

Debt, the Budget and the Balance Sheet

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Understanding the relationship between the budget and the balance sheet, and the impact of debt on both, is critical in assessing fiscal sustainability. This paper briefly describes the concepts of debt and the cost of servicing debt that are reported in the budget papers.

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Introduction

The *Charter of Budget Honesty Act 1998* ('the Charter') provides the framework in which the government conducts and reports its fiscal policy.

The Charter requires that the government's fiscal strategy be based on principles of sound fiscal management. The Charter defines these principles to include the maintenance of debt at prudent levels, though it also provides for fiscal policy to vary to moderate cyclical fluctuations in economic activity.

The consequence of a change in fiscal policy – as measured by a change in the fiscal and underlying cash balances – will be a change in the government's balance sheet as the government either finances budget deficits through the issuance of debt or the sale of financial assets or it invests budget surpluses in financial assets.

The size and composition of the government's balance sheet will also change where the government issues debt in order to acquire financial assets, either for policy purposes as in the case of the NBN, or in order to maintain a liquid debt market as the basis for the pricing and management of interest rate risk through the broader economy.

This paper examines the different concepts published in the budget papers that summarise the state of the balance sheet; the concepts of the cost of servicing debt; and the factors affecting those costs. The paper sets out a worked example of the costing of the interest savings generated by the sale of a financial asset.

Debt and other balance sheet concepts

The government's balance sheet reports the stock of all government assets and liabilities. Measures such as Commonwealth Government Securities (CGS) on issue, net debt, net financial worth and net worth are aggregates that can be drawn from the balance sheet to provide an indication of the government's financial position at a point in time.²

The government's balance sheet, presented in Budget Paper No. 1, details the market value of CGS on issue over the forward estimates. **Commonwealth Government Securities** on issue is a large component of the government's total liabilities, representing around 95 per cent of interest bearing liabilities (commonly referred to as gross debt).

2 The Government prepares its financial statements – including the balance sheet and the aggregates described in this paper – based on the external reporting standards mandated by the Charter and is obliged to report any departures from these standards. Details of the external reporting standards and accounting policies are published in Budget Paper No. 1.

While CGS on issue provides information on the most common form of government debt, it does not take account of amounts that are owed to the government by other parties. Governments, as do individuals and businesses, hold assets that can be sold to meet financial obligations.

Net debt is a commonly quoted measure of a government's financial position that takes account of some of the assets held by the government. Net debt provides a useful measure for international comparisons, as published by the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development.

Net debt is equal to interest bearing liabilities less a pool of liquid financial assets. Table 1 below, presents the main components that are included and excluded from the calculation of net debt. As shown in the table, the unfunded superannuation liability is not included in the calculation of net debt, nor is the stock of equities and non-financial assets.

Table 1: Components of the key balance sheet aggregates

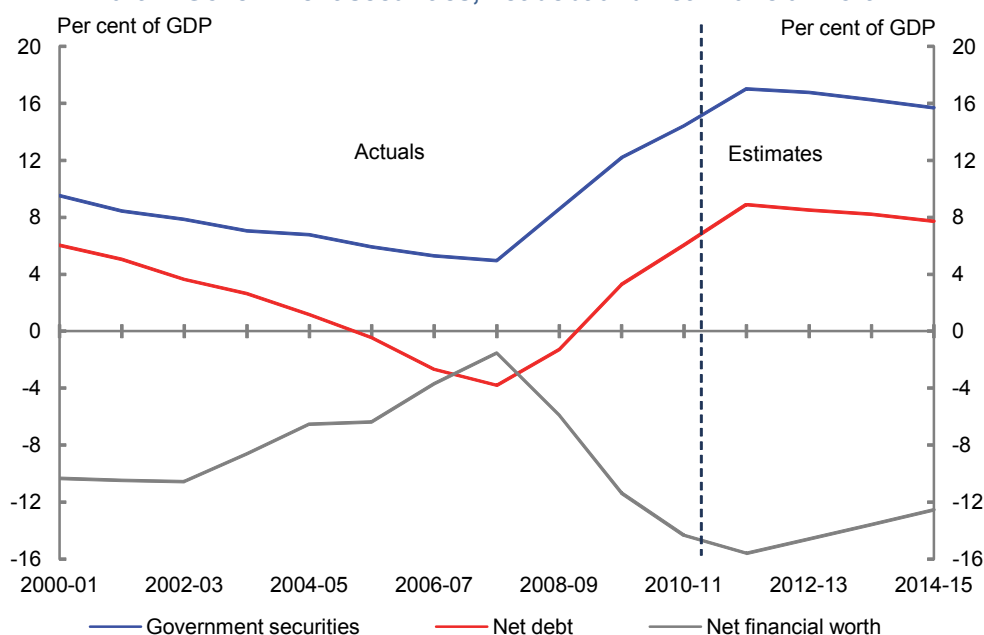
	Assets	Liabilities
Net debt	Cash deposits Advances paid <i>(for example, HELP loans)</i> Investments, loans and placements <i>(for example, Future Fund investments in interest-bearing assets)</i>	Commonwealth Government Securities Loans <i>(for example, IMF capital subscription)</i> Deposits and other borrowing
Net financial worth	As above, plus: Equity investments <i>(for example, equity in government business enterprises such as the NBN)</i> Other receivables <i>(for example, tax receivables)</i>	As above, plus: Provisions and payables <i>(for example, superannuation liability)</i>
Net worth	As above, plus: Non-financial assets <i>(for example, buildings and military equipment)</i>	As above

Source: The Treasury.

Net financial worth is equal to total financial assets less total liabilities. In other words, net financial worth is a broader measure that takes account of a subset of the government's assets – it excludes non-financial assets – but includes the full range of the government's liabilities recognised on the balance sheet³.

Net financial worth includes the government's liability for the superannuation of public servants and military personnel, the largest single difference between net financial worth and net debt.

Chart 1: Government securities, net debt and net financial worth⁴



Source: 2011-12 MYEFO, Final Budget Outcomes for 2000-01 to 2010-11.

In taking account of the full set of the government's liabilities, net financial worth provides a more robust sense of the longer term sustainability of the government's financial position, noting though that it is subject to the short term volatility associated

3 The Statement of Risks published as part of the budget papers discloses the government's contingent liabilities and other fiscal risks that are not recognised in the financial statements because of uncertainty about their timing, magnitude or likelihood.

4 Forward estimates of net financial worth are prepared on the basis of a superannuation liability valued using the actuarially determined discount rate contained in the Long Term Cost Reports for the civilian and military schemes. Actual net financial worth as reported in the Final Budget Outcome is prepared on the basis of a superannuation liability valued using the spot rate on the 10-year government bond prevailing on the last day of the financial year, consistent with Australian Accounting Standards.

with movements in interest rates used in the calculation of the superannuation liability.⁵

Against these liabilities, net financial worth takes account of the full range of liquid financial assets but, in contrast with **net worth**, it excludes non-financial assets that are often illiquid and cannot be easily sold to meet the Government's financing needs (and which are generally held to provide goods or services to the community rather than to yield a financial return).

This means that net financial worth provides a measure of the Government's ability to withstand adverse economic shocks by drawing on its stock of liquid assets to finance its budget.

Impact of debt on the budget: fiscal and underlying cash balances

The budget summarises the government's revenue and expenditure over a specified period of time. In the broad, the budget aggregates measure the extent to which the government commands and allocates the real resources of the economy over that period of time.

The two key budget aggregates – the fiscal balance and the underlying cash balance – measure the net result of these revenue and expenditure *flows* over a financial year, distinct from the *stock* concepts reported on the balance sheet.

- The fiscal balance measures the Australian Government's investment-saving balance. It measures in accrual terms the gap between government revenue and its expenses and investment in non-financial assets.
- The underlying cash balance plus Future Fund earnings is the cash counterpart of the fiscal balance, reflecting the Australian Government's cash investment-saving balance.⁶

The concept of a budget is distinct from how it is financed.

5 Net debt increased by 9.9 per cent of GDP from 2007-08 to 2010-11 whereas net financial worth fell by 12.9 per cent of GDP (the inverse relationship reflects that net debt is calculated as liabilities less assets whereas net financial worth is calculated as assets less liabilities). The bulk of the difference in the size of the movement in the two aggregates was an increase in the superannuation liability of 2.0 per cent of GDP, largely owing to a fall in the ten year bond rate used to discount the future stream of superannuation payments in the Final Budget Outcome.

6 The government also publishes the headline cash balance which is equal to the underlying cash balance plus Future Fund earnings plus net cash flows from investments in financial assets for policy purposes such as equity injections and the Higher Education Loan Program.

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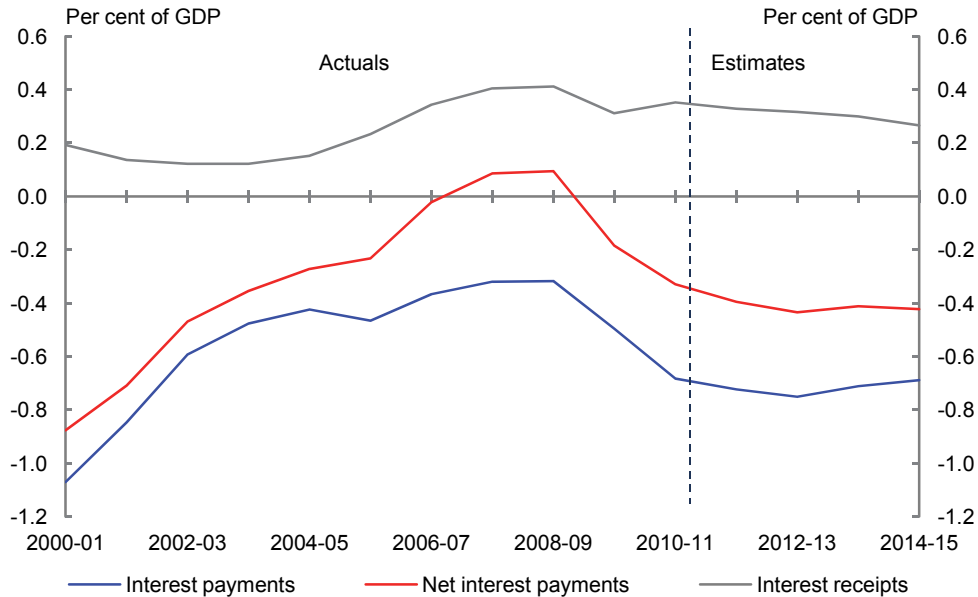
A government running a budget that is in deficit (that is, where its revenues are less than its expenses and investments in non-financial assets) can choose to finance the deficit by liquidating its financial assets, where available, or by increasing its issuance of debt. Conversely a government running a budget that is in surplus can choose to use the surplus monies to invest in financial assets or to retire its stock of debt.

These financing transactions will be disclosed as a change in the composition of the government's balance sheet and are not themselves reflected in the fiscal or underlying cash balances.

The same approach applies at the level of an individual transaction. The impact of any spending on the fiscal or underlying cash balances remains the same regardless of whether that spending is financed through the sale or drawdown of a financial asset or through the increased issuance of debt.

That said, changes in the government's issuance of debt or its holdings of financial assets feed back into the fiscal and underlying cash balances through the resulting changes in the cost of servicing its debt or in the return generated by its financial assets.

Two commonly reported concepts that summarise the effect of the government's debt and financial assets on the cash budget are interest payments and net interest payments.

Chart 2: Australian Government interest payments, interest receipts and net interest payments⁷

Source: 2011-12 MYEFO, Final Budget Outcomes for 2000-01 to 2010-11.

Interest payments (or 'public debt interest') are payments on the government's debt liabilities. Over 95 per cent of the government's interest payments are those made on Commonwealth Government Securities. It is a straight measure of the cost of servicing the government's debt, but it does not take account of the cash interest receipts earned by the government on its investments in interest-bearing financial assets.

Net interest payments are equal to the difference between interest paid and interest receipts. As such, net interest payments take account of cash interest receipts from the government's financial investments (though not of dividends paid on the government's holding of equities). The government's interest receipts are largely derived from its investments through the Future Fund, the Nation Building Funds, the Higher Education Loan Program and investments in Residential Mortgage-Backed Securities⁸.

⁷ Net interest payments are reported in the budget papers as interest payments less interest receipts, but are shown in Chart 2 as interest receipts less interest payments to illustrate its correlation with interest payments.

⁸ Net interest payments is conceptually comparable with the headline cash balance rather than the underlying cash balance given that it takes account of Future Fund earnings.

Reporting on budgetary impacts of debt

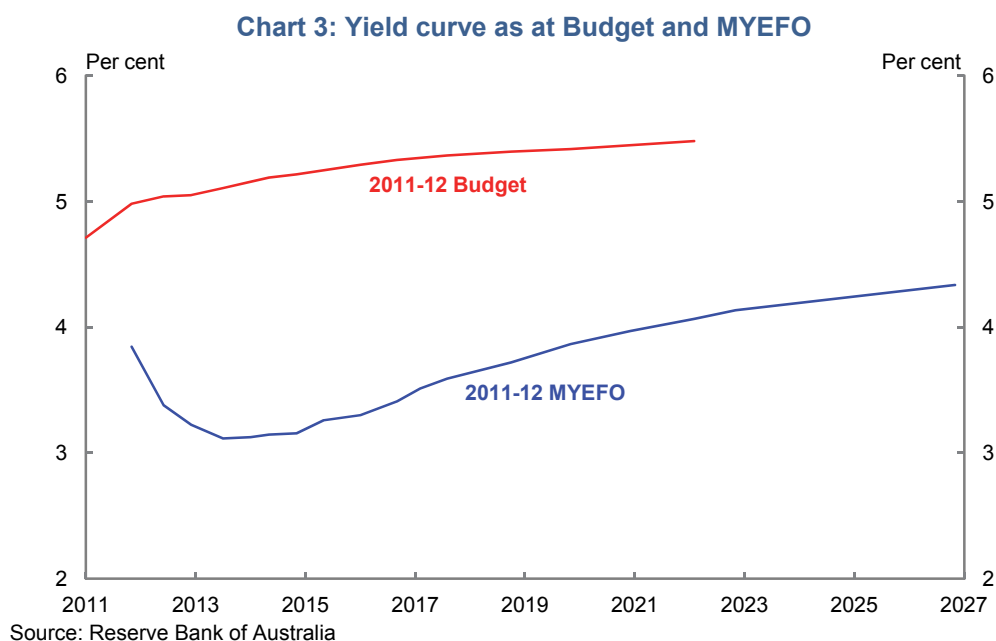
The government reports on its estimated debt and its associated budgetary impact as part of the annual budget and the Mid-Year Economic and Fiscal Outlook (MYEFO), consistent with its reporting obligations under the Charter.

Estimated levels of **debt** are primarily a function of the market value of outstanding CGS on issue and any new issuance required to finance projected budget deficits and investments in financial assets that are not otherwise financed by drawing down on financial assets such as the Nation Building Funds.

- The Government announced in the 2011-12 Budget that it will continue to monitor the liquidity of the CGS market as the budget returns to surplus to ensure that it continues to support the bond futures market. This will mean at some stage the issuance of CGS to acquire financial assets alone rather than to finance the budget (Budget Paper No. 1).

Estimates of **debt servicing costs** are a function of the level of debt, the yield curve and the Government's debt management strategy which is the responsibility of the Australian Office of Financial Management (AOFM).

The yield curve is the comparison of the interest rates on government bonds of different maturity, which is determined by market conditions. Chart 3 shows the shift in the yield curve from the 2011-12 Budget to the 2011-12 MYEFO.



The shift in the yield curve will affect the cost of servicing *new* issuance of debt but will have no impact on the cost of servicing the *outstanding* stock of debt, the cost of which was fixed by the interest rate at the point in time that it was issued. The interest payments reported in the budget papers therefore include both the projected cost of servicing new debt issued across the current yield curve and the historic cost of debt issued in the past. To estimate the cost on new debt issuance the AOFM takes a snapshot of the yield curve at the time estimates are prepared and assumes that it will apply over the estimates period.⁹

The AOFM's objective in managing the government's debt portfolio is to meet its financing task in a cost-effective manner, subject to acceptable risk and to maintain liquidity in the bond and bond futures markets. The AOFM retains flexibility in its issuance across the yield curve to achieve a balance between meeting investor demand, managing refinancing and interest rate risks and minimising the costs of the debt portfolio (AOFM 2010-11).

Preparing estimates of the cost of servicing new debt is a complex process which is sensitive to market conditions and the debt management strategy. Estimates of debt servicing costs are therefore centrally prepared by the AOFM and updated through the budget and the MYEFO processes.

Such a centralised process allows the AOFM to prepare its estimates taking account of the complete financing task for the budget; a necessary approach as debt servicing costs cannot be broken down to the level of individual programs or lines of expenditure given that financing is fungible and there is no basis on which to classify individual programs as being funded from taxation revenue or financed through issuance of debt.

The exception to this rule is the costing of the public debt interest impact resulting from any proposal to purchase or sell a financial asset. Such estimates are prepared in order to provide the government with an approximation of the impact of the proposal on the fiscal and underlying cash balances. Box 1 provides a worked example.

⁹ The constant yield curve methodology used in the preparation of the budget estimates means that the yield curve prevailing at the time of the estimates update is expected to be the same for the issuance of new CGS throughout the estimates period, a technical assumption that reflects the high degree of difficulty in forecasting interest rates.

Box 1: Costing the purchase or sale of a financial asset

Transactions in financial assets represent a change in the composition of the government's assets and liabilities on its balance sheet. The principal invested or raised through the purchase or sale of a financial asset does not affect the fiscal or underlying cash balance unlike the flows associated with that financial transaction (such as the interest on the associated debt or the dividends earned on that investment).

The estimated interest cost or saving associated with the purchase or sale of a financial asset is highly sensitive to market conditions and the Government's debt management strategy, as outlined above. Estimates of interest costs are prepared by the AOFM at each published update of the fiscal outlook taking account of the Government's entire financing task. Given the fungibility of the financing task, it is not possible to disaggregate the interest costs associated with an individual transaction.

However agencies preparing costings of proposed transactions in financial assets are required under the government's budget process operational rules to include an indicative estimate of the interest cost associated with the proposal. This estimate is prepared in order to provide the government with some sense of the impact of the proposal on the fiscal and the underlying cash balances. Such costings necessarily involve a 'rule of thumb' methodology based on simplifying assumptions on interest rates and on timing of financial flows and assuming no change to the government's debt management strategy.

Interest rates

The estimate is prepared using a weighted average cost of funds, reflecting the average cost of raising new debt with weightings reflecting the Government's debt management strategy in issuing across the yield curve. Where there is an upward sloping yield curve, this means that the average cost of funds will be less than the ten year bond rate reflecting the lower interest on issuance at the short end of the yield curve.

Estimates of interest costs prepared for costings purposes use the weighted average cost of funds for the issuance of new debt underpinning the most recently published report on the economic and fiscal outlook prepared under the Charter.

The same interest rate assumptions are used for the costing of the sale of a financial asset as for the costing of the purchase of a financial asset. This is a simplifying approach which implicitly assumes that the cash raised by the sale of a financial asset will be used to reduce the level of CGS on issue by limiting new issuance.

Timing of financial flows

Costings normally present the financial impacts of a proposal across the forward estimates on a yearly basis.

However the interest cost associated with a financial transaction is sensitive to the assumption about the timing of that transaction *within* years. The annual interest paid on a transaction at the start of a year is greater than that of a transaction that occurs near the end of a year.

In the absence of specific information about the within-year timing of a transaction,

interest costings are normally prepared using a simplifying assumption that a transaction will occur halfway through the year.

Worked example of a hypothetical proposal

The rule of thumb methodology can be illustrated through a worked example of a hypothetical proposal to sell a financial asset for \$1 billion in 2011-12.

The interest savings from the sale of the asset are calculated:

- based an assumption that the sale proceeds of \$1 billion are received half way through 2011-12;
- using a illustrative weighted average cost of funds for new borrowing of 5 per cent; and
- with interest savings compounding across the forward estimates.

The calculations are summarised in the table below, showing total interest savings of \$187 million over the forward estimates.

	2011-12	2012-13	2013-14	2014-15
	\$m	\$m	\$m	\$m
Profile for asset sale	1,000	0	0	0
Weighted average cost of funds (%) (a)	5.0	5.0	5.0	5.0
Compound interest on principal (b)	25	51	54	57
Impact of asset sale on the fiscal balance/ underlying cash balance	25	51	54	57

(a) Weighted average interest rate paid on new issuance of debt. Illustrative rates only.

(b) Interest impact in the first year is calculated on the assumption that the sale proceeds are received halfway through the year.

The costing of the proposal would also take account of the costs of selling the assets as well any forgone interest or dividends generated by the financial asset which would offset – partially or wholly – the impact of the interest savings on the fiscal and underlying cash balances.

Conclusion

The fiscal and underlying cash balances record the government's command and allocation of resources through the flow of its revenue and expenses and investment in non-financial assets over a given time frame, conventionally a financial year.

The fiscal and underlying cash balances are distinct from the financing transactions entered into by the government. The government can finance a deficit by raising debt through the sale of CGS or by selling financial assets; the principal involved in these transactions will affect balance sheet aggregates such as net debt or net financial worth but not the fiscal or underlying cash balances.

The assets and liabilities on the government's balance sheet have a feedback effect on the fiscal and underlying cash balances through their associated flows such as the interest payments on debt and the dividends paid on government equity investments.

Costing the impact on the fiscal and underlying cash balances of any proposal to purchase or sell a financial asset needs to take account of the estimated revenue generated by that asset as well as its impact on the government's interest payments associated with changing debt levels, an approximation of which can be calculated through a simplified rule of thumb methodology albeit the results are highly sensitive to the assumed cost of funds (interest rates) and the timing profile of the transaction.

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