

Attachment A

SENSITIVITY OF BUDGET ESTIMATES TO ECONOMIC DEVELOPMENTS

The estimates contained in the 2014-15 MYEFO are based on forecasts of the economic outlook. Changes to the economic assumptions underlying the estimates will impact on receipts and payments, and hence the size of the underlying cash balance. Even small movements in economic parameters can result in large changes to the budget aggregates.

This section examines the effects on receipts and payments of altering some of the key economic assumptions. Tables 3.18 and 3.20 illustrate the sensitivity of key components of receipts and payments to possible variations in the economic outlook. The two scenarios considered are:

- Scenario 1: a 1 per cent reduction in nominal GDP owing to a fall in the terms of trade.
- Scenario 2: a 1 per cent increase in real GDP driven by an increase in labour productivity and labour force participation, with each contributing equally.

The economic scenarios provide a rule of thumb indication of the impact on receipts, payments and the underlying cash balance of changes in the economic outlook. They represent a partial economic analysis only and do not attempt to capture all the economic feedback and other policy responses related to changed economic conditions. In particular, the analysis assumes no change in the exchange rate, interest rates or policy over the forecast period. The impact of the two scenarios on the economic parameters would be different if the full feedback response on economic variables and likely policy actions were taken into account. The analysis does not aim to provide an alternative picture of the economic forecasts under these scenarios, but instead gives an indication of the sensitivity associated with different components of receipts and payments to changes in the economy. As such, the changes in the economic variables and their impact on the fiscal outlook are merely illustrative.

The impacts shown in the tables below are broadly symmetrical. That is, impacts of around the same magnitude, but in the opposite direction, would apply if the terms of trade were to increase or if real GDP were to decrease.

Scenario 1

The first scenario involves a permanent fall in world prices of non-rural commodity exports in 2014-15 consistent with a fall in the terms of trade of around 4 per cent, which causes a 1 per cent fall in nominal GDP by 2015-16. The sensitivity analysis evaluates the flow-on effects on the economy, the labour market and prices. The impacts in Table 3.17 are stylised and refer to per cent deviations from the baseline levels of the economic parameters.

Table 3.17: Illustrative impact of a permanent non-rural commodity price fall consistent with a 1 per cent fall in nominal GDP by 2015-16 (per cent deviation from the baseline level)

	2014-15 per cent	2015-16 per cent
Real GDP	0	- 1/4
Non-farm GDP deflator	- 3/4	- 3/4
Employment	- 1/4	- 1/2
Wages	0	- 1/4
CPI	0	- 1/4
Company profits	-3	-3
Consumption	- 1/4	- 1/2

Assuming no change in exchange rates or interest rates, the fall in export prices leads directly to a lower non-farm GDP deflator (from the export component of GDP) and lower domestic incomes. Lower domestic incomes cause both consumption and investment to fall, resulting in lower real GDP, employment and wages. The fall in aggregate demand puts downward pressure on domestic prices.

In reality, a fall in the terms of trade would be expected to lead to a fall in the exchange rate, although the magnitude is particularly uncertain in the short term. In the event of a fall in the exchange rate, the impacts on the external sector would dampen the real GDP effects, and there would be some offsetting upward pressure on domestic prices.

Given these assumptions, the overall impact of the fall in the terms of trade is a decrease in the underlying cash balance of around \$2.7 billion in 2014-15 and around \$5.6 billion in 2015-16 (see Table 3.18).

Table 3.18: Illustrative sensitivity of the budget balance to a 1 per cent decrease in nominal GDP due to a fall in the terms of trade

	2014-15 \$b	2015-16 \$b
Receipts		
Individuals' and other withholding taxes	-0.6	-1.7
Superannuation fund taxes	0.0	-0.2
Company tax	-1.8	-3.2
Goods and services tax	-0.1	-0.3
Excise and customs duty	0.0	-0.1
Other taxes	-0.1	-0.1
Total receipts	-2.6	-5.6
Payments		
Income support	-0.2	-0.2
Other payments	0.0	0.1
Goods and services tax	0.1	0.3
Total payments	-0.1	0.2
Public debt interest	0.0	-0.2
Underlying cash balance impact(a)	-2.7	-5.6

(a) Estimated impacts fall within the 70 per cent confidence intervals for years 2014-15 and 2015-16, as shown in Attachment B Charts 3.10 to 3.12.

On the receipts side, a fall in the terms of trade results in a fall in nominal GDP which reduces tax collections. The largest impact is on company tax receipts as the fall in export income decreases company profits. Owing to lags in the tax system, the effect on company tax is larger in 2015-16. Lower company profits are assumed to flow through to lower Australian equity prices, therefore reducing capital gains tax from individuals, companies and superannuation funds.

The weaker economy results in lower aggregate demand, which flows through to lower employment and wages, reducing individuals' income tax receipts. The decrease in disposable incomes leads to lower consumption, which in turn results in a decrease in GST receipts (decreasing GST payments to the states by the same amount) and other indirect taxes.

On the payments side, a significant proportion of government expenditure is partially indexed to movements in costs (as reflected in various price and wage measures). Some forms of expenditure, in particular income support payments, are also driven by the number of beneficiaries.

The overall estimated expenditure on income support payments (including pensions and allowances) increases in both years because of a higher number of unemployment benefit recipients. The increase in spending on unemployment benefits in 2015-16 is partly offset by reduced expenditure on pensions, allowances and other payments linked to inflation reflecting lower growth in prices.

The reduction in the underlying cash balance results in a higher borrowing requirement and a higher public debt interest cost.

As noted previously, under a floating exchange rate, the fall in the exchange rate would dampen the effects of the fall in the terms of trade on real GDP, meaning the impact on the fiscal position could be substantially more subdued. Also, to the extent that the fall in the terms of trade is temporary rather than permanent, the impact on the economic and fiscal position would be more subdued.

Scenario 2

The second scenario involves a permanent 0.5 per cent increase in both the participation rate and labour productivity, resulting in a 1 per cent increase in real GDP from 2014-15. Once again, the sensitivity analysis evaluates the flow-on effects on the economy, the labour market and prices. The impacts in Table 3.19 are stylised and refer to per cent deviations from the baseline levels of the parameters.

The 1 per cent increase in real GDP increases nominal GDP by slightly less but the magnitude of the effects on receipts, payments and the underlying cash balance differ from the first scenario because different parts of the economy are affected in different ways.

Table 3.19: Illustrative impact of an ongoing equal increase in both labour productivity and participation consistent with a 1 per cent increase in real GDP from 2014-15 (per cent deviation from the baseline level)

	2014-15 per cent	2015-16 per cent
Nominal GDP	3/4	3/4
Non-farm GDP deflator	- 1/4	- 1/4
Employment	1/2	1/2
Wages	1/4	1/4
CPI	- 1/4	- 1/4
Company profits	1 3/4	1 3/4
Consumption	1	1

The increases in labour force participation and labour productivity have the same impact on output, but different impacts on the labour market. Higher productivity leads to higher real GDP and higher real wages, while an increase in the participation rate increases employment and real GDP. Imports are higher in this scenario, reflecting higher domestic incomes.

Since the supply side of the economy expands, inflation falls relative to the baseline. The lower domestic prices make exports more attractive to foreigners, with the resulting increase in exports offsetting higher imports, leaving the trade balance unchanged. The exchange rate is assumed to be unchanged.

The overall impact of the increase in labour productivity and participation is an increase in the underlying cash balance of around \$3.5 billion in 2014-15 and around \$4.4 billion in 2015-16 (see Table 3.20).

Table 3.20: Illustrative sensitivity of the budget balance to a 1 per cent increase in real GDP due to an equal increase in both productivity and participation

	2014-15 \$b	2015-16 \$b
Receipts		
Individuals' and other withholding taxes	1.8	1.5
Superannuation fund taxes	0.1	0.2
Company tax	1.2	1.7
Goods and services tax	0.5	0.5
Excise and customs duty	0.3	0.4
Other taxes	0.0	0.0
Total receipts	3.9	4.3
Payments		
Income support	0.0	0.3
Other payments	0.0	0.1
Goods and services tax	-0.5	-0.5
Total payments	-0.5	-0.1
Public debt interest	0.1	0.2
Underlying cash balance impact(a)	3.5	4.4

(a) Estimated impacts fall within the 70 per cent confidence intervals for years 2014-15 and 2015-16, as shown in Attachment B Charts 3.10 to 3.12.

On the receipts side, individuals' income tax collections increase because of the rise in the number of wage earners and, additionally, higher real wages. The stronger labour market also increases tax collections from superannuation funds because contributions (including compulsory contributions) are higher. The increase in personal incomes leads to higher consumption which results in an increase in GST receipts (with the corresponding receipts passed on in higher GST payments to the states). In addition, the stronger economy results in higher levels of corporate profitability, increasing company taxes.

On the payments side, overall estimated expenditure on income support payments (including pensions, unemployment benefits and other allowances) is lower, reflecting lower growth in benefit rates through indexation due to lower inflation (as measured by the Consumer Price Index).¹ This effect is partly offset by growth in the number of unemployment benefit recipients (as higher labour force participation increases both employment and the number unemployed).

On balance, the rise in estimated tax collections is only partly offset by increased payments. This improves the underlying cash position, which results in a lower borrowing requirement and lower public debt interest cost.

If increases in productivity and participation are temporary rather than permanent, the impact on the economic and fiscal position would be more subdued.

¹ Under existing indexation arrangements, the growth in wages (average weekly earnings) has historically been the key driver of the growth in benefit rates for pensions and similar payments. However, with recent subdued wages growth, the key driver is now indexation of benefit rates to growth in the CPI.

SENSITIVITY OF THE BALANCE SHEET TO ECONOMIC AND FISCAL RISKS

Consistent with the medium-term fiscal strategy, this MYEFO places emphasis on the strength of the Government's balance sheet. This section supplements the analysis of Australia's fiscal sustainability in Part 3, and discusses the resilience of our balance sheet to adverse economic and fiscal shocks. The baseline case and the downside scenario are analysed:

- Baseline case: discussion of how current economic and fiscal risks may impact the balance sheet.
- Downside scenario: discussion of how significant but remote economic and fiscal downside risks may impact the balance sheet.

A strong balance sheet provides the Government with the flexibility to respond to adverse fiscal and economic risks, and is an indicator of fiscal sustainability. Fiscal risks refer to developments or specific events that are unpredictable in both timing and magnitude, which result in a significant increase in Government payments. This includes events such as emergency defence or foreign aid requirements and natural disasters. These payments generally result in an erosion of existing budget surpluses and/or higher government borrowings. Economic risks refer to economic shocks, such as a financial crisis, that result in a fall in GDP, employment, wages and therefore tax receipts, and increased payments, for example for unemployment benefits. These effects generally result in lower receipts and higher payments, eroding surpluses or widening deficits and resulting in higher levels of net debt.

This analysis focuses on the impact of large risks eventuating and the impact to the balance sheet and fiscal sustainability in broad terms.

Baseline case

The estimates contained in MYEFO are based on forecasts of the economic and fiscal outlook. Risks that have a probable chance of materialising are already taken into account in the financial statements. Australia holds AAA credit ratings from all three rating agencies, and the balance sheet is strong given current economic conditions.

There are a number of existing contingent liabilities and assets that are not included in the Financial Statements on the basis that they are currently assessed as unlikely to occur, but under certain and potentially extreme circumstances they could crystallise in the future. These contingencies include loan guarantees, warranties, indemnities, uncalled capital and letters of comfort, and are outlined in *Appendix C: Statement of Risks*.

Downside scenario

If fiscal or economic risks come to fruition, the strength of the balance sheet is called upon as it will need to respond to the initial shock to the economy or the budget. In a

large economic shock, the Government will likely be pressed to intervene in a riskier environment by drawing down assets, issuing more debt and/or providing guarantees to give certainty to the market. This poses a challenge to the Government and tests the ability and strength of the balance sheet to support economic activity and so ameliorate the impact of the shock on businesses and households.

A higher level of payments necessitating higher borrowings

When economic conditions deteriorate the budget position can decline significantly as receipts fall and payments increase. This can lead to an erosion of existing budget surpluses and/or an increase in borrowings to fund these additional payments. The section below discusses how a number of fiscal and economic risks increase payments if they materialise.

A deterioration in economic conditions and economic activity is usually signalled by a fall in demand for labour and for goods and services. Eventually excess supply in product and labour markets will generate falls in wages and domestic prices, and the quantity of labour employed and goods and services exchanged. The decline in wages and employment will lead to a fall in personal income tax receipts. Weak labour market conditions would also lead to lower household consumption and falls in GST receipts. The fall in nominal GDP (driven by falls in domestic prices and the level of goods and services exchanged) reduces revenue raised from company tax. At the same time a higher unemployment rate would lead to increased expenditure on income and other Government support payments. To fund this deterioration in the Government's fiscal position, assets would need to be run down or borrowings would need to increase through the issuance of more Commonwealth Government Securities (CGS).

During an economic downturn, increases in payments could be funded by an increase in CGS issuance thereby increasing the liability. This would lead to higher interest payments until the Government begins to repay its debt.

A weakened economic environment also increases the likelihood of contingent liabilities on the balance sheet (for example, guarantees) crystallising or defaults on government loans, resulting in higher liabilities and an increase in payments.

Appendix C provides further detail on contingent liabilities, contingent assets and other fiscal risks. Information on contingent assets and liabilities is also provided in the Australian Government's annual consolidated financial statements and in the annual financial reports of departments and non-budget entities.

Some of the Government's large guarantees are those introduced during the Global Financial Crisis. As described below, even a large deterioration in conditions would be unlikely to trigger some of these guarantees.

The Guarantee Scheme for Large Deposits and Wholesale Funding is applicable to certain liabilities covered by the guarantee. As at 5 December 2014, total liabilities

Part 3: Fiscal strategy and outlook

covered by the Guarantee Scheme were estimated at \$2.5 billion. Government expenditure would only arise in the unlikely event that an institution failed to meet its obligations with respect to a commitment that was subject to the guarantee and the guarantee was called upon. In such a case, the Government would likely be able to recover any such expenditure through a claim on the relevant institution.

The Financial Claims Scheme provides depositors of authorised deposit taking institutions (ADIs) and policyholders of general insurers with timely access to their funds in the event of a financial institution failure. In relation to ADIs, payments are capped at \$250,000 per account holder per ADI, and a mechanism exists to make payments to eligible beneficiaries with a claim against a failed insurer. ADI deposits eligible for coverage under the scheme were \$732.4 billion at 30 June 2014, increasing only slightly from an estimated \$722.8 billion at 31 December 2013, reflecting overall deposit growth in the financial system. Initial amounts available to meet payments and administer the scheme are \$20.1 billion per institution. In the unlikely event of a failure, any payments made under the Financial Claims Scheme would be recovered through a liquidation of the failed institution. Any shortfalls would be recovered through a levy on the industry.

The IMF has analysed and tested the financial strength of Australian banks in its Financial Stability Assessment Programme Report 2012. The report found that Australia's financial system is sound, resilient, and well-managed, and that the major banks are conservatively run and profitable. The IMF concluded that if necessary, given Australia's modest public debt, there is space for both monetary and fiscal policy to respond to a significant shock.²

The guarantee of State and Territory Borrowings, also introduced in response to the considerable financial market turbulence in the Global Financial Crisis, only applies to outstanding securities for New South Wales and Queensland covered by the guarantee before it closed on 31 December 2010. As at 31 October 2014, the face value of guaranteed securities was \$13.3 billion. While the risk of default of either government is remote, if a significant economic event were to cause a default by either or both governments, the Commonwealth is likely to be able to recover its guarantee payments through a claim on the relevant state or territory at a future date.

In addition to payments resulting from shocks to the economy, natural disasters are highly unpredictable and are outside the Government's control. They can pose devastating consequences on the Australian community and result in large unexpected increases in payments for disaster aid and recovery funding. While the Government's current balance sheet strength is able to provide capacity for further borrowings without putting at risk existing spending programmes and Australia's debt sustainability, if a natural disaster occurs in conjunction with a significant economic

² IMF's Australia: Financial Stability Assessment Programme Report, February 2012.

downturn, the burden on the Government's finances would put further pressure on the budget.

A fall in the strength of the balance sheet

In addition to an increase in borrowings, certain balance sheet items are required to be recorded at market value and the market valuation of these items make them susceptible to significant economic downturns as prices fluctuate. As a result market movements may have temporary impacts on the strength of the balance sheet.

The Higher Education Loan Program (HELP) is the largest asset on the balance sheet, in terms of individual programs, and represents the net present value of expected loan repayments and therefore future sources of funds. The HELP asset was \$25.1 billion at 30 June 2014 and is projected to grow to \$30.6 billion in 2014-15 and \$52.0 billion by the end of the forward estimates. This growth is largely a result of improved access to student loans and students paying a greater share of the cost of their education. A slow-down in wages growth as a result of a deterioration of economic conditions may lead to slower loan repayments meaning the government cannot repay its debt as quickly.

The investments of the Future Fund are also susceptible to market changes. The Future Fund's investments are estimated to be around \$104.5 billion at 30 September 2014. However, if the Future Fund were to experience negative returns on its investments due to an external financial market shock, its value could fall substantially.

As at 5 December 2014, market value of CGS on issue was \$388 billion. Movements in interest rates impact upon the market value of the Government's CGS liability. For example, lower interest rates that may be used to stimulate the economy will contribute to a higher market value of the liability.