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Is It Feasible?

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Abstract

This Policy Brief proposes projections on the evolution of the Australian debt-to-GDP ratio over the long run. Plausible assumptions about the fiscal policy plans that could be implemented until 2050 suggest that Australian public debt is likely to remain on a sustainable path. This conclusion is supported both by some recent academic literature as well as some popular financial indicators. Further simulations conducted to study the role of credibility and clear communication aiming at reducing fiscal policy uncertainty suggest that fiscal policy credibility is likely to be a powerful tool that policymakers should exploit to minimise the costs related to debt stabilisation.

JEL classification: E62, E66

Keywords: Fiscal debt sustainability, fiscal plans, macroeconomic projections, gains from clear communication, policy credibility

Australia’s economic growth has been positive and solid for more than two decades. While the negative financial shock behind the Global Financial Crisis (GFC) has led most countries worldwide to a substantial deceleration of their economic activities, Australia has been remarkably resilient, as displayed in Figure 1. Evidently, the United Kingdom, the United States, Germany, and the world as a whole have suffered dramatic output losses, in particular in 2009. In contrast, Australia has managed to continue growing at an impressive pace.

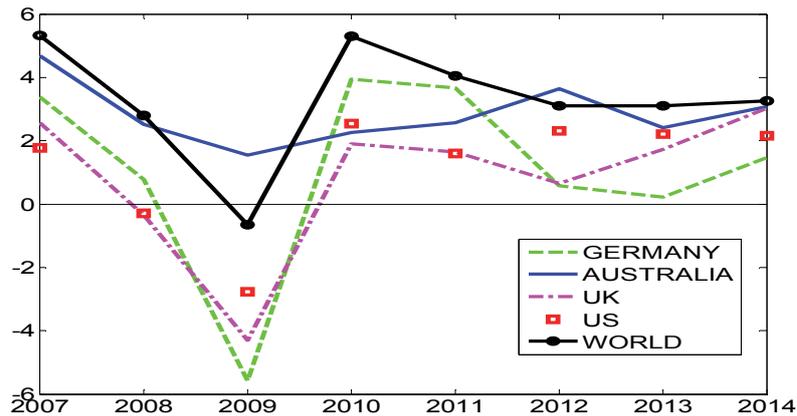


Figure 1: Yearly GDP growth rates, OECD estimates

One of the drivers behind Australia’s economic performance in the last few years is, very likely, expansionary fiscal policy. It is well known that Australia’s debt is very low from an international standpoint. According to some IMF estimates, Australia’s gross debt-to-GDP ratio in 2014 was 27%. To obtain a sense of how moderate this figure is, the same ratio was 107% in the United States, 88% in the United Kingdom and 87% in Germany, not to mention Japan’s 236% and Italy’s 126%. However, the increase in that ratio in Australia has followed spectacularly high rates since 2007, as documented by the OECD—see Figure 2.

This sustained increase in public debt has been judged as worrisome by a number of observers. For instance, the *Financial Review* reported that “Ratings agencies say the Abbott government will need to deliver further spending cuts or tax hikes to ensure Australia maintains its AAA credit rating over the longer term” (5 February 2015). Sensible, but not-necessarily converging, suggestions on how to enhance debt sustainability have come from different economists, with some of them stressing the need to fix fiscal spending first (Gareth Hutchens, ‘No Budget Emergency, Say Economists’, *The Age*, 12 July 2014), and others pointing to tax increases as the way to go (Max Corden, ‘Australia Needs Higher Taxes, Not Spending Cuts’, *The Conversation*, 5 December 2014).

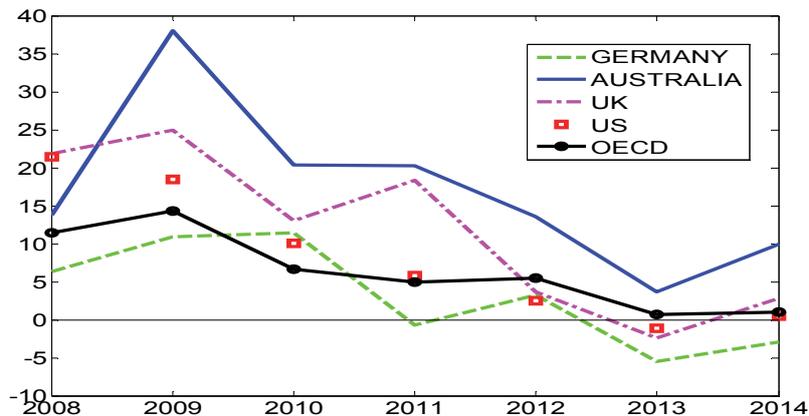


Figure 2: Yearly general government gross financial liabilities over GDP growth rates, OECD estimates

This Policy Brief addresses two questions. First, is Australia’s debt sustainable? Second, how can it be reduced? Answering these two questions is the key to designing fiscal policy plans suited to maintain Australia on the virtuous growth path that it has followed for more than two decades now. The remainder of this Policy Brief discusses issues related to these two questions. In particular, the section on debt sustainability proposes long-run projections conditional on the law of motion of the debt-to-GDP ratio. These projections suggest that, if some needed fiscal adjustments are implemented starting in 2016, Australia’s debt will be likely to follow a sustainable path. Importantly, fiscal consolidation appears to be feasible via a gradual reduction in deficit followed by a temporary and short-lived positive surplus. In other words, no severe austerity measures appear to be necessary for Australia’s debt sustainability to remain possible. As discussed in this section, these predictions appear to be supported by both some recent academic literature and some *prima facie* evidence coming from financial market indicators.

Of course, debt sustainability does not imply debt desirability. Inefficient spending of some sort can be sustainable. However, a welfare-improving move is to cut such inefficient spending. The section on how to reduce fiscal debt will then present some recent results on the costs associated with spending versus revenue-driven fiscal adjustments. The main result there is that fixing fiscal spending may be less recessionary. Clear and credible communication of multi-year fiscal plans is also discussed as a possible way to enhance fiscal sustainability.

IS AUSTRALIA’S DEBT SUSTAINABLE?

When does a country have a ‘sustainable’ debt? In general, a debt is sustainable to the extent that lenders are willing to lend money to a debtor. Hence, as long as a country has access to financial markets, its debt is technically sustainable. Then, the question becomes: When do financial markets

stop lending to a country? Loosely speaking, when the predicted debt-to-GDP ratio is 'too high', something which suggests that the borrower is likely to become insolvent and default.

Is Australia likely to default at some point in time? I tackle this question by simulating different fiscal scenarios with the law of motion of the debt-to-GDP ratio expressed in real terms.

Debt's law of motion. There are four factors driving the temporal evolution of debt. Conditional on past values, and *ceteris paribus*, a higher interest rate on debt and a higher deficit will work in favour of increasing debt in the future; higher inflation and output growth rates will work in the opposite direction. Using the law of motion of debt, we can project the evolution of debt over time. Given that the idea is to understand if debt is sustainable, the projections proposed here cover the period 2016–2050, which is a horizon somewhat in line with those of recent predictions on fiscal aggregates proposed by the Intergenerational Report (Commonwealth of Australia 2015), which computes values until 2055.

To project the debt-to-GDP ratio, we assume the debt-to-GDP ratio to be 22% in 2015. Using values from the Intergenerational Report (Commonwealth of Australia 2015), we then assume a 6% interest rate on Government bonds, a real GDP growth rate equal to 2.8%, and an inflation rate equal to 2.5%. These values are in line with historical averages or consistent with institutional features of the Australian economy. In particular, the growth rate of real GDP is assumed to be slightly lower than the one recorded, on average, in the last forty years in Australia, which is 3.1%. In contrast, the reference for the inflation rate is the median point of the 2%–3% band targeting adopted by the Reserve Bank of Australia since 1993.

The missing component to simulate future paths of the debt-to-GDP ratio is then the sequence of fiscal deficits from 2016 to 2050. Given the calibration described above, different paths of fiscal deficits will then lead to different projected values of debt. We then turn to the discussion of the alternative fiscal scenarios that we assume.

Fiscal scenarios. The first set of simulations assume fiscal deficits to take a given value in 2016 and maintain it 'forever', that is until 2050. The first scenario sets deficits at 2.5%. This scenario aims at roughly capturing what would happen if no fiscal adjustments were implemented. This 'status quo' scenario is then compared to alternative ones in which the deficit-to-GDP ratio is fixed at 2%, 1% or 0% from 2016 onwards. The aim of this exercise is to understand if scenarios in which there is a 'deficit-only' fiscal policy in place (no positive surplus is assumed here) can be consistent with fiscal sustainability.

Figure 3 presents the simulated paths of the debt-to-GDP ratio under these four alternative scenarios. The main messages here are the following. First, some fiscal adjustments need to be implemented to stabilise debt, which would otherwise 'explode'. Second, a 'zero-deficit' strategy from 2016 onwards

would maintain the Australian economy on a fiscal path which can be safely judged as sustainable. In fact, while still predicting an increase in the debt-to-GDP ratio, this strategy would implement a 27% value for this ratio in 2050. When assessed with today’s lens, one can state that: (i) this ratio is extremely low by international standards; (ii) it is much lower than the 60% ‘sustainable’ ratio that the Eurozone countries agreed upon when they signed the Maastricht treaty; (iii) it is extremely low compared to the ‘Maximum Sustainable Debt’ (MSD) for Australia recently computed by Collard, Habib and Rochet (2014). Such MSD is a threshold value for the debt-to-GDP ratio of a country over which financial markets stop lending. When calibrating their model of fiscal debt sustainability for Australia, they find Australia’s MSD is equal to 95%, a value which appears to be a non-binding constraint in the presence of a zero-deficit scenario.

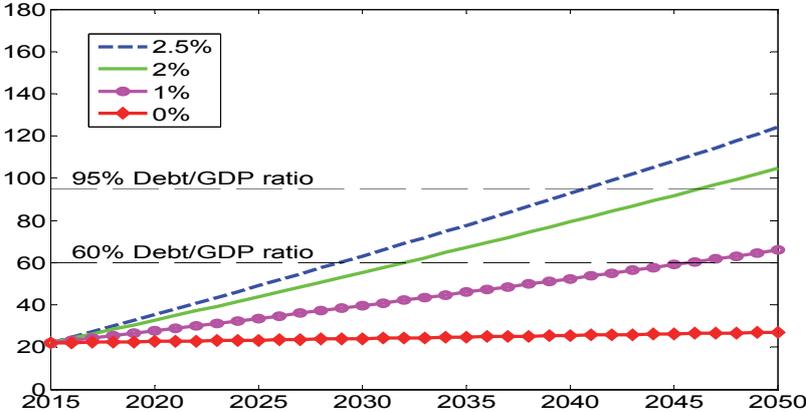


Figure 3: Assumption: Deficits in place ‘forever’

The main message, the sustainability of the Australian debt, appears to be consistent with the trend that some popular financial indicators have followed for a number of years. Figure 4 depicts the evolution of the 10-year Australia–U.S. Government Bond yield spread in the period 2007–2014. Interestingly, this spread shows an upward trend to 2010, probably due to uncertainties surrounding the solidity of the international financial markets and the higher perceived risks in the aftermath of the realisation of the GFC financial shock. In the second part of the sample, however, the spread has followed a downward trend, which can be interpreted as consistent with a drastic fall in the relative risk-premium required by the financial markets to purchase Australian debt, that is 0.52% in February 2015. Consistently the 10-year yield on Australian bonds was 2.5% in February 2015. This suggests that financial markets, which are typically assumed to be forward-looking, currently predict the Australian Government debt to remain sustainable for years to come. Notice that this value is much lower than the 6% assumed here to simulate the fiscal scenarios presented above, but not necessarily inconsistent. In fact, such scenarios focus on expected averages over the long run, while the 2.5% interest rate on Government bonds may very well be temporary.

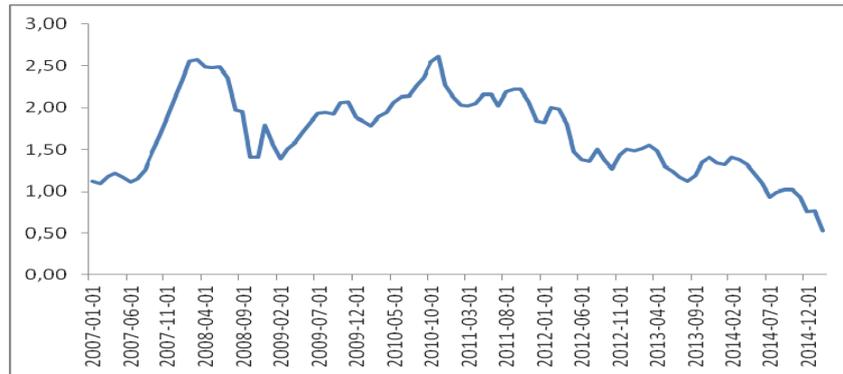


Figure 4: 10-year Australia–U.S. Government Bond yield-spread

Do Australians necessarily have to go ‘cold-turkey’? The ‘zero-deficit’ scenario simulated above suggests that debt sustainability may be achieved by maintaining the fiscal accounts in check. However, one of the assumptions behind the simulated path of debt, is that the deficit should be set at zero in 2016. This could be seen as a ‘cold-turkey’ strategy, because it would require substantial budget adjustments in the very short run by the fiscal authorities. At the same time, this quick stabilisation of the fiscal conditions appears to generate a positive pay-off—that is, debt sustainability. But are the gains of a quick stabilisation large? To address this question it is of interest to compare the zero-deficit scenario with a scenario featuring a much more gradual adjustment of the fiscal accounts. I assume this ‘gradual consolidation’ fiscal plan to feature: (i) a yearly reduction of 0.5% in the deficit-to-GDP ratio from 2015 (where the deficit is assumed to be 2.5% as in the previous scenarios) to 2020; (ii) a surplus-to-GDP ratio of 1% for the next three years, that is 2021–2023; and (iii) a zero-deficit afterwards.

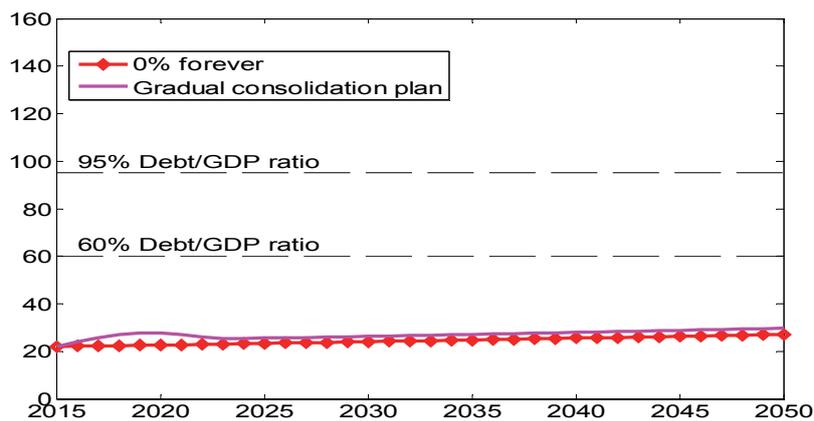


Figure 5: ‘Cold-turkey’ versus ‘gradual consolidation’ plans

Figure 5 portrays the projected debt-to-GDP ratios associated with these two plans. The gradual consolidation plan implies a debt-to-GDP ratio in 2015 equal to 30%. While being obviously larger than the 27% associated with the '0% forever' scenario, there hardly seems to be a difference in terms of debt sustainability. This is good news, because it suggests that debt stabilisation is not only economically likely, but also politically feasible.

HOW TO REDUCE PUBLIC DEBT

The discussion in the previous section has made no attempt to set debt at zero. This is because debt here is not interpreted as a sin. Instead, it is assumed that debt may be a necessity, or at least a worthwhile policy to implement, for a country. If borrowing at a 6% rate endows the government with money which can be spent to implement projects for which the social return is higher than 6%, it makes sense for a country like Australia to borrow that money.

But when is fiscal spending efficient for society? In theory, public spending is necessary to guarantee public goods which are classified as necessary (national defence), in the presence of market failures (e.g., when the market does not provide a good which is socially desirable), and to guarantee a sufficiently high quality of life via transfers and subsidies to poor people and the unemployed. Inefficient fiscal spending, instead, while being sustainable, is clearly not desirable. Given that one way of reducing public deficit and debt is by reducing fiscal spending, Australia could exploit the outcome of the latest spending review to identify areas in which spending is not necessary and cut that spending. Ideally, spending reviews should be conducted once a year to monitor all spending categories in order to regularly reoptimise fiscal plans and minimise spending inefficiencies.

The other way of reducing public debt is by increasing taxes. Increasing direct or indirect taxes has the advantage of guaranteeing a quick inflow of resources to government coffers. However, taxes are often distortionary and tend to be recessionary. Hence, taxation plans should be carefully designed in order not to reduce the overall efficiency of an economic system and not to increase the degree of income and wealth inequality, an issue which is also present in a country like Australia (Joseph Stiglitz, 'Inequality: Why Australia Must Not Follow the US', *The Age: Comment*, 7 July 2014).

Consolidation plans and fiscal multipliers. Leaving theoretical considerations on the design of optimal public spending and taxation plans aside, it is worth stressing here that the recent empirical literature on fiscal consolidation plans has pointed to different fiscal multipliers when it comes to reducing spending versus increasing revenues. Alesina, Favero and Giavazzi (2015) employ a rich dataset, developed by the International Monetary Fund, to investigate the effects of a large number of fiscal consolidation plans that were implemented in several OECD countries in the period 1978–2009. They find tax-based fiscal adjustments to be much more costly than spending-based fiscal consolidations in

terms of short-run real GDP loss. This evidence corroborates the idea of fixing fiscal spending first, something for which a constantly updated spending review appears to be a necessary tool.

More relevant information comes from a different but related literature, namely the literature on nonlinear fiscal multipliers along the business cycle. Caggiano, Castelnuovo, Colombo and Nodari (2015) find such multipliers to be larger in recessions. Their paper points to different effects across recessions and high returns from fiscal spending in deep crises like the 2007–2009 crisis in the United States. This empirical finding suggests that moderate reductions in public spending (if inefficient) might have modest effects in Australia, a country which has recorded a softening in its economic trend but certainly not a recession.

Communication and gains from credibility. Another tool that a government should exploit is communication. A recent theoretical literature shows that uncertainty is an important driver of agents' decisions in the economic system. Caggiano, Castelnuovo and Groshenny (2014) find that a portion as large as 1.8% (in absolute terms) of the increase in U.S. unemployment during the last economic recession is attributable to spikes in uncertainty. Part of this uncertainty is probably due to uncertain policy decisions. According to Baker, Bloom and Davis (2013), an increase in policy uncertainty from 2006 to 2011 may be behind a portion of the U.S. GDP decline in 2007–2009, as large as 2.3%. Once determined, it is imperative to clearly communicate a multi-period fiscal plan to the public. Clear communication, combined with the implementation of fiscal actions in line with the previously stated policy moves, would increase credibility and positively affect financial markets' expectations of the ability of the Australian Government to sustain its fiscal debt. In the case of necessary deviations from the previously presented fiscal moves, such deviations should be clearly and promptly justified to the public.

Are the pay-offs from this enhanced credibility large? A reduced-form analysis suggests that they might very well be. Assume that, given an increase in credibility by the Australian Government, the average risk-premium asked by the markets to buy Australian debt reduces, and the average interest rate on debt goes down to 5%. What does this imply for the gradual adjustment plan scrutinised in the previous section?

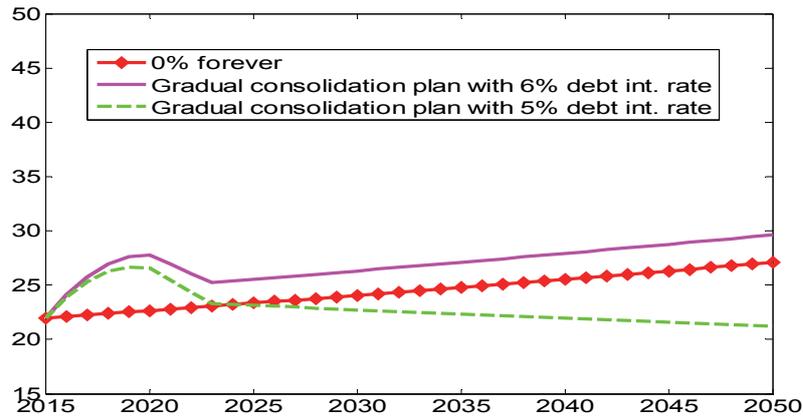


Figure 6: The role of communication and credibility

Figure 6 presents the path of the debt-to-GDP ratio conditional on an interest rate on public debt equal to 5%, along with the paths associated with the ‘0% forever’ scenario and the ‘gradual consolidation plan with 6% interest rate on debt’. The main finding is that gains in credibility which positively affect the interest rates that a government has to pay on borrowings may have positive effects for debt stabilisation. In particular, all else being equal, a reduction of 1% (in absolute terms) of the average interest rate paid on debt leads to a gradual *reduction* of the debt-to-GDP ratio, which—according to our simulations—equals 21% in 2050.

The reason for this ‘switch in slope’ of the path of this ratio is the following. When the real interest rate is larger than the real GDP growth rate, the resources that the government owes its creditors exceed those produced within the country. Hence, the government will need to borrow real balances to compensate for this difference, and the debt-to-GDP ratio will grow, which is exactly what happens in the scenarios featuring our baseline calibration. In contrast, in this alternative calibration which aims at factoring in the role of credibility, the country is assumed to produce resources which exceed those that it has to return to its creditors. Consequently, the debt-to-GDP ratio declines over time. Hence, a gain in credibility having the effect of compressing the risk-premia paid by the government on public debt issued to implement public economic activities would lead to a decrease in the real interest rate and, therefore, open the way for expansionary fiscal policies or, at least, reduce the severity of the fiscal consolidation plan.

CONCLUSIONS

One of the most famous quotes by the former U.S. baseball player Yogi Berra is: “It’s tough to make predictions, especially about the future”. This applies both to baseball and to a variety of other contexts, and fiscal policy outcomes represent no exceptions. In spite of the difficulty of predicting what will happen in Australia in the future, this Policy Brief has proposed some projections to

understand if the Australian debt is sustainable and how to reduce it. Those projections have been coupled with evidence from both the recent academic literature and the financial markets. In summary, the main messages in this Policy Brief are the following:

- Australia's debt-to-GDP ratio is quite low by international standards, and it is likely to be sustainable if needed adjustments are undertaken in coming years. Such adjustments appear to be neither particularly severe nor necessarily urgent. A gradual adjustment plan featuring no positive surplus before 2021, and zero-deficit realisations from 2024 to 2050, is shown to potentially deliver a 30% debt-to-GDP ratio in 2050. This figure is quite low by international standards, and does not in any manner signal fiscal fatigue.
- The first point is corroborated both by some recent academic literature and by signals coming from some key-financial market indicators. Academic literature on fiscal fatigue and maximum sustainable debt suggests that Australia has the potential to reach values for the debt-to-GDP ratio which are much higher than the current or predicted ones. Financial markets are currently asking for very low risk-premia on Australian Government bonds. Given the forward-looking behaviour of financial markets, this evidence appears to be consistent with the idea that Australia's debt is expected to follow a sustainable path.
- Sustainability does not imply desirability. In particular, the degree of efficiency of fiscal spending should be constantly monitored and frequently reviewed so as to maximise the social returns from the allocation of public resources. Taxation plans should be carefully designed to maximise public revenues conditional on a low degree of inequality. Because of the need to reduce debt and therefore improve the current deficit situation, a reduction in spending and/or an increase in revenues is needed. It is worth recalling here that the recent academic literature on fiscal consolidation plans points to spending reductions as the less costly option in terms of real GDP loss.
- Once designed, a multi-period fiscal plan should be clearly communicated and explained to the public by the government. This would reduce fiscal-policy-related uncertainty, therefore minimising the adoption of 'wait-and-see' strategies by entrepreneurs and consumers operating in an uncertain economic environment. Actions in line with the plan would enhance the credibility of the government, with potential gains which may be large. Notably, deviations from the plan due to variations in the economic environment should not necessarily be seen as a reputational cost if the reasons for such deviations are clearly and convincingly communicated to the public.

REFERENCES

- Alesina, A., C. Favero and F. Giavazzi, 2015, 'The Output Effect of Fiscal Consolidation', *Journal of International Economics*, forthcoming.
- Baker, S.R., N. Bloom and S.J. Davis, 2013, 'Measuring Economic Policy Uncertainty', *Chicago Booth Research Paper* No. 13-02.
- Caggiano, G., E. Castelnuovo, V. Colombo and G. Nodari, 2015, 'Estimating Fiscal Multipliers: News from a Nonlinear World', *Economic Journal*, forthcoming.
- Caggiano, G., E. Castelnuovo and N. Groshenny, 2014, 'Uncertainty Shocks and Unemployment Dynamics in U.S. Recessions', *Journal of Monetary Economics*, vol. 67, pp. 78–92.
- Collard, F., M.A. Habib and J.C. Rochet, 2014, 'Sovereign Debt Sustainability in Advanced Economies', Universities of Bern, Zurich and Toulouse School of Economics, mimeo, available at <<http://fabcol.free.fr/>>.
- Commonwealth of Australia, 2015, *2015 Intergenerational Report: Australia in 2055*, Commonwealth of Australia, Canberra, available at <<http://www.treasury.gov.au>>.