



Rethinking Macro Policy II: First Steps and Early Lessons

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In 2009 Queen Elisabeth visited the Economics department of the London School of Economics, discussed the financial crisis and asked a simple question: "why did no one see it coming?" It was a good question, but it could now be expanded because there were two failures.

First, a failure to foresee the crisis coming at all. A failure in, say 2005, or 2006 or 2007 to foresee that we were heading towards a major financial crash. There were some notable exceptions. To different degrees, Nouriel Roubini, Ragu Rajan, and Bill White, issued some warnings. But on the whole the world's central banks and regulators and finance ministries, and the IMF, not only did not warn of impending disaster, but in general propagated a thesis that financial innovation and increasing financial intensity had made crises less likely.

And then a second failure in spring 2009, once the severe crisis of 2008 was behind us: a failure to foresee how difficult and slow recovery would be. No official forecast anticipated anything like the scale and length of the subsequent Great Recession; and almost no one anticipated the scale of the policy stimulus which we would deploy in an attempt to offset recessionary forces. There were to my knowledge no official sector or market forecasts that policy rates, having fallen to the ZLB, would stay there for 4 years – so far, and probably now for several years more.

So why this double failure? There were many specific reasons; and in particular the flawed structure of the Eurozone clearly played a key role in explaining why the initial crash produced a subsequent major after-shock. But I will present the argument, not original but I think so fundamental that it is worth stressing, that central to our poor foresight was a sustained failure over several decades to appreciate and focus on the central importance to both financial stability and macro-economic stability of the scale of debt contracts – the level of leverage both within the financial sector and within the real economy, and in the private sector quite as much as the public sector.

And I will also argue that once we do focus on the fundamental importance of debt and leverage, we may need to consider more radical policies – both macro-prudential and monetary – than we have done so far.

Mervyn King pointed out in a lecture last autumn that the dominant new Keynesian model of monetary economics “lacks an account of financial intermediation, so that money, credit and banks play no meaningful role.” (King, 2012)

In retrospect that was a very odd omission. After all, since monetary policy works through an interest rate, it must presumably work through the financial intermediation system, debt contracts and banks.

But it was not only an odd omission; it was also very dangerous, because debt contracts have very specific features which have major implications for financial stability and macro-economic stability.

Those features were obvious to and a major focus for several midtwentieth century economists, writing amid the wreckage of the 1929 to 1933 financial crash and the subsequent Great Depression, writers such as Irving Fisher and Henry Simons (Fisher, 1933 & 1936; Simons, 1936). And if one reads those economists again, what is striking is the central role that they ascribe to debt creation and debt destruction in the origins and development of the Great Depression, and how radical were the policy prescriptions they proposed in response.

Henry Simons is typically thought of as a foundation figure of Chicago school economics and laissez faire policy prescriptions. But he argued that “*private initiative has been allowed too much freedom in determining the character of our financial system and in directing changes in the quantity of money and money substitutes*”. And he wanted not only to make fractional reserve banking illegal, but to severely restrain the role that even non-bank debt contracts, as against equity contracts, could play in the economy.

Simons and Fisher believed that the more debt contracts there were in the economy, the more fragile it would become, the more vulnerable to harmful financial cycles of the sort that Claudio Borio described yesterday.

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There are at least five interlocking reasons why that could be so, why debt contracts are different from equity.

First, the phenomenon which Andrew Shleifer *et al* have labelled “local thinking”, the tendency to ignore in the good times the downside tail of the distribution of possible debt returns (Gennaioli, Shleifer and Vishny, 2010). When we hold an equity contract, the observed movement of equity prices reminds us each day that returns can go up or down, that we hold a risky investment. But if we hold debt contracts, in the good times we only observe the non-default, full pay-out result. There is therefore a danger that investors will come to believe that inherently risky

debt contracts are safe risk-free investments. And a danger therefore that the aggregate value of apparently low risk debt instruments created will exceed the value which could actually be risk-free, given the underlying real economic risks facing companies and households. As a result as Shleifer *et al* put it, a free financial system may manufacture large volumes of debt securities “which owe their very existence to neglected risk”.

Second, the rigidities and fragilities created by default and bankruptcy processes. As Ben Bernanke observed, “in a complete markets world, bankruptcy would never be observed”. Instead we would see smooth, non-jumpy, continual redefinition of debt terms – steadily converting to equity – as credit worthiness declined (Bernanke, 2004). And as Charles Goodhart and Demetrius Tsocos explored in the 2011 Mayekawa lecture, one of the main deficiencies of modern macro-economic theory, with its representative agent fiction, is the absence of the possibility of default – either of companies, households or banks themselves. (Goodhart and Tsocos, 2011). But in the real world we do see defaults; and as both Bernanke and Irving Fisher described, their operation can play a major role in the propagation of recessions and depressions. Thirdly, debt is quite different from equity because it has to be continually rolled over. One could imagine a working market economy in which the new equity issue market closed entirely for, say, five years. There would obviously be disadvantages, but such closure would not in itself tip the economy into a recession, because the pre-existing equity investments would still exist – they are not continually repaid. But debt contracts continually mature, so that macro-economic stability depends crucially on the smooth continuity of new credit supply, a vulnerability which made Simons so wary of short term debt contracts that he hankered after an economy in which only long-term debt contracts (he suggested 50 years or more) would be allowed.

Fourth, a key focus of Simons and Fisher, the fact that banks do not just, as too many economics textbooks wrongly imply, intermediate existing money into credit. Rather they create new credit and money *de novo*, and introduce maturity transformation risks.

And fifth, the potential for credit extension against assets – in particular real estate – to itself influence the value of those assets. A process which can unleash Minsky-type cycles in which more bank credit creation can beget yet more, with both lender and borrower incentive and economics creating strong procyclical effects. A credit and asset price cycle which, as Claudio Borio said yesterday, is not just a part but the central feature of the financial cycle.

These distinctive features of debt contracts together have, I believe, two implications.

- First, that we cannot assume that the free market left to itself will arrive at an optimal balance of debt and equity contracts. Indeed it will have a systematic long term tendency to create too much debt, too much leverage.
- Second, that the more leverage – probably best measured as debt to GDP – beyond some point, the more potentially fragile becomes both the financial system and the macro-economy. That is what theory should, I believe, tell us, and what some empirical research is beginning tentatively to confirm.

Analysis by Steve Cecchetti and Enisse Kharroubi, (Cecchetti and Kharroubi, 2012) who in an important paper from the BIS last summer suggest that debt to GDP and long term growth rates may be related in an inverse U function, with growth first increasing over some range of increasing financial intensity, but then declining above some turning point.

Those findings would not at all have surprised the mid-twentieth century economists who wrote in the wake of the 1929 to 1930 crash. But we somehow forgot the importance of debt stock levels or wrongly dismissed them as unimportant, and as a result ignored or assumed benign the huge increases in real economy and financial system leverage, in both the formal banking and shadow banking systems, which occurred over several decades ahead of the crisis.

And in our regulatory response to the crisis, I still fear that we have not recognised the scale of the financial fragility risks which debt contracts can create. And I fear that we have not yet been adequately radical in our policy response.

We have significantly increased bank capital requirements. But there are I believe persuasive arguments, for instance set out in Anat Admati and Martin Hellwig's new book (Admati and Hellwig, 2013) that optimal bank capital ratios - the ratios that we would set if we were benevolent dictators of a greenfield economy - would be much higher still, more like 25% to 30%.

But even more fundamentally, our regulatory response still does not overtly recognise that the level of real economy leverage is a potentially vital variable.

Take for instance the indicative measure proposed for the operation of the Basel III counter-cyclical buffer. It is that the buffer should be raised if credit growth is running significantly above past trend, and reduced if it is below that trend.

But that implies that as long as credit growth is in line with trend – as long as it is smooth growth – that is fine even if the trend growth is more rapid than nominal GDP. And even therefore if debt to GDP is relentlessly rising.

I believe that that is inadequate, and that instead we have to start treating aggregate leverage levels (private as much as public) as a crucial indicator, and seek policy measures to contain that level, through for instance limits on maximum allowed loan-to-income ratios.

Deflation in the downswing of the cycle

So we failed to see the crisis coming because we treated relentless financial deepening as either neutral or benign rather than dangerous. But what about the failure of early 2009 – once the crisis had already occurred – the failure to see how difficult recovery would be?

Here again I think our crucial blindness related to debt: a failure to anticipate the strength of the deflationary impetus created by attempted private sector deleveraging in the aftermath of an excess debt crisis. A failure of foresight despite the fact that Japan over the previous 20 years had provided a strong illustration of that effect, well described in Richard Koo's account of a balance sheet recession (Koo, 2009).

- Left by the upswing with debt stock levels they now believe excessive, constrained companies or households become determined to deleverage. They seek to generate financial surpluses with which to pay down debt. And their investment and consumption decisions become highly inelastic to reductions in interest rates.
- Policy rates at the ZLB therefore have little stimulative effect, and private demand falls. Public deficits rise, usefully providing an offset to low private demand, but at the expense of rising public debt levels.
- So that at the aggregate level, leverage doesn't actually fall, but simply shifts from the private to the public sector – the pattern clearly seen in Japan over the last 20 years and in the UK, Ireland, Spain and the US over the last four.

That description is, I think, persuasive, and Eggertsson and Krugman's 2012 paper (Eggertsson and Krugman, 2012) provides a more formal and mathematical explanation of the processes at work, integrating into a new Keynesian framework the assumption that some agents are constrained by debt stock concerns, and as a result make different marginal decisions than non-constrained agents.

And again what is surprising in retrospect is how novel that integration is, how little present were debt stock levels in previous models.

- After all in the arena of international monetary policy we have discussed for decades the potentially deflationary impact of an asymmetry of response between debtor and creditor nations – the former constrained to cut back demand, the latter not constrained to stimulate.

- And what Eggertsson and Krugman do is simply explore the same potential asymmetry as between constrained net debtors and unconstrained net creditors within an economy.

That asymmetry, deleveraging and balance sheet recession process is, I believe, a crucial factor in explaining the slow recovery since 2009.

So the question is: what policies will best help navigate this inherently challenging deleveraging environment? And again here I suggest that we need to be open to more radical policies than so far deployed.

Let's suppose that we want to stimulate aggregate nominal demand, to produce a more rapid path of nominal GDP growth, as Mike Woodford proposed yesterday.

Of course we might not want to: Mervyn King warned us yesterday against assuming that deficient aggregate demand is the only problem – and I certainly agree with that – particularly in the UK.

But let's suppose it is at least part of the problem: how best to stimulate? The predominant current approach is via unconventional monetary tools.

- Policy rates have been at the ZLB for four years, but unconventional policies – QE, twists, credit easing, credit subsidy, central bank liquidity support, forward guidance- are available and have been deployed.

- And all of these tools work via one of two related transmission mechanisms:

- By seeking to influence a wider set of interest rates than the current policy rate alone – long as well as short, expectations of forward rates as well as current rates, interest rates actually paid by endborrowers in the real economy as well as the policy rate in wholesale markets.
 - Or they work by asset price and portfolio balance effects – higher bond or equity prices producing wealth effects and search for yield.
- And the best evidence seems to be that these policies, working via these channels, have had some positive impacts on both price levels and real output.
But there must be two concerns about these policies.

- First, that such policies, working through these indirect and expectational channels, must be potentially subject to declining marginal effectiveness in the specific circumstances of debt overhang in a balance sheet recession. Because if we really do have debt constrained companies or households, focussed on deleveraging, they may be relatively inelastic to reduction in long term rates or to the rates they actually pay, as well as to the current policy rate.

- Second, that a long sustained period of low interest rates must have adverse consequences of the sort that Jeremy Stein highlighted in his recent paper (Stein, 2013) and which the latest GFSR describes: with financial stability risk growing as financial market agents seek to take on leverage, to write put options, to engage in leveraged carry trades. The elasticity to lower current and expected interest rates of responses focussed on asset speculation and search for yield via financial innovation, may turn out greater than the elasticity of response of real economy investment and consumption.

A sole reliance on monetary policy stimulus, working via these indirect and expectational channels, may therefore carry dangers. An alternative of course – or a complement – is fiscal stimulus, directly injecting purchasing power into the economy, rather than operating via indirect channels. The classic argument against is that the first round effects of that stimulus are offset by crowding out, by the central bank response, and by Ricardian equivalence effects, making fiscal multipliers low.

But Brad DeLong and Larry Summers' recent paper (DeLong and Summers, 2012) provides persuasive arguments for believing that in the current conditions of debt overhang and private sector deleveraging, and with central banks committed to maintain interest rates at the ZLB for several years ahead, fiscal multipliers are bound to be far higher. And that – together with the potential limitations and dangers of monetary policy working entirely via indirect channels – suggests the need for caution about a policy prescription which combines rapid fiscal consolidation offset, it is supposed, by unconventional monetary stimulus. But equally, we cannot be unconcerned by dramatic increases in public debt levels.

Richard Koo may be right that without large Japanese fiscal deficits over the last twenty years, the Japanese economy would have suffered a real great depression. But Japanese government debt levels over 200% of GDP and rising cannot simply be ignored. And to the extent that Japanese consumers and companies are aware of that debt burden – which beyond some level they must surely be – such debt levels may indeed generate Ricardian equivalence offsets to confidence and thus to demand.

As a result, it seems possible that balance sheet recessions can place us in a position where the authorities run out of ammunition – the pure monetary bullets ineffective or endangering adverse side effects – the fiscal magazine empty.

But fiscal and monetary authorities combined never run out of ammunition: they can always do what Ben Bernanke proposed for Japan in 2003 (Bernanke, 2003).

- He proposed *"a tax cut for households and businesses that is explicitly coupled with incremental BoJ purchases of government debt, so that the tax cut is in effect financed by money creation"*.
- He stressed that it would be important to be clear that *"much or all of the increase in the money stock is viewed as permanent."*
- He suggested that businesses and companies would willingly spend the money received since *"no current or future debt service burden has been created"* (i.e. no Ricardian equivalence offset would logically arise).
- And, as a result, he argued that the debt to GDP ratio would fall, since there would be no increase in nominal debt but a rise in nominal GDP.

This is helicopter money, or as I labelled it in a recent lecture “overt money finance of an increased fiscal deficit” It is an available policy option. And in technical terms there are no reasons for believing that it would be more inflationary – i.e. would produce a less favourable balance between price and output effects – than would any other policy which would be successful in stimulating nominal GDP.

But there could certainly be powerful political economy reasons for excluding this option, for treating it as taboo. Because if the taboo were broken, politicians might want to use the option in excess and all the time, rather than in small amounts and in the specific extreme conditions of balance sheet recessions.

And that may argue for not being explicit about debt monetisation. As Mike Woodford commented in a dialogue we had together at the London Business School two weeks ago,

- If you inject a fiscal stimulus against the background of a central bank committed to maintaining low interest rates for several years
- ... and with that commitment made credible by a price level or money GDP level target
- ... and if you accept the possibility and indeed likelihood that some of the increase in the monetary base will turn out *post facto* to be permanent.
- Then you have a strategy substantially very close to Bernanke’s helicopter money, but without breaking the potentially valuable political economy taboo. But that strategy still does require a degree of coordination of fiscal and monetary policy: and an acceptance by the central bank that it is facilitating a fiscal policy stimulus, rather than offsetting fiscal austerity via monetary policy stimulus working entirely via interest rate, expectational and portfolio balance channels.

That coordination is made essential by the specific conditions of postcrisis balance sheet recession. It would have been better if we never had got into this situation in the first place, never allowed excessive leverage to develop. But we did, and we need to design policy today in the specific conditions created by those past policy mistakes.

The crisis occurred and was not foreseen because we failed to appreciate

the fundamental importance of aggregate leverage.

And our failure to foresee the slow and difficult recovery reflected the fact that our macro-economic models, while incorporating sticky prices and wages, largely failed to reflect the perhaps still more important rigidities introduced by debt contracts, debt stock levels, and default processes. Integrating financial structure, debt contracts, default and the banking system into macro-economic models is therefore critical – but still at an early stage.

Which makes the title of this conference, 'First Steps and Early Lessons', very well chosen.

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