DEBTS, DEFICITS AND BORROWING COSTS
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The recent downturn in economic activity has led to large-scale revisions to debt stock projections for all major economies. In this note we look at the projected evolution of debt stocks over the next decade, compare them to our pre-crisis projections from January 2008 and put uncertainty bounds around them. Increased debt stocks may increase the costs of borrowing by governments, and they appear to be a factor behind the increase in spreads on government bonds that we have observed in Europe in the past year or so. We analyse those spreads, and suggest that each excess rise of 34 per cent of GDP in government debt issued by members of EMU might, in the medium term, raise the cost of their borrowing by up to 100 basis points. We should be careful in extrapolating this to the UK situation, but there are lessons to be learnt.

Figures 1–4 plot our projections to 2018 for the major European economies in our current forecast and compare them to the projections made in January 2008. We also include error bounds around the current forecast produced by stochastic evaluations around that forecast.1 The most significant change is for Spain, where the January 2008 path is below the 95 per cent confidence bounds of the current forecast until 2015. The projection for the Spanish debt stock has been revised up by 26 percentage points of GDP for 2012, whilst those for Germany and France peak at a revision of about 20 per cent in four to five years. The current projections for France and Germany are significantly different from those made in January 2008 for the next 2–3 years, but the inherent uncertainty in projecting output, prices, tax revenues and interest rates give us bounds that expand over the next decade to reach 80–100 per cent of GDP for all these countries. The Spanish debt stock is likely to reach around 60 per cent of GDP, the lowest of the major four Europeans, and below the peak reached in the mid-1990s. The German debt stock is likely to peak at around 73 per cent of GDP, whilst that in France will probably reach 90 per cent of GDP before the middle of the next decade. In both cases this will be the highest level seen for at least 40 years. The revision to the Italian debt stock projection takes it to around 125 per cent of GDP, which remains below the 130 percentage points seen in 1998.

As we can see from Barrell and Kirby (2009), the revisions to the UK position are larger, but they start from a lower base point than all these economies, and hence the debt stock is likely to peak well below that of Italy at around 100 per cent of GDP.2 Figures 5–7 plot similar paths for our projections for debt stocks in the US, Canada and Japan, along with the appropriate uncertainty bounds. These countries all show larger revisions to projections than do the core Europeans, although none are as large as that for the UK.

The Canadian debt stock projection has been revised up by 35 per cent of GDP, taking it to a potential peak of 83 per cent of GDP in 2015. This is well below the peak of 100 per cent of GDP debt stock in 1996. Canadian fiscal rectitude in the last decade has involved running surpluses and reducing debt, but it remained at a relatively high level in 2008.

The US debt stock is likely to rise to more than 100 per cent of GDP in 2012, much higher than at any time in the past 50 years, and marginally more than our maximum projection for the UK. Projections for the Japanese debt stock have to take account of the high level of debt already there in 2007, and it is likely to rise to around 200 per cent of GDP. However, the markets do not seem greatly concerned about the solvency of the Japanese government, although there is a one in twenty risk that the debt stock could exceed 250 per cent of GDP.

Deficits are large and revenues are weak because of the scale of the economic downturn, and also because the asset bubbles we have seen in the past decade had raised revenues for stamp duties and the like in counties such as the UK, Ireland and the US. These revenues have now disappeared, at least temporarily. The correlation between the scale of the house price boom from 2000 to its peak with the worsening of the deficit projection for 2010 is around 0.4; we plot the relevant data in figure 8. It is not clear from
this figure whether worsening of the fiscal position flows from lower revenues from housing market transactions or from the impact of house prices on demand. However, in the UK and Ireland, for instance, much of the revenue shortfall comes from this source.

As debt stocks rise it is likely that they become harder to place with willing holders, and hence interest costs on those debts might rise. In aggregate across the world, if government borrowing rises it is likely to put pressure on savings and investment balances and push real interest rates up. This may not be of immediate concern in a sharp recession but it is to be considered in the future. The unwillingness to hold larger debt stocks may reflect a perception that there is default risk, or more likely that there are preferred habitats in portfolios, and holders have to be induced to change the structure of their portfolio holdings by changes in relative rates of return.
Monetary Union in Europe gives us an interesting experiment on rates of return on government debt. EMU has meant short-term policy rates are the same but long-term government bond rates differ. These differences reflect preferences and perceptions of risks, and these change over time. For most of the period since EMU was formed the spread over German long-term interest rates on other government bonds was small and it fell after 2003, as we can see from figure 9, which includes Denmark and Sweden, as they have attempted to shadow the euro. Since the inception of the financial crisis in late 2007 these spreads have widened noticeably, perhaps reflecting worries about the future of EMU, and hence about differential prospects for inflation, or changing perceptions of government default risks. They could also just reflect stable portfolio preferences in the face of changing relative quantities of different assets held in the portfolio. Greece and Ireland...
have seen the largest changes at around 250 basis points, and Italy and Portugal have seen increases in spreads of around 140 basis points. Austria, Belgium and Spain have seen increases of around 100 basis points whilst the increase in the spread for France, the Netherlands, Denmark and Finland has been around 60 basis points.

If we regress the change between January 2008 and April 2009 in the bond spread over German bonds against a constant and the change between January 2008 and April 2009 in the Institute projection for a country’s debt stock (as a per cent of GDP) in 2013, as compared to the change in the German debt stock projection over the same interval, we get a partial explanation of the increase in the spread. The regression results reported in (1) suggest that all bond yields have risen by 57 basis points as compared to German bonds. In addition there is likely to be another 30 basis points increase in the bond spread facing a country for every 10 per cent of GDP relative increase in the debt stock projection for 2013. There is no evidence that changes in the projection of the deficit in 2009 impacted on spreads, and as debt stock projections go forward they gradually lose information content and become insignificant, as we would expect given the increasing uncertainty in those projections as indicated by figures 1–7.

The change in spreads against the change in relative debt stock projections is plotted in figure 10. The largest revisions to debt stock projections are in Ireland, Belgium and Spain, whilst the largest revisions to spreads have been in Greece and Ireland. Clearly other factors are at work, including perhaps a re-evaluation of risks in general. We stress above that debt stock projections are uncertain. We are uncertain about the evolution of nominal GDP and of the price level. We are also uncertain about projections for revenues and spending even given we might know the level of nominal GDP. Our uncertainty bounds in figures 1–7 take account of the possible distribution of outcomes for all these variables. They also take account of our inherent uncertainty about long-term interest rates, and they may be either higher or lower than we currently project.

It is unfortunate that debt stocks are rising so rapidly, but debts of 100 per cent of GDP should be sustainable and it should be possible to reduce them. It would have been
better to have been running surpluses in good times to save up for the current disaster, but of the countries considered here, only Spain and Canada had begun to do this in the past decade. Paying off the debt is relatively easy, but not painless, even though it does not require a government budget surplus in standard accounting terms. If inflation is 2 per cent, and is expected to stay there, then market interest rates on risk-free debt will be 2 percentage points above the equilibrium real interest rate. This excess compensates fully for inflation, and involves paying back 2 per cent of the principal in each period. After twenty years almost half of any debt raised is paid back in this way.

High borrowing will induce high borrowing costs. Market projections suggest that governments are still regarded as safe, and long-term rates on UK government debt, for instance, are still expected to remain below 5 per cent. However, it would be unwise not to consolidate the debt over the next decade. Plans to raise taxes in two to three years, and to cut back on spending, are being considered in most European countries. As high levels of debt in large countries such as the US put upward pressure on real interest rates, a coordinated fiscal consolidation would be welcome.

NOTE
1 See Barrell (2001) and Barrell, Hall and Hurst (2006) for discussions of stochastic simulations on NiGEM.
2 To the extent we can we have made an allowance for the net cost of bank bailouts, but these are currently around 5 per cent of GDP in the UK and less in the European economies.

REFERENCE