Moreover, without measures in place to hold governments to account on their public financial management, the fiscal disciplines required by those governments are likely to be more loosely adhered to. This begs the question: does Australia need a more prescriptive debt stabilisation policy?

Does Australia need a more prescriptive debt stabilisation policy?

The economic cycle is a powerful force that does not respect either financial year-ends, or electoral cycles.

The medium term fiscal strategy laid out in the 2015-16 Federal budget is unambiguous in following provisions of budget balance or surplus over the economic cycle, yet the extent to which such targets have been achieved is not as clearly articulated as might be the case. Fiscal policy, spending and investment decisions are shaped by policy commitments and imperatives, as well as societal needs. And progress towards the objectives of the medium term fiscal framework is inevitably constrained by past, current and future economic conditions. Nevertheless, evidence from the previous section does support the view that Australia fell a long way short of adhering to the fiscal framework and achieving budget balance during the post-GFC cycle to March 2014. The commitment to reach budget balance by 2018-19 will be a difficult challenge, especially when the required revenue, spending and growth assumptions are compared to actual outcomes.

The economic cycle is a powerful force that does not respect either financial year-ends, or electoral cycles. That is not to say that governments shouldn't take a proactive stance in driving economic growth through policy settings. However, the extent to which the accumulation or reduction in government debt is influenced by economic cycle effects is an important concern for prudent debt management. This is one of a number of arguments put forward in support of the need to introduce more prescriptive debt stabilisation policies.

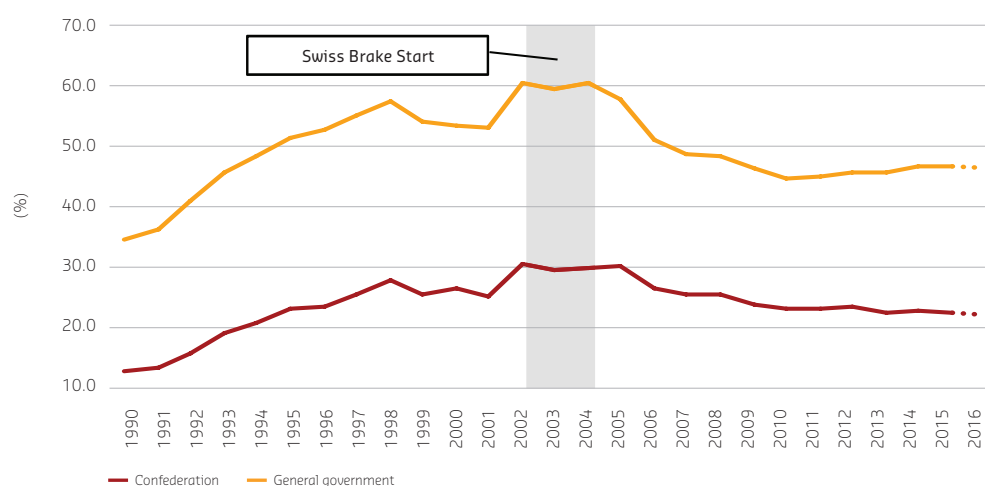
Fatas (2005) has identified four potential biases that in his view support the need to constrain fiscal policy, spending and investment decisions. These comprise politically-driven fiscal policy (increased spending around election time); pro-cyclical fiscal policy (increasing spending in boom times relative to taxes), excessive deficits and unsustainable budgetary plans; and intergenerational inequity. Fatas asserts that the first two biases – electorally-driven or pro-cyclical fiscal policy – have similar adverse consequences on the economy. Specifically, fiscal provisions that do not adequately take into account the current cyclical position of the economy may be sub-optimal and will ultimately impact negatively on output and growth (Fatas, 2005). The third bias contends that there is an increasing trend (particularly among developed countries) towards large budget deficits and levels of government debt that build the potential for either large scale fiscal adjustment or, in extreme cases, default. Both scenarios will impact negatively on the economy and may also be a source of future business cycle volatility. The fourth bias – intergenerational inequity – is not directly an issue of output volatility, but relates more to the unsustainability (and unfairness) of systemic budget imbalance. Structural budget deficits lead to borrowing against future wealth, with the result that future generations bear the costs of current fiscal policy.

A number of countries have embarked upon prescriptive fiscal strategies, as articulated in a range of accords, agreements and legislative measures. The European Union introduced a series of fiscal discipline measures for its 28 member countries under the Maastricht Treaty and the Stability and Growth Pact (SGP). The pact requires that each member country introduces fiscal arrangements to limit their government deficit to 3 per cent of GDP and government debt to 60 per cent of GDP.

In 2003 Switzerland embarked upon a prescriptive fiscal strategy prescribed by legislation within the country's Federal Constitution (Danninger 2002; Geier 2011). The purpose of the new strategy was to introduce fiscal measures to restrict the accumulation of government debt that spiraled out of control in Switzerland during the 1990's. A public referendum was held in 2001 to consider the establishment of a debt ceiling along with limits on the amount of money that the Swiss government could borrow from the economy. The referendum was passed comprehensively, with 85 per cent of Swiss voters supporting new amendments to introduce the so-called 'Swiss brake' debt stabilization mechanism (the 'Schuldenbremse') in 2003⁸. The debt brake mechanism works through the introduction of a ceiling on spending, calculated each year as a function of expected tax revenues and the economic cycle. Spending in excess of these legislated limits are penalized with further spending reductions in each of the three years following the breach in order to maintain control of public debt.

The debt brake mechanism has without question had a demonstrable and significant impact in stabilizing the Swiss government's debt. Figure 28 shows the trend in general government and confederation gross debt for Switzerland since 1990, and shows the reversal of both components of government debt following the introduction of the debt brake in 2003, by nearly a quarter in the case of general government debt from 60 per cent to 45 per cent of GDP between 2004 and 2009.

Figure 28 Gross Debt as a proportion of GDP – Switzerland, 1990-2016



Note: IMF definition of Gross Debt is used.

Source: BANKWEST CURTIN ECONOMICS CENTRE | Switzerland Federal Finance Administration (FFA).

⁸ However, because of significant uncovered deficit in 2003, the Swiss brake practically came to action in 2004 to 2006.

The success of the Swiss Brake in maintaining government debt prompted other countries, especially in Europe, to implement similar rules. The most prominent example of this was Germany's move to legislate for a 'Schuldenbremse' debt brake in 2009, leading to a limit in the structural budget deficit of 0.35 per cent of GDP from 2016. Rules used in the United Kingdom, New Zealand and Australia are mechanically different from the Swiss Brake, and are less prescriptive, but have a similar conceptual basis.

In a 2014 report the National Commission of Audit dismissed the application of a debt brake mechanism for Australia, which in their view would be:

"...complicated, less suited to the Commonwealth Budget, and have the same issues around enforceability as simpler targets". [National Commission of Audit, 2014]

On the other hand, proponents of the debt brake argue in favour of prescriptive debt stabilisation rules. The IMF notes that one of the strongest features of the debt brake rule is the way it limits spending in times of high economic growth. The IMF goes on to note specifically that the Swiss debt brake rule:

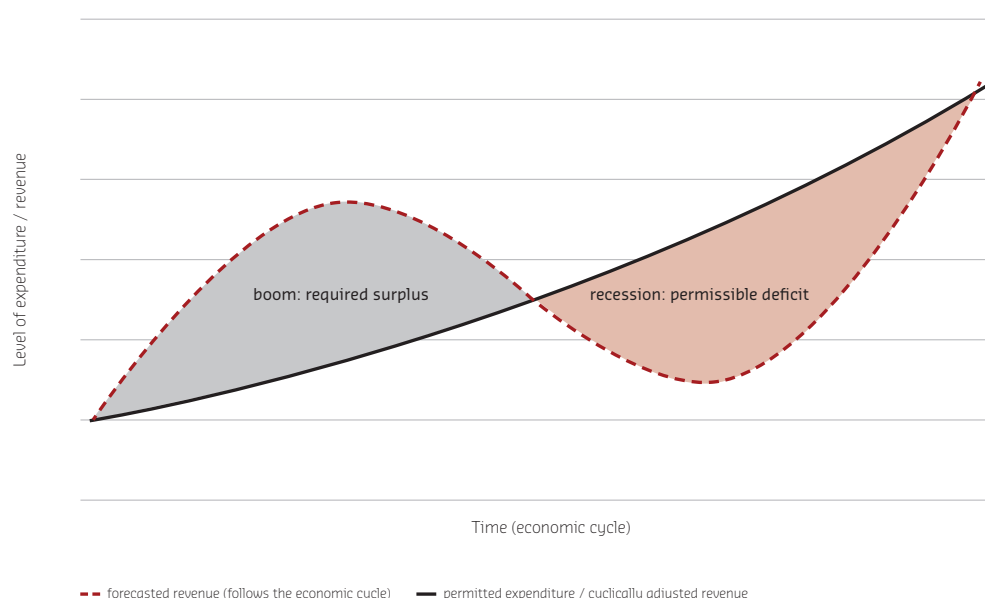
"...combines the stabilising properties of an expenditure rule with the effective debt-controlling properties of a balanced budget rule."
[IMF, 2011]

A Debt Brake Rule for Australia?

In this *Focus on The States* report we explore some possible implications of adopting a debt brake rule for Australia. Specifically, we produce some indicative simulations of the effects of a debt brake rule adopted at three different points in time – 2002 (as Switzerland did), 2008 and 2011 – using a similar approach to that adopted by Geier (2005, 2011). The projections necessarily require some simplifications and assumptions, but they do at least provide some sense of the limits a debt brake would place on budget spending decisions.

The basic idea of the debt brake is to limit government spending so that it does not exceed structural revenue. The debt brake approach works by setting explicit maximum government spending limits each year at a fraction of estimated government revenue. The fraction adjusts to the business cycle, and is determined from the ratio of trend to forecast GDP. Under a debt brake rule, the maximum limit on spending can exceed revenues for periods where forecast GDP is below trend GDP (equivalently, where the ratio of trend to forecast GDP is greater than one). However, for periods where GDP is above the long-term trend (i.e. the ratio of trend to forecast GDP is less than one), the debt brake formula limits spending to remain below revenues (Figure 29).

Figure 29 Ideal Representation of the Swiss Brake



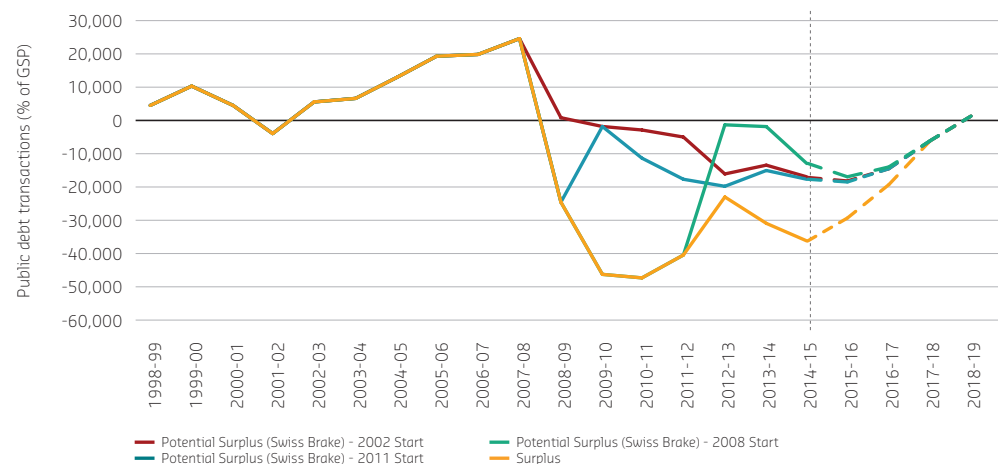
For periods in which actual expenditures exceed the limits set under the debt brake, the additional spending is added to a notional deficit account (known as an Accumulation Account in the Swiss debt brake legislation). If the balance of the deficit account exceeds 6 per cent of last year's spending, the excess is required to be paid down over the next three years through a series of penalties that impose harsher spending limits.

BCEC modelling of a prospective debt brake mechanism for Australia follows Geier (2005, 2011) by using actual values for the forecast GDP, and actual government revenues for estimated revenues. We simulate the potential impact of a debt brake for Australia using the mechanism described previously, starting the debt brake regime at three points - 2002, 2008 and 2011.

It is important at the outset to highlight the principal limitation with simulating the prospective impact of debt brakes in countries with no debt brake in place. Restricting spending necessarily means that resources don't make it into the economy to influence performance, demand or revenues.

Notwithstanding these caveats, Figure 30 shows the prospective trajectory of the budget surpluses for each of three start dates for the brake, together with the actual budget surplus. Indicative simulations show that a debt brake for Australia introduced from 2002 (in red in Figure 30) would have restricted spending during the growth period from 2002 to 2007 and kept the deficit closer to balance over the more challenging economic period from 2008. According to BCEC simulations, a debt brake would have limited the 2014-15 Federal budget deficit to around \$17bn by 2014-15 – a deficit reduction of more than 50 per cent on the actual deficit.

Figure 30 Comparison of actual with potential surplus under a debt brake, Australia



Source: BANKWEST CURTIN ECONOMICS CENTRE | Authors' calculations from ABS Cat 55120 and 55206.

Reiterating the points mentioned earlier, such modelling won't account for the negative spillover effects that reduced spending might have in reducing growth and limiting tax revenues. To explore this issue further requires a far more complex economic systems approach.

Summary

and discussion

Summary and discussion

Government debt is a public policy issue that arguably provokes some of the most intense debates among politicians, commentators, the public and the media. The topic of debt provides convenient political ammunition in the war of ideas on sound economic management. Deficits and debt are commonly portrayed as outcomes of poor economic policy, ineffective management of public finances, or reckless government spending. Federal and state governments are challenged on the size of their budget deficits and how much they spend on public debt interest payments, and the extent to which this crowds out other important spending priorities.

Yet too often the debate is oversimplified, ignoring the patterns of surpluses and deficits that typically emerge over the course of the economic cycle, and the role that debt can and should play as an instrument to support the economy when times are tough. Public debt is perfectly consistent with the prudent management of an economy over the course of a business cycle. Borrowing to finance productive investment can have a positive and long-lasting impact on economic growth. Taking on debt to fund capital or infrastructure investment can be considered 'good debt', provided that the investment returns a higher benefit than the cost of entering into and sustaining the debt and does not place a substantial burden on government activity.

The purpose of this *Focus on The States* report has been to bring to the fore some of the key issues to better inform the debate on government debt in Australia. How should debt best be measured? How should debt be most effectively managed across the economic cycle? When is it good economic policy to increase debt? At what level does debt become a problem?

Is Australia's debt too high? Prior to the global financial crisis, Australia was in a strong fiscal position with healthy government budget surpluses earned through most of the Millennium decade. The GFC brought about a sharp reversal in this trend, with today's public sector debt having climbed to a 15 year high of \$238bn, some 18.6 per cent of GDP.

These figures may be well below the debt levels reached in the early 1990s, but this latest period of debt growth is different in at least two respects. First, the speed of growth of public debt over the past decade has been significantly more marked; and second, something of a separation between revenue and GDP relativities has emerged. Net debt as a share of GDP and revenue tracked closely together up until the GFC. Since this time revenue as a proportion of GDP has fallen almost 8 percentage points over the last twenty five years, from 47.6 to 39.7 per cent of GDP.

The report finds that overall public sector debt held by Australia's states and territories has increased over the past decade. In 2013-14 public sector debt for all states and territories combined totalled \$111bn, the equivalent of 7.3 per cent of GDP. Public non-financial corporations play a much larger role for Australian states and territories, and are responsible for higher levels of net debt, than at Commonwealth level.

Looking at a comparison across states, Queensland's public non-financial sector net debt increased by 90.3 percentage points in the ten years to 2014-15, from -25.2 to 65.1 per cent of revenue. Western Australia saw an increase in net debt relative to

state revenue, more than doubling from 25 to 67.9 per cent in the ten years to 2014-15. Victoria's net debt has increased from 12.1 to 68.4 per cent in the last ten years, while South Australia increased its public debt from 15.5 to 61.9 of state revenue over the same period. Although debt is growing for the majority of states and territories, it is worth emphasising that values of debt across regions are not as high as they were in the late 1990's.

Our research suggests that Australia has undergone something of a structural change over the course of the GFC. The evidence from Australia's recent growth trajectory suggests that the traditionally held notion of a long-term real GDP growth rate of 3.25 per cent or more is no longer defensible. Our findings indicate the current trend rate of growth for Australia to be closer to 2.5 to 2.75 per cent. This revision to trend growth is important given the assertion in the 2015 Federal budget that the Australian economy will return to surplus in 2019-20.

What has driven the recent trajectory of government debt in Australia? Does responsibility for the growth in debt post-GFC lie more on the revenue or spending side? Our findings have shown that both sides should bear some accountability for Australia's current debt position. Revenues post-GFC have fallen consistently short of expectations, failing to rise consistently above a historical trend of 23.5 per cent of GDP despite successive budgets targeting revenues of 25 per cent. Yet on the other side of the balance sheet, spending has consistently ran ahead of the plans laid out over the forward estimates in pretty much every budget since the end of the GFC.

The pace at which debt has accumulated since the GFC and the prospect that debt will continue to grow into the future raises important questions about Australia's fiscal framework in relation to budget deficit and debt. With lower growth prospects and budget forecasts that history tells us are challenging in the extreme, what is Australia's future debt position likely to be?

With output growth lower than expected, and more aligned to a new trend of 2.75 per cent, important decisions need to be made both on the expenditure and revenue side. Government spending should be adjusted to accommodate a slowing economy. But simply to commit to spending controls in the face of Australia's current economic condition is unlikely to deliver the path to surplus that has been laid out by the government. Tax reform options should also be explored to increase revenues and strengthen the country's budget position. However, any changes to increase revenue streams need to be carefully considered both from the impact these may have on growth and also from a distributional perspective. Revenue and spending measures ought both to be considered in the 2015 Mid-Year Financial Outlook due to be released in December.

It follows that fiscal strategies for Australia need to adjust to this new norm. Expectations for tax revenues should be revised, instead of reaching for unrealistic targets. For successive budgets to have targeted revenues of 25 per cent of GDP over the forward estimates has been at some considerable variance to the historical average of 23.5 per cent stretching back over nearly four decades. We urge continued restraint to align revenues and spending at a realistic level, with growth assumptions consistent with the latest evidence.

From the assessment of the progress of budget deficits and accumulated net debt over the course of the post-GFC cycle from June 2011 to March 2014, we argue that Australia has departed to a greater degree from the fiscal framework provisions of a balanced budget than for the earlier GFC and pre-GFC cycles. More discipline is required to stick closer to the prescriptions of a 'golden rule' style fiscal framework, and over economic cycles that are more transparently measured than currently is the case.

We would caution against a further accumulation of debt, even though the cost of public borrowing is cheap with interest paid on Treasury bonds currently at a rate of 2.7 per cent. To do so opens up risks should economic conditions deteriorate sharply or should interest rates rise from their current levels. The ability of governments to service relatively high levels of debt may be sustainable, but may not necessarily be desirable. Indeed, loading up further on debt potentially erodes Australia's defences against adverse economic shocks.

However, without measures in place to hold governments to account on their public financial management, the fiscal disciplines required to bear down on public debt are likely to be more loosely adhered to. A number of biases exist around government spending and investment decisions, including those driven by the political cycle and those that are pro-cyclical. These biases can have adverse consequences on the economy, creating output volatility and inhibiting growth.

In our view it is worth at least considering whether a more prescriptive fiscal framework would deliver more control. Prescriptive debt stabilisation devices such as the 'debt brake' mechanism introduced in Switzerland in 2003 can serve as protective mechanisms through by preserving a country's debt position and guarding it against economic crises. In fact, one of the main benefits of debt brake mechanisms is that they force governments to be more disciplined during the good times, and not to give in to the temptation for spending to increase to match revenues as they grow over the course of an economic boom.

Indicative modelling by BCEC shows that a debt brake mechanism for Australia from 2002 would have restricted spending during the growth period from 2002 to 2007 and kept the deficit closer to balance over the more challenging economic period from 2008. According to BCEC simulations, a debt brake would have limited the 2014-15 Federal budget deficit to around \$17bn by 2014-15 – a reduction of more than 50 per cent on the actual deficit.

So does Australia have a debt problem? On the face of it, and against international comparisons, the answer has to be no. Yet this should provide no licence to expand our debt stock significantly further than the levels currently held. Whatever stance is taken to the issue of government debt, this is a critical period in Australia's trajectory towards continued economic growth and prosperity. Decisions made now will have an important bearing on the country's future and the welfare of its people.

Glossary

and Technical Notes

Glossary and Technical Notes

Data sources

This report uses data from two primary data sources – ABS Government Finance Statistics (ABS Cat No.5512.0) and State and Territory Treasury Budget statements and related outputs, including final estimates and mid-year financial outlook. Some discrepancies exist between the primary data sources. These discrepancies arise from differences in classifications and accounting practices.

Gross debt

The International Monetary Fund's Government Finance Statistics Manual defines gross debt as 'all liabilities that are debt instruments' with a debt instrument defined as 'a financial claim that requires payment(s) of interest and/or principal by the debtor to the creditor at a date, or dates, in the future.' This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardised guarantee schemes, and other accounts payable.

Gross debt is not a concept used in Australian Government Budget Papers and is not currently provided as a separate item in Government Finance Statistics. The concept and measurement of gross debt in Australia is currently being reviewed. In this report we have used a proxy for gross debt sourced from the liabilities listed in government operating statements. These include currency on issue, deposits held, advances received, borrowing, other provisions and other non-equity liabilities. Unfunded superannuation liability and other employee entitlements are excluded.

Net debt

Net debt is included in the balance sheet presentation for information. It is equal to (deposits held plus proceeds from advances plus borrowing) minus (cash and deposits placed plus investments, loans and placements plus advances outstanding). (GFS Explanatory Notes)

Net debt is a concept used within the Budget Papers, with details of net debt figures calculated back to the early 1970s. Australian Government general government sector net debt is equal to the sum of deposits held, government securities (at market value), loans and other borrowing, minus the sum of cash and deposits, advances paid and investments, loans and placements.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is an economic indicator of the value of a country's total output, calculated as the sum of the following measures: consumption expenditures; business investment; government spending; and net exports (defined as exports minus imports).

Gross State Product (GSP)

Gross State Product (GSP) is a measure of the economic output of a state, province or region, and serves as the counterpart to gross domestic product for a country. Conceptually, GSP is measured on the same basis as GDP, although there are practical difficulties in measuring 'import' and 'export' flows across state boundaries, and attributing state-specific income accruing from factors of production in national and multinational firms.

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