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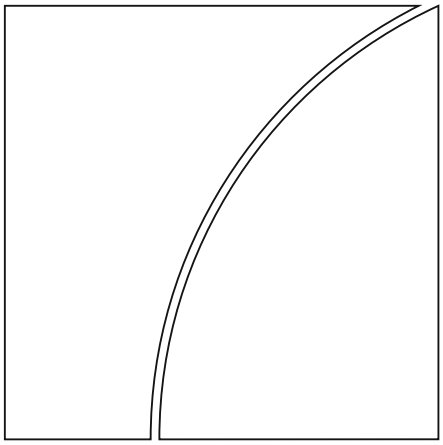

# BIS Papers

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# Foreword

The 13th BIS Annual Conference took place in Lucerne, Switzerland on 27 June 2014. The event brought together a distinguished group of central bank governors, leading academics and former public officials to exchange views. The focus this year was on debt. The papers presented at the conference and the discussants' comments are released as BIS Working Papers 479 to 482.

BIS Papers No 80 contains the opening address by Jaime Caruana (General Manager, BIS) and a keynote address by Benjamin Friedman (Harvard University) and remarks by Stephen King (HSBC) and Masaaki Shirakawa (Aoyama Gakuin University).

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# Debt: the view from Basel

Jaime Caruana[1]

The proposition that I would like to put to you is that there is simply too much debt in the world today. This is speaking from both a financial stability and a macroeconomic point of view.

This is not to say that I have found a good answer to the fundamental question: how much debt is too much debt? Rather, I'm starting from the observation that, if at the beginning of the crisis we were all concerned about too much debt, we now have $40 trillion more debt in the G20 countries than we started with. Debt as a share of GDP currently stands at 40%, up more than 20 percentage points since 2007. This alone makes it difficult for me to take a relaxed view.

It may be the case that the debt is better distributed now, if it has shifted to those who can more ably manage the risks. Also, leverage in the banking sector has improved. What concerns me more are some emerging trends. First, there has been less private sector deleveraging in the major advanced economies than one would have expected after the global financial crisis. Second, there has been a lot of public sector leveraging up in advanced economies. Third, and possibly even more important, is that in some advanced and emerging economies that were less affected by the crisis, we have seen the private sector leveraging up amid buoyant asset prices.

One particular development deserves considerably more attention by both policymakers and the research community: that is, the significant increase of cross-border private debt issuance in what has been called the new phase of global liquidity.

We need a better understanding of this trend. In particular, we need to ask whether a credit boom driven by capital markets is less risky than one driven by banks. The questions are these: is this new phase of global liquidity expansion more likely to end in crisis than have past such episodes? And are the post-crisis regulatory changes and available policy tools sufficient to address the new challenges?

The thesis that there is too much debt in the world seems to contradict the idea that debt is good for social welfare, as memorably expressed by Daniel Webster on the floor of the US Senate: "Credit – man's trust in man – has done a thousand times more to enrich mankind than all the goldmines in the world. It has exalted labour, stimulated manufacture and pushed commerce over every sea." Put in less eloquent terms, the economic welfare benefits that debt can provide are many: by borrowing, households can smooth consumption; governments can offset demand shocks, bringing down involuntary unemployment; and firms can invest more quickly than if they relied solely on their own cash flow.

[1] General Manager, Bank for International Settlements.

These potential benefits of debt should not be underestimated when assessing the current policy environment. But we also need to ask if theory and reality are aligned. With this in mind, let me briefly comment on each type of debt.

First, there is household debt. One clear benefit is that younger people can buy a home by bringing forward future earnings via mortgage contracts. This is a classic case of income smoothing, where householders can take on debt to buy and furnish a home when young and gradually pay the debt down as they approach retirement. However, for some time it's been questionable whether household debt dynamics have been behaving in a way that is consistent with the beneficial aspects of income smoothing. The recent evidence is not encouraging. For example, we have to thank the Riksbank, for shedding new light on this issue. Their recently published data on the distribution of household debt cast doubt on the textbook story:[2] Swedish household debt is high at around 174% of disposable income, one of the highest ratios in Europe. But despite (or because of) the heavy debt overhang, roughly four out of 10 borrowers are not reducing or amortising their debts.

More generally, the hypothetical income-smoothing role of debt seems to be contradicted by what we saw in some crisis-hit countries, where households were extracting equity in good times only to be obliged to pay down the debt in bad times. In other words, household borrowing tended to be procyclical rather than countercyclical, which again does not square with the conventional view of household debt as being driven primarily by the need to smooth income.

Second, there is government debt. Again, textbook theories of government debt highlight the potential benefits of financing government spending during bad times without resorting to tax increases, and then repaying the resulting debt in better times. This, of course, presupposes that governments are prudent and will keep down the average level of debt across the cycle. However, the evidence suggests that governments have behaved in a way that will severely constrain any scope for reaping the benefits of such countercyclical policies. With debt levels close to or above 100% of GDP, many OECD governments are in no position to pursue a vigorous countercyclical fiscal policy any time soon. In some cases, governments may not even be able to activate automatic fiscal stabilisers during a downturn, forcing them to make procyclical cuts as recently seen in the European periphery.

Third, there is corporate debt, which lets firms keep up their investment spending even when it outpaces the growth rate of internal funds. Yet, at present, most corporate sectors are spending less on new capital than profits and depreciation alone would allow. All too often, debt is being taken on as a way of funding higher pay-outs to shareholders (in a form of "de-equitisation").

All these examples – whether household, governmental or corporate – highlight a key point. That is, when indebtedness is pushed too far, debt loses its capacity to bridge temporary setbacks. And the evidence from many sectors in many countries suggests that we may have exceeded this ceiling for the prudent, welfare-enhancing functioning of debt.

[2] See www.riksbank.se/en/Press-and-published/Notices/2014/Economic-Commentary-How-indebted-are-Swedish-households/.

The implications are worth studying. In the BIS's *84th Annual Report*,[3] for example, concerns about debt feature prominently. Let me just mention two issues, the first in relation to growth, the second about the new dynamics of global liquidity and debt.

Global growth has been fuelled by debt for a long time. Some might say too much so. Apart from leading to severe resource misallocations, the resulting financial booms have masked a decades-long erosion of potential growth and a trend decline in productivity growth in the advanced economies.

Ideally we would like to see a change in growth patterns. We would like to see a much greater emphasis on supply side policies that increase growth, thus reducing the need for continued fiscal stimulus. Such policies will also pay dividends in terms of higher revenues and lower spending. Fiscal authorities also need to exercise restraint, especially in good times. More realistic estimates for structural budget balances will help here – for example, we need to make sure that structural fiscal positions aren't artificially inflated by financial booms, with their tendency to temporarily increase tax revenues.

For the private sector, the task is more complex. Research at the BIS has found that, when private sector credit-to-GDP ratios are significantly above their long-term trend, serious banking strains tend to follow within three years. And right now a number of emerging market economies, as well as some advanced ones, have reached this point in the financial cycle.

In the *BIS Annual Report*, we also comment on what we see as the new phase of global liquidity. Traditional funding sources, primarily from banks, are being supplanted by new funding sources that are changing the character of global financial stability risks. Interestingly, corporations, particularly in emerging market economies, have increasingly tapped international securities markets for much of their funding, both directly and through their affiliates abroad.

While the growth of intermediation through capital markets offers some benefits by diversifying funding sources, we're still learning about what this new trend means in financial stability terms. Will the resilience of global financial markets be strengthened or weakened? I will not venture a complete answer, but I will say that the risks are different and need to be better understood. Certainly, the risks will depend on the use of the funds and on the incentives of intermediaries.

For one thing, this type of financing makes market liquidity conditions much more important when assessing financial stability risks. The point here is that market funding conditions are notoriously procyclical, with liquidity being cheap and ample when conditions are good, but liable to evaporate at the first signs of trouble. And, when bondholders rush for the exit, they trigger fire sales and contagion with knock-on effects for other financial institutions.

A second point is that, in this new phase of global liquidity, asset managers have become the central players in global financial flows. One concern is that the practices and incentives of these managers can result in leverage-like amplification of market dynamics with non-linear outcomes.

[3] www.bis.org/publ/arpdf/ar2014e.htm

Third, it may be more difficult to track these risks than those of bank-driven booms. For a start, they are not properly captured in the usual statistics. Borrowing through foreign affiliates may not show up in the balance of payment statistics (or, if it does, when funds are repatriated, the borrowing may show up only as foreign direct investment). Further, relevant data about balance sheet risks are hard to come by and incomplete.

It is time for me to hand over to the experts on debt gathered here. With the level of debt as high as it is, and with few immediate prospects for its reduction, it is critical that we develop our understanding of this new environment and its implications for the global financial system. This includes getting a clearer insight into the changing nature of debt and credit markets, as well as a better understanding of the related policy trade-offs and challenges. At the same time, we should not lose sight of the fact that debt remains too high, and that there are no easy choices about how to achieve a meaningful deleveraging.

Thank you.

# Keynote address: A predictable pathology[1]

Benjamin M Friedman[2]

We meet at an unsettled time in the economic and political trajectory of many parts of the world, Europe certainly included. In Europe in particular, the setting is neither usual nor welcome. Germany's finance minister Wolfgang Schäuble has called last month's elections for the European Parliament "a disaster," going on to conclude that "all of us in Europe have to ask ourselves what we can do better … we have to improve Europe." To be sure, an election is a political event. But just as surely, here and now as in other times and places, what underlies the politics is to a large degree the economics. What is happening in many parts of Europe today is not just a pathology, but the predictable pathology that ensues whenever the majority of any country's citizens suffer a protracted stagnation in their incomes and living standards.

The origins of this stagnation, in the parts of Europe where it is occurring, are broadly understood. More than half a decade ago, Europe imported the backwash of the financial crisis spawned in the American mortgage market and the US banking system more generally. Factors idiosyncratic to one European country or another – fiscal imbalance, eroded competitiveness, an American-style construction boom, an excess of impaired bank assets, and the like – rendered some parts of Europe especially vulnerable. In the familiar way, both monetary and fiscal policies likewise played a role (although in this context it is not clear what one means by a European fiscal policy). But a large part of the story too bears on the subject of today's conference – "Debt" – and, in particular, the sovereign debt crisis that Europe has also now been confronting for more than half a decade.

The euro area constitutes a remarkable experiment in this regard. The fact that it is a monetary union without a fiscal union behind it is of course entirely familiar. But a seldom discussed implication of this anomaly is that the euro area economy has no government debt. By "government debt" I mean obligations issued by a public entity empowered to print the currency in which the obligations are payable. All other major economies we know – the United States, the United Kingdom, Japan, Sweden, Switzerland and many others – have government debt in this sense. In the euro area, by contrast, public sector debt is entirely what Americans call "municipals" – that is, obligations issued by public entities not authorised to print the currency owed. It is this feature that makes the bonds issued by Massachusetts, or New York, or Texas, subject to default in a way that US government debt is not. The bonds of all euro area states, even those currently regarded as most secure, like Germany's, are likewise subject to default in the same sense. It would be difficult to exaggerate how unusual an experiment this situation represents. I am unable to think of another modern example of a major economy with no government debt to anchor its financial structure.

[1] I am grateful to Timothy Guinnane, John Olcay and Peter Temin for helpful conversations.

[2] William Joseph Maier Professor of Political Economy, Harvard University.

A further unusual aspect of Europe's situation in this regard is that, following the various actions taken to date, what amounts to municipal debt issued by some of the entities whose fiscal condition is the weakest is, increasingly, owed not to market investors generally but to official lenders. This ownership matters because, unlike private market investors, official lenders in principle do not accept defaults. To a certain extent, of course, this is a fiction. But widely maintained fictions often guide actions, especially in public decision-making, and sometimes they do so with highly unfortunate consequences. This particular fiction also strengthens the commonplace European presumption – which strikes many Americans as bizarre – that sovereign default by a euro area member state would necessarily trigger the country's exit from the currency union. From time to time in America's history, US states have defaulted on their general-obligation bonds, and it may happen again. In the recent financial crisis, the two states whose bonds the market deemed most at risk were Illinois (because of unfunded pension obligations) and California (because of the state's overall budget imbalance at the time). It would not have occurred to an American that if, say, Illinois defaulted on its GO bonds it would, on that account, have to exit the dollar currency union. But this principle seems to be the working assumption in much of the current European conversation.

The route by which Europe arrived at this situation is also well known. The governments of fiscally strong countries lent, or gave, funds to the governments of fiscally weak countries, allowing them to service their existing debt and to issue new debt. (This process also allowed the governments of the fiscally strong countries in effect to bail out their lending institutions without acknowledging that they were doing so, thereby maintaining yet another fiction that may or may not be useful.) The fiscally strong countries provided these transfers and new credits mostly in exchange for imposition of contractionary fiscal policies – and, supposedly, structural reforms – in the fiscally weak countries, in both cases with the goal of rendering them better able to manage their debt. But the problem with the former is that, despite economists' ability to devise theoretical demonstrations to the contrary, contractionary fiscal policy actually is contractionary. The problem with the latter is not just that structural reforms are politically difficult to implement, but that even when implemented they take a long time to become expansionary. Moreover, even then they are often expansionary in a highly non-neutral way, exacerbating already unwelcome trends in income distribution.

In a group consisting mostly of economists, it is useful to recognise that this approach to Europe's debt crisis, and even more so the underlying attitudes it reflects, are counterintuitive in yet another way. The standard presumption in economics, dating to the conception of "commerce" articulated by David Hume and Adam Smith and their contemporaries, is that market transactions involve two parties, each of whom acts voluntarily and with sufficient information to make a choice. In the case of credit transactions, this means presuming that both borrowers and lenders acted voluntarily. Among borrowers there are familiar exceptions such as the inherited debt of deceased parents, or the "odious debt" issued by a country's prior regime, and for just this reason they are normally treated differently. Similarly, there is a stronger case for the presumption of informed voluntariness on the part of institutional lenders than individuals, and this difference in information and expertise provides a standard rationale (along with risk diversification) for financial intermediation. By contrast, today's public discussion surrounding the European sovereign debt crisis mostly presumes that when a bond is in trouble, the

*lenders* – especially institutional lenders – are victims. In parallel, there is an almost religious presumption of guilt among the borrowers.

From a historical perspective there probably *is* something religious about these presumptions. Although Jews and Christians and Muslims long regarded lending with suspicion (and Muslims still do), by the beginning of the 19th century evangelical Protestants had mostly come to regard *borrowing* as sinful, even when the debt was serviced and repaid on a timely basis. Non-payment, of course, elevated the negative moral connotation to a whole different plane. As the 19th century moved on, in one European country after another (and in America too) the active frontier of this debate was often the movement to introduce limited liability for what we now think of as corporate borrowers and equity investors: limited liability represented a retreat from what historians often refer to as the "retributive philosophy" of 19th century evangelicalism.[3] By mid-century, public attitudes had begun to change, driven in large part by the new awareness of the possibilities for ongoing economic growth and waning ambivalence toward it. Even so, the lingering opprobrium attached to borrowing persisted, especially in the public sector context. As one long-ago historian of HM Treasury described this development, "An ethic transmuted into a cult, this ideal of economical and therefore virtuous government passed from the hands of prigs like Pitt into those of high priests like Gladstone. It became a religion of financial orthodoxy whose Trinity was Free Trade, Balanced Budgets and the Gold Standard, whose Original Sin was the National Debt. It seems no accident that 'Conversion' and 'Redemption' should be the operations most closely associated with the Debt's reduction."[4]

Today a reversion to the "retributive philosophy" of the 19th century – to the view, in the words of another historian of that day, that "a just economy was more to be sought after than an expanding one" – is clearly in evidence in Europe's approach to its sovereign debt crisis.[5] Whether Europe's economy has thereby achieved justice is a matter for a different discussion. It has clearly foregone expansion. The imposition of contractionary policies in the most heavily indebted countries has reinforced a perverse feedback between weak economies and questionable sovereign debt, with a further feedback between both of those and troubled banks. Cross-border lending has significantly contracted, and some countries face what amounts to a credit crunch despite the ECB's expansionary monetary policy. Nor are these simply isolated phenomena, with little bearing on the broader European economy. Back when I was first teaching economics, a plausible exam question was "Why is unemployment in Europe always so much greater than in the United States?" Then, for some years, asking the question in the opposite direction seemed more apt. Today, with the euro zone unemployment rate roughly double that in the United States, we can bring out the old exams again.

The more fundamental consequence is ongoing stagnation of incomes and living standards for the majority of the population in many European countries. The median household income in the United Kingdom, adjusted for what little inflation

[3] See, for example, B Hilton, *The Age of Atonement: The Influence of Evangelicalism on Social and Economic Thought, 1785–1865*, Oxford University Press, 1986, p 244.

[4] H Roseveare, *The Treasury: The Evolution of a British Institution*, Allen Lane Penguin Press, 1969, p 118.

[5] Hilton, *Age of Atonement*, p 248.

there has been, peaked in 2007 and has yet to regain that level. France, Italy and the Netherlands have not experienced complete stagnation by this measure, but the real median income in each has seen only a minimal increase. Ireland, Greece and Portugal have all experienced stagnation, or worse, in real median income over this period. Spain did too for half a decade, only last year finally enjoying a solid increase.

A parallel stagnation of incomes has taken place in the United States as well, but America's federal fiscal structure provides at least some built-in cushioning mechanisms that Europe lacks. Further, in Europe's fiscally weak countries the usual frustration over stagnant incomes and living standards is today compounded by the sense of being dictated to, in many citizens' eyes perhaps even exploited, by foreigners. Twenty-five centuries or so ago, if another city-state had conquered the Athenians the then-conventional tribute would have required some hundreds of Athens's finest youth to trek off to the victors' lands, to do forced labour, and an equal number of Athens's fairest virgins to go as well, for purposes best left unspecified. Today's political conventions are sharply different, but the resulting youth labour flows are similar.

And, as Mr. Schäuble has highlighted, the all-too-familiar consequence of this economic stagnation, together with the widespread absence of employment opportunities, is a turn away from (small-L) liberal values toward xenophobic populism of either the right or the left. The same pathology has emerged before, again and again, in one country after another around the world, whenever the citizenry has lost its sense of forward progress in its material living standard, and lost too the optimism that that progress will resume any time soon. Europe today increasingly looks to be on the verge of repeating key elements of the experience of the years between the two World Wars, with not only the ascendency of extremist political movements but cross-border communication among them. There are differences, of course: in the 1930s the central node of that communication was the rising Nazi movement and then government in Germany, while today it looks as if the facilitating vehicle will instead be the European Parliament. But the effects are parallel, and so are parts of these groups' programs, today including the campaign to roll back within-EU immigration and EU regulatory authority, not to mention the entire European Union project.

With European monetary policy already expansionary – with the introduction just last month of a negative redeposit rate, innovatively so – and since Europe as such has no fiscal policy, the urgent need today is for debt restructuring and relief for the fiscally weak European countries (and it is useful to recall that in real time it is often hard to tell the difference between the two). In a similar way, in the United States today there is need for relief for underwater homeowners whom the bail-out of US lenders a half-decade ago largely neglected. But the need in Europe is more acute.

Again looking back to the interwar period, there is ample precedent, within Europe, for both debt relief and debt restructuring. Indeed, that experience is also the origin of our host institution this evening. The reparations due from Germany under the Versailles treaty were quickly transformed into the obligation to service two series of bonds, scaled to reflect the recovering country's ability to pay; but in the end neither bond was ever fully paid. Initially, the Weimar government serviced the bonds to foreign investors at the same time as German states and local governments were borrowing from abroad, so that on net the international flows

were mostly recycling while within Germany there was substantial intergovernmental shifting of burdens. The 1924 Dawes Plan and then the 1929 Young Plan further reduced what Germany owed, and each arranged for yet a new foreign loan. The need to facilitate transactions under the Young loan is what led, in 1930, to the creation of the Bank for International Settlements.

The Lausanne Conference in 1932 ended all German reparations payments, in exchange for which Germany deposited with the BIS bonds representing a small fraction of what was originally due; the bonds were never issued, and some years later the BIS burned them. By then Germany had acquired other foreign debts, however. The Nazi government initially serviced the debt but blocked the conversion of the Reichsmarks paid into foreign currency. It then began making payment half in Reichsmarks and half in non-convertible Reichsbank scrip. After a series of further steps, in 1934 Germany defaulted on both the Dawes and the Young loans.

After the war, the 1953 London Debt Conference took up the matter of Germany's unfulfilled commitments, including government debt, state and local debt, and even private debt. The London agreement reduced the amount due by at least half (most likely more, depending on the calculation) and rescheduled the remainder so that no principal payments were due for five years and the rest strung out over 30 years. A significant part of the debt was further deferred, with no interest due along the way, until such time as reunification might occur – which turned out to be nearly four decades later. The United States also converted into grants most of the loans extended under the Marshall Plan, in parallel with treatment of the other recipient countries, and did the same for loans under the Government and Relief in Occupied Areas programme.

As one historian summarised the approach taken to Germany's post-war debt relief, "at the time of the London conference most observers had in mind long years of what they viewed as Germany's irresponsible treatment of foreign debts and property owned by foreigners." Nonetheless, "The entire agreement was crafted on the premise that Germany's actual payments could not be so high as to endanger the short-term welfare of her people … reducing German consumption was not an acceptable way to ensure repayment of the debts."[6] The contrast to both the spirit and the implementation of the approach taken to today's overly indebted European countries is stark.

There is no economic ground for Germany to be the only European country in modern times to be granted official debt restructuring and debt relief on a massive scale, and certainly no moral ground either. The supposed ability of today's most heavily indebted European countries to reduce their obligations over time, even in relation to the scale of their economies, is likely yet another fiction – and in this case not a useful one. As the last decade's financial crisis fades into the past, and market interest rates move up to a more normal configuration, these countries and others too will find their debt increasingly difficult to service. In the meanwhile, the contractionary policies imposed on them are depressing their output and employment, and their tax revenues. And the predictable pathology that follows from stagnant incomes and living standards is already evident.

[6] T Guinnane, "Financial Vergangenheitsbewaltigung: The 1953 London Debt Agreement", Yale University, Economic Growth Center, Discussion Paper, no 880, 2004, pp 22, 24, 31.

James Tobin often remarked that there are worse things than three percent inflation, and from time to time we have them. Indeed, we just did. In the same vein, there are worse things than sovereign debt defaults, and from time to time we have them too. They are in progress as we meet.

# Remarks by Stephen King[1]

Are central banks still successfully dealing with the effects of the last financial crisis or, instead, are they creating conditions that could trigger the next one?

If debt was too high as a share of economic activity pre-2007, it is even higher now. For all the talk of deleveraging, at the aggregate level there has merely been a game of "pass the parcel". Even when economies have staged stronger than expected recoveries – in 2013 and early-2014, the UK grew much more quickly than forecast – those recoveries have relied on falling household savings rates and strong housing gains, echoing aspects of the pre-2007 world.

All the while, monetary policy has remained remarkably accommodating. While there have been a few tweaks here and there – the Bank of England is no longer adding to its asset purchases while the Federal Reserve has been tapering its purchases – interest rates across the developed world remain remarkably low. Both the Bank of Japan and the ECB are thinking about further unconventional stimulus actions, in the ECB's case a reflection of growing deflationary pressures.

Where the evidence suggests financial conditions are perhaps a little frothy, there is often a bias against the use of monetary policy to offer any form of restraint. With an increased emphasis on financial stability objectives – conveniently assumed to be separate from monetary objectives – central banks are placing more emphasis on macroprudential policies that are mostly experimental and, thus, relatively risky. And when central banks hint at rate increases, they emphasise that interest rates are unlikely to return to pre-crisis levels. Forward guidance may have become a little erratic of late but, nevertheless, central banks are keen to emphasise that monetary accommodation will be here for some time.

The evidence to date suggests that, although monetary conditions are very loose, economic activity remains mostly rather depressed. The euro zone has its own, well documented, problems but weakness has also been seen elsewhere. Forecasts for US economic growth have persistently been too optimistic. Emerging nations are no longer growing at the pace of old.

This weakness may have less to do with a lack of stimulus and more to do with structural difficulties facing the world economy. Following heady rates of expansion in the 1980s and 1990s, US economic growth has averaged only 2% per year since 2000. Emerging economies did well between 2008 and 2012, nurtured on a diet of strong Chinese domestic demand and hot money inflows linked to the West's quantitative easing. Since then, however, many have succumbed to a combination of much lower growth and tricky balance of payments problems.

Weak growth may simply be a reflection of excessively high levels of debt, as suggested by Stephanie Lo and Kenneth Rogoff.[2] If so, more deleveraging may be required before a proper recovery can take shape: that means either debt repayment, higher inflation or, perhaps, some form of default or restructuring.

[1] Chief Economist, HSBC.

[2] See S Lo and K Rogoff, "Secular stagnation, debt overhang and other rationales for sluggish growth, six years on", conference paper in this volume.

Alternatively, weak growth might reflect a Keynesian-style "secular stagnation", as favoured by Larry Summers, in which case interest rates are unlikely to rise for a very long time.

Then again, weak growth might reflect a series of more profound supply-side weaknesses, as I argued in *When the Money Runs Out: The End of Western Affluence* (Yale). Growth in the western world in the second half of the 20th century was boosted by a massive re-opening of world trade, a big increase in opportunities for women in the workforce, a large expansion of tertiary education opportunities, financial liberalisation (with a concomitant increase in debt) and, most obviously, a temporary workforce boost thanks to the baby boomers. As the influence of these factors fades, the long-term growth rate is likely to fall: and, as it falls, so debt becomes a bigger problem both economically and politically. Worse, promises made based on an extrapolation of trends seen during the good times – in areas such as healthcare, education, pensions, corporate earnings growth – will in some cases now have to be broken, creating an environment of uncertainty hardly conducive to entrepreneurial risk-taking.

Under these circumstances, persistently relying on monetary policy alone to stimulate growth may make matters worse. Monetary policy – whether conventional or otherwise – may have acted as a powerful antibiotic in 2009 when the risk of another Great Depression was frighteningly high but it is now looking more like an addictive painkiller. And, as with all painkillers, there are side effects.

- Persistently low interest rates – particularly long-term interest rates – can lead to false market signals, particularly if low interest rates result from "distortions" such as quantitative easing or the activities of Chinese reserves managers. Those false signals, in turn, can lead to rapid and possibly inappropriate increases in other asset prices: a gap can then open up between financial hope and economic reality.
- The pursuit of higher growth and lower unemployment via loose monetary policy may lead to heightened uncertainty in currency markets. One country's monetary stimulus may be regarded by another country as a "beggar-thy-neighbour" currency devaluation.
- If monetary and financial policies are supposed to solve for inflation, growth, employment and financial stability, central bankers will increasingly be dragged into inherently political areas that, in time, could combine to undermine the independence of the institutions they work for. This is particularly so if asset purchase programmes lead to both big gains for wealthy asset holders and losses for wage earners faced with higher import prices.
- Persistently easy monetary policy may allow inefficient companies to survive: the resulting overcapacity then makes the entry of new, more dynamic, competitors less likely. Employment may hold up better in the short term but there are likely to be significant costs in the form of lower medium-term growth and poor productivity performance. Moreover, constant monetary bailouts – a continuation of what used to be known as the "Greenspan put" – might create a "heads I win, tails you lose" mentality, encouraging destabilising behaviour.
- Setting interest rates at very low levels may trigger another destabilising "hunt for yield". With the retirement age having risen only modestly in the western world, assets are being "worked harder" to deliver the desired returns for baby

boomers now heading into retirement. Offering unusually low interest rates is likely only to encourage excessive risk-taking. A better option would be to raise retirement ages, encouraging people to work for longer and, thus, become less reliant on sweating financial assets.

Faced with these challenges, it is easy to see why central bankers have become more enthusiastic about macroprudential policies. In theory, financial conditions can be tightened without an impact on monetary conditions. However, it may be that macroprudential policies have become popular only because of what might be best described as "wishful thinking", based on the idea that monetary and financial conditions are somehow independent from one another.

Previous experiments involving broad-brush interventions based on similar assumptions, however, have not always succeeded. In the 1970s, for example, a failure to recognise the role of monetary policy in generating excessive inflation led to the use of incomes policies. They became increasingly popular not because there was any evidence that they worked but, instead, because policymakers needed tools to deal with both excessive unemployment and undesirably high inflation: by limiting wage gains, the idea was that inflation could be brought down without leading to higher unemployment. As it turned out, incomes policies did more harm than good, leading to mispricing within labour markets and rapidly deteriorating industrial relations. More recently, macroprudential experiments elsewhere in the world have delivered decidedly mixed results: Spain's "dynamic provisioning" in the years before the global financial crisis did little to prevent a subsequent financial meltdown. That, arguably, was provoked in part by monetary conditions – and "hot money" inflows from northern Europe – which were totally inappropriate for the Spanish economy.

If macroprudential policies are inexact and prone to failure,[3] monetary policy may ultimately have to play a bigger role in safeguarding financial stability. Arguably, however, quantitative easing encourages exactly the opposite. Central banks are in danger of becoming a new source of so-called "uninformed funds".[4] Pre-financial crisis, reserve managers in emerging markets were the primary source of such funds, in effect blindly buying a range of supposedly low-risk assets – government and agency paper – with the result that yields ended up remarkably low, thus leading others to engage in the "hunt for yield". Central bankers today may claim to have different motivations but the results are likely to be similar: currency undervaluation, loose monetary conditions, indiscriminate declines in yields and, inevitably, an increase in risk-taking.

Monetary and financial policies are in danger of providing conflicting messages: loose monetary conditions are designed to kick-start growth while financial policies are designed to limit potentially destabilising financial risk. To the extent, however, that one of the most important transmission channels of monetary policy is via the financial system, the independent use of monetary and

[3] A view supported by M Obstfeld, "Trilemmas and trade-offs: living with financial globalisation", a conference paper in this volume, in which the author suggests the existence of a financial policy trilemma.

[4] For a more detailed discussion, see T Santos, "Credit booms: implications for the public and private sectors", conference paper in this volume.

macroprudential policies creates the economic equivalent of a Dr Doolittle "push-me, pull-you", where the overall direction of policy is decidedly unclear.

One way to escape from this impasse is simply to recognise that the monetary remit needs to be broadened to address not only price stability but also financial stability.[5] We know from countless recent examples that the precision-engineered pursuit of price stability has not always been consistent with financial stability and, on some occasions, may even have contributed to financial instability which, in turn, has destabilised inflation over longer horizons. It turns out that the claims made by protagonists of the Great Moderation were, to say the least, exaggerated.[6] It is precisely because inflationary expectations were so well anchored that the complacency associated with the Great Moderation became so widespread. Yet a casual glance at economic development over the very long term demonstrates that, even with low inflation, financial instability remains a key risk.

This provides a clue as to how the aims and ambitions of monetary policy should be re-shaped. The aim should not be to deliver price perfection or optimum output because, in both cases, excessive risk-taking will follow shortly thereafter. Central bankers who promise too much will only end up fostering the kind of behaviour that ultimately leads to financial instability. Instead, policymakers should aim for "positive ambiguity", using monetary policy to deliver a combination of price stability, a high level of output and, importantly, a heightened sense of financial stability. Of course, there is no way in which a single policy instrument can be used to achieve all three objectives simultaneously. Importantly, however, there will be occasions when the central bank should downplay the inflation objective in the pursuit of financial stability: policymakers should fully expect to preside over occasions in which inflation is either well above or well below target and likely to remain there for a considerable length of time.

Such an approach would hardly be transparent. The advantage of positive ambiguity, however, is that it reduces the chances of one-way bets and herd behaviour. Given recent experience, that can only be a good thing. Importantly, the approach explicitly recognises the importance of monetary conditions for financial stability – as opposed to pretending that financial stability can somehow be separately defined and controlled. Failure to recognise this link, with the resulting overreliance on untested or unreliable macroprudential policies, may only serve to sow the seeds for the next financial upheaval.

[5] For a more detailed discussion, see S King, "What's wrong with inflation targeting and how to put it right", HSBC, 9 June 2014.

[6] See, for example, O Blanchard and J Simon, "The long and large decline in U.S. output volatility", *Brookings Papers on Economic Activity*, vol 1, 2001, pp 135–64, and B Bernanke, "The Great Moderation", remarks at the meetings of the Eastern Economic Association, Washington DC, 20 February 2004.

# Excessive debt and the monetary policy regime

Remarks by Masaaki Shirakawa[1]

## Debt in the macroeconomic policy debate

In discussions on macroeconomic policy, debt was not regarded as a key concept in the 1970s and the 1980s. But the intellectual climate has changed significantly after the global financial crisis, and debt is now one of central themes in the policy debate. It is therefore timely for the BIS to have organised this year's annual conference around the topic of debt. And it is no less fitting for a participant from Japan to speak about the problem of too much debt. After all, debt has continued to play an important role in Japan's economic fortunes over the past 30 years, as is illustrated by the bubble in the late 1980s, the aftermath of deleveraging and the financial crisis in the 1990s, and rapidly rising public debt.

The global financial crisis has raised awareness of the connection between debt and financial stability, and for that matter, the real economy. Nevertheless, this was certainly not the first time that debt has caused so much misery. Debt itself is not bad. It can promote economic progress. Why should something that is useful suddenly become so problematic? Economic activity needs capital, which can consist of own funds or outside funds.

Outside funding consists of equity and debt. Equity is state-contingent whereas debt is non-state-contingent. Debt must be repaid whatever the outcome of the investment. Given the possibility of bankruptcy and its associated cost, the financing of a project entirely with debt is risky. Thus, there should be an optimum mix of debt and equity. It is sensible to finance the more or less certain part with debt. But what is the degree of that certainty? If the distribution of potential outcomes is known, we can pin down the optimal funding mix. Unfortunately, the world is uncertain, and we estimate the distribution of probabilities at our own risk. So there is an element of subjectivity in determining the funding mix.

Collectively, we are more or less correct most of the time. If economic agents collectively underestimate failure, more debt financing will be raised than is advisable. When matters turn out differently from the expected outcome, debts will go unpaid (or equity losses will be sustained by those who cannot bear them). Until the black swan appears, a self-reinforcing cycle of underestimation and positive outcomes can continue. The cycle can persist for quite a long time, if the debt is financing the purchase of positional goods (real estate and existing equity in particular) instead of real investments. Returns on investment in positional goods will be positive so long as there are buyers willing to pay a higher price (financed by yet more debt). Real investments can also cause problems, but less often. People tend to keep dancing until the music stops. That is probably why the level of debt in

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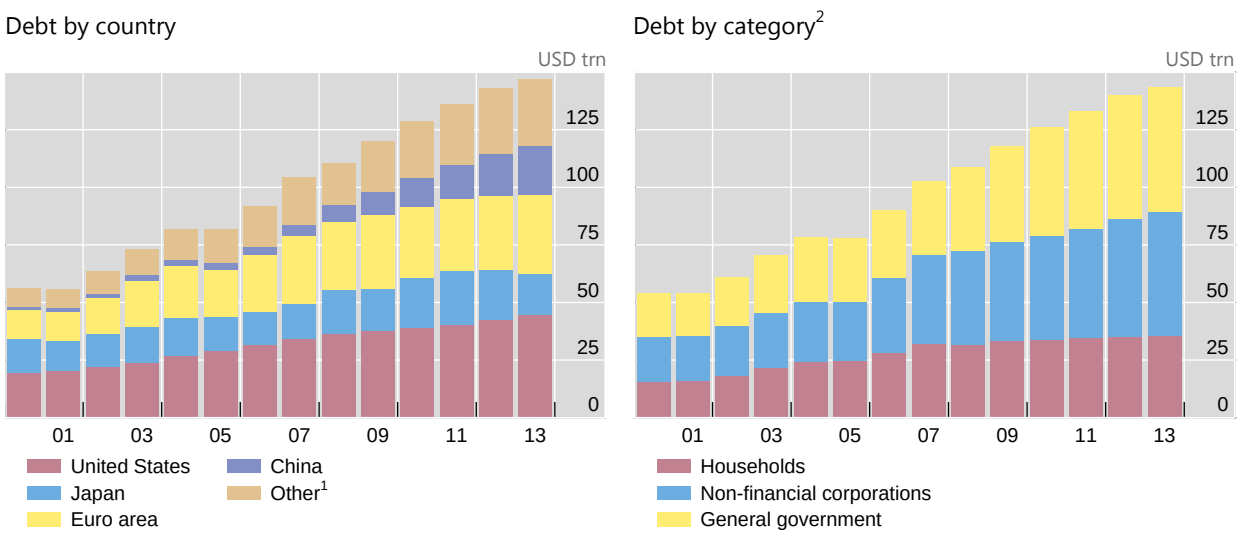
I would like to thank Kunio Okina for his valuable comments for my earlier draft.

the economy is a good indicator for bubbles, and why real estate has been at the centre of so many past bubbles. When the bubble bursts, a mountain of unpaid debt will remain, and households and firms will have to retrench, leading to debt deflation. Yet the story does not stop here. After the most recent bubble burst, many governments undertook an expansionary fiscal policy to offset weak demand due to private deleveraging. As a result, public debt has increased significantly. Total debt, comprising both public and private debt, has been increasing in relation to GDP following the global financial crisis (graph 1).

Is there some way to stop this? In other words, can we ever hope to put the brakes on runaway leveraging-up? With this topic in mind, I would like to pose the following questions. First, what problems does too much debt cause? Second, why is too much debt created? Third, why have we seen the phenomenon of bubbles and their implosions more frequently over the past 20 years? Finally, how can we keep the amount of debt in check?

Debt trends — Graph 1




[1] Sum of total debt for Argentina, Australia, Brazil, Canada, China, India, Indonesia, Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey. [2] Sum of the economies listed in the left-hand side panel.

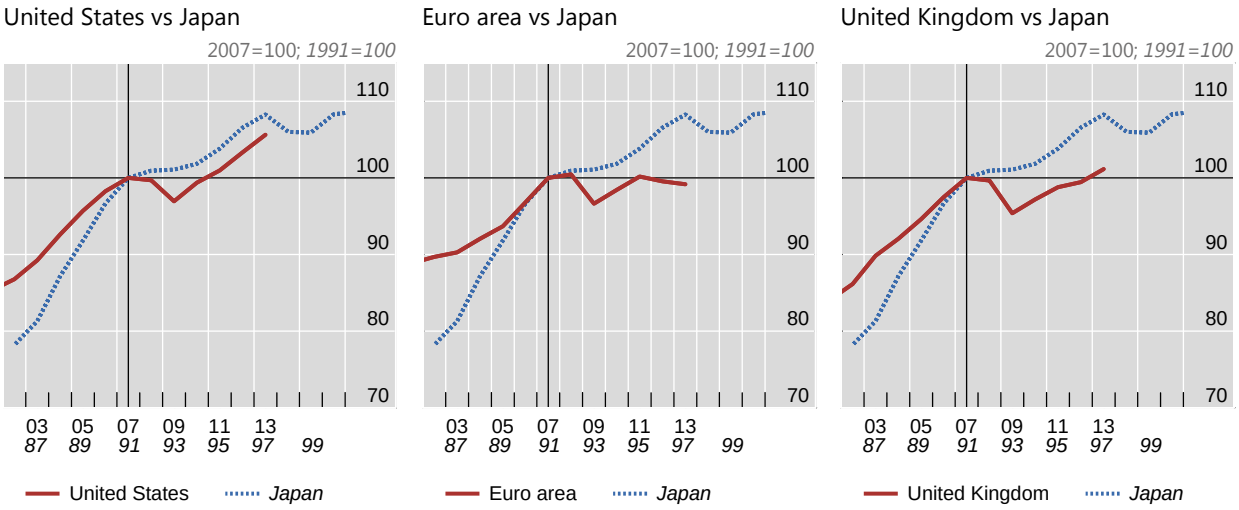
Sources: IMF, *World Economic Outlook*; OECD; national data.

## What problems does too much debt cause?

Debt itself is not bad. The problem arises when too much debt is accumulated. Then the adjustment is prolonged and painful, as is shown by anaemic post-bubble growth in many countries. Contrary to the conventional wisdom, the trajectory of real GDP in the United States, euro area and the United Kingdom has slightly underperformed Japan's post-bubble growth record – which is often treated as a textbook example of policy failure after the bursting of a bubble (graph 2). At any rate, this eloquently shows that the adjustment of "too much debt" is necessarily a prolonged and painful process.

## Real GDP

Peaks of bubble = 100 Graph 2




The dashed lines refer to the horizontal axis in italics.

Sources: Datastream; BIS calculations.

The question is why post-bubble growth is so weak. The mechanism most often discussed in this context is deleveraging and its impact on the real economy. It is true that growth is inhibited by less spending from overborrowed economic entities and less lending by over-leveraged financial institutions. Yet, this type of mechanism, although important, does not fully capture the actual adjustment process, which is often more subtle and complex. On the demand side, elevated uncertainty depresses spending. And the source of this uncertainty changes over time. Since the memory of crisis is vivid and touches everyone, firms and households do not easily change their cautious stance towards spending until long after the acute phase of the crisis has receded. On the supply side, production capacity is lost that was justified only by the demand pattern unique to the bubble period. "Luxury hotels in a ghost town" no longer have any economic value. Lost capacity might be compensated for by a reallocation of resources but this takes time.

On top of these factors, I would like to stress the importance of lasting and serious "collateral damage" of a political and social nature after the bursting of a bubble. This affects both the demand and supply sides through various channels.

First, it affects the quality of human capital. Long-term unemployment and loss of skills are typical examples. The effects are long-lasting ("hysteresis").

Second, risk aversion after the bursting of a bubble often leads to an inward-looking corporate culture, which stifles innovation. The same holds for policymakers, who tend to prefer measures that do not provoke politically sensitive issues, thus leading to a decline in productivity growth.

Third, the hostile environment for businesses and financial institutions tends to invite various politically driven measures that often interfere with the necessary reallocation of resources from inefficient to efficient sectors.

Fourth, a prolonged period of low interest rates tends to lead to a decline in economic renewal by keeping more inefficient firms alive than would otherwise be the case.

## Why is too much debt created?

Since this issue has been intensively debated, especially after the global financial crisis, I do not intend to cover all possible causes. My focus here is on the particular role of finance in the creation of bubbles.[2] Financial institutions extend credit to borrowers. The unique feature of finance is that, unlike suppliers of other goods and services, the supply of credit or creation of debt is not constrained by the suppliers' capacity, at least in the short run. In the case of manufacturing, an increase in supply is more or less constrained by production capacity. In the case of most service industries that are labour-intensive, an increase in supply is constrained by the availability of labour input. But finance is somewhat different. Borrowing an expression from Claudio Borio, finance is "elastic".[3] Banks do not need money in their vaults to extend credit. When a firm or an individual borrows from a bank, the bank can create the money.

Debt creation eases the constraint facing borrowers and lenders by generating a self-reinforcing cycle of asset prices through the following mechanism. First, asset purchases (especially of positional goods) drives up prices, which improves investment returns for purchasers, leading to an optimistic assessment of future returns. Second, the improved capital position of borrowers and lenders due to the increase in asset prices enables ever more aggressive risk-taking. Third, the increased collateral value enhances lending opportunities and borrowing capacity. In essence, finance is "elastic" and the financial system is inherently prone to such overstretch.

## Why have we seen episodes of excessive debt build-up more frequently over the past 20 years?

Discussions of the global financial crisis tend to centre on why it happened. This is a legitimate question. But a more pertinent way of framing the issue is why we have witnessed problems of excessive debt build-ups – leading to bubbles and financial crises – more frequently than before. In the 1970s and 1980s, there were some failures of deposit-taking institutions such as Continental Illinois or the savings & loan crisis. Also, some US money-centre banks were faced with debt problems in the Latin American countries. But, as far as the advanced economies are concerned, we saw no full-scale financial crisis that threatened to undermine confidence in the entire financial system, thus threatening the whole economy. This situation changed around 1990: to name but a few, we have since witnessed the Nordic banking crisis,

[2] Adair Turner has discussed this issue intensively and I have learned a lot from his arguments. See Adair Turner (2013).

[3] See Borio and Disyatat (2011).

Japan's financial crisis, the collapse of the IT bubble, the collapse of the US housing bubble and the financial crisis that culminated at the time of Lehman failure and the European debt crisis.

There are several hypotheses on the causes of more frequent bubbles and financial crises and for that matter, of too much debt.

## A steady decline in the potential growth rate

The first hypothesis, strange to say, is a steady decline in the potential growth rate in the years leading up to the global financial crisis. Earlier, I referred to several reasons why growth is weak after the bursting of a bubble. In these arguments, the causality runs from the latter to the former. But the direction of causality could also be the reverse: that is, a decline in the potential growth rate causes a bubble. According to this hypothesis, underlying low growth was temporarily masked by the economic boom due to the bubble, only to be revealed after the bubble burst. One conceivable mechanism for this sequence of events is as follows.

A steady decline in the potential growth rate resulting from demographics and/or a lack of innovation tends to dampen return expectations. A lack of real investment opportunities may prompt firms and individuals to turn to assets and set in train the self-reinforcing cycle of more debt and higher asset prices ("elastic finance"). In addition, property prices are themselves affected by demographics. In many countries, the peak of the "population bonus" often coincides with peak property prices. In the population bonus phase, baby boomers' demand for property is strong.[4]

## Globalisation and increasing capital flows

The second hypothesis involves mechanisms connected with globalisation and increasing capital flows. Globalisation is a shock that will dislocate risk/return profiles, and if firms and individuals cannot accurately evaluate such changes, their estimation of returns might be over-optimistic. Also, growing international capital flows could increase the chance that a self-reinforcing debt and asset price cycle is started in the destination economies. And if the central banks of these countries try to prevent their currencies from appreciating, the resultant monetary easing may further accelerate the asset price cycle.

## Change in monetary policy regime

The third hypothesis concerns a change in the monetary policy regime. By this, I mean the perception held by investors and the general public about how the central bank is conducting its monetary policy. The monetary policy regime evolves over time; it is never static.[5] Currently, the monetary policy regime of the advanced economies might be characterised by the following elements, whether or not these features truly reflect the policymakers' actual intentions.

[4] See Nishimura (2013).

[5] My thoughts on the monetary policy regime were stimulated by Bill White (2013).

- Focus on price stability Price stability is important and central banks have achieved great success in this respect. But this very success has also built up subtle institutional and social dynamics over time. For instance, staff economists who are trained without any hands-on knowledge of a bubble and the ensuing financial crisis tend to focus on a "macroeconomy" characterised only by inflation and growth. The call for transparency in monetary policy has at times made it hard for the central bank to be alert to financial imbalances that are not well signalled by the inflation rate. Against this backdrop, the focus on price stability has tended to foster a low interest rate environment, thereby encouraging increased leverage and/or maturity mismatches.
- Preference for low volatility Preference for low volatility is not explicitly mentioned by central banks but, if their revealed preference is for low volatility, this would tend to make investors complacent about risk, hence increasing financial imbalances.
- "Put-option" type of monetary policy in the event of a sharp fall of asset prices This is again not explicitly mentioned by central banks. But prior to the global financial crisis, the prevailing view was that aggressive monetary easing would be needed after the bubble burst, as opposed to a pre-emptive monetary tightening. If investors interpret the central bank's monetary policy in this way, the policy asymmetry becomes entrenched in investors' thinking and could therefore encourage more aggressive risk-taking.

The above three elements concern monetary policy. But the linkage between monetary policy and financial stability is more subtle. Monetary policy is regarded as the primary job of central banks, yet in many countries central banks are also supervisory and regulatory authorities. Given this overlap in their roles, there might be a risk that the supervisory function of central banks is dominated by their monetary policy function via the institutional leadership and the intellectual climate prevailing in the monetary policy departments. This could spell delays in taking action against a bubble or excessive debt, or even a failure to take such action, even though supervision and regulation would be the most effective instruments for coping with this type of situation.

## How should we keep too much debt in check?

Now, we move to the fourth and final question of how to keep too much debt in check. The global financial crisis has again highlighted the problems caused by too much debt. After the bubble burst, private deleveraging has made some progress, but the reality is that total debt, comprising both public and private borrowing, is still on the rise. Given this, how can we keep the amount of debt in control? There is no simple answer. Many factors are blamed for causing bubbles and financial crises, and many reform measures are currently under way in areas such as supervision and regulation, macroprudential policy, resolution of troubled financial institutions and the clearing of OTC derivatives.

In this paper, I would like to focus on the issue of monetary policy. The issue of monetary policy in the context of financial stability has been debated intensively but I am quite uncomfortable with the current treatment of this issue. The question is whether monetary tightening can be effective as a means of correcting financial

imbalances such as leverage or maturity mismatching, and for that matter imbalances in the macroeconomy. Currently, discussions tend to focus on the marginal impact of raising the policy rate by, say, 1 percentage point as a way of reducing various financial imbalances. I wonder whether this treatment is appropriate. This treatment is essentially a "partial equilibrium" approach in the sense that the monetary policy regime is assumed to be constant. If we do take this approach, the marginal impact is obviously rather small and monetary policy would therefore be considered as somewhat of a "blunt tool".

Each monetary policy decision might be justified if we look at incremental benefit and cost. But, what this kind of approach misses is a cumulative impact of such monetary decisions on perceived monetary policy regime: these decisions, over time, shape market participants' view about how monetary policy is operated. If perceived monetary policy regime is one characterized by aforementioned three elements, then central banks are gradually constrained by such perception itself. It is quite difficult to act differently. In addition, given such perceived monetary policy regime, marginal impact tends to be rather small. We need to explore the possible link between monetary policy and financial stability by explicitly taking into account perceptions about the monetary policy regime. This forms the basis for thinking about what might constitute the most appropriate monetary policy.

Here, I should hastily interject that I do not imply that monetary policy, even when properly managed, can always prevent a bubble. Any such view would be optimistic. The issue is what kind of outcome we are hoping to achieve. Conventional monetary policy strategy aims at achieving an optimum combination of inflation and growth (or employment). An alternative policy regime would be a kind of mini-max strategy that aims at lessening the probability of grave tail risk events such as a bubble. The intention behind such a strategy would be to avoid the worst case scenario, on the recognition that our knowledge of the economy is quite limited and that excessive debt brings with it huge macroeconomic consequences. Interestingly, Milton Friedman said in his famous presidential address to the American Economic Association in 1967 that "the first and most important lesson that history teaches about what monetary policy can do – and it is a lesson of the most profound importance – is that monetary policy can prevent money itself from being a major source of economic disturbance". When he said this, what he was thinking of was the central bank's lender of last resort function. But it seems that the more important message we should draw from his address is that the role of monetary policy as a mini-max strategy is quite important.

I have already pointed to three elements that characterise the perceived monetary policy regime. Looking at recent developments, there might be two additional elements that could have some bearing on the creation of too much debt. One is the policy stance toward the risk of deflation and the other is the international dimension of monetary policy in the face of the zero lower bound.

## Asset deflation or general price deflation

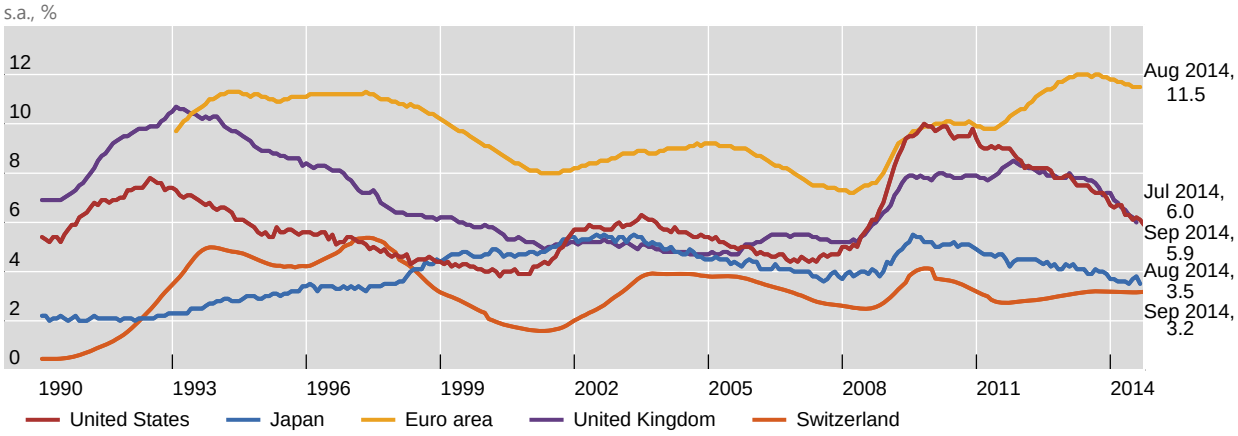
The problem with too much debt arises primarily because net equity becomes negative due to a decline in asset prices. In other words, what is emphasised in terms of deflation is asset price deflation. If the central bank does not act satisfactorily as a lender of last resort on the brink of a systemic crisis, the financial

system collapses and the economy is severely hit, with the prices of goods and services falling significantly and rapidly. This deflationary spiral is what happened in the 1930s. Deflation increases the real debt burden and thus depresses spending. Deflation also induces economic agents to postpone their spending on the expectation of future price declines. The resulting fall in spending leads to further price declines. A deflationary spiral is likely to develop in a situation where prices of goods and services fall sharply in a very short time span. Typically, this kind of situation arises when the financial system collapses. Therefore, the best way to avoid this type of deflation is to prevent financial system instability in the first place.

In recent years, Japan's experience has been often cited when it comes to deflation. The country's CPI started to decline from 1998, although the cumulative decline in the past 15 years up to 2013 has been less than 4%. The unemployment rate has been low and its rise has been relatively limited (graph 3).[6] Price declines were not unidirectional. In addition, if we compare growth since 2000 between Japan the United States, the euro zone and the United Kingdom, Japan's performance has been average in terms of GDP per capita and even pre-eminent in terms of GDP per working age population (graph 4). In essence, Japan did not witness a deflationary spiral as such, which was incidentally the subject of one of the questions most frequently asked by my friends in the central bank community. In my view, the core problem facing the Japanese economy lies with demographics or, more accurately, the problems attendant on a too-slow adaptation to this grave reality.

Unemployment rates

Graph 3




Source: Datastream.

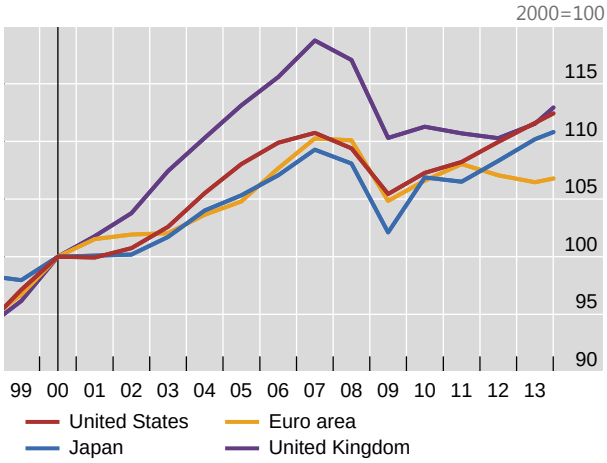
This reading of the Japanese experience suggests that we should distinguish between a sharp price decline over a short time frame and a very mild decline over a much longer period. The crux of the debate is whether or not systemic financial stability is maintained, as I mentioned above. This leads us to the argument that financial stability is imperative in order to avoid the damaging type of deflation. This also reminds us that we have to be attentive to the development of financial

[6] The facts of Japan's deflation are discussed in Shirakawa (2014).

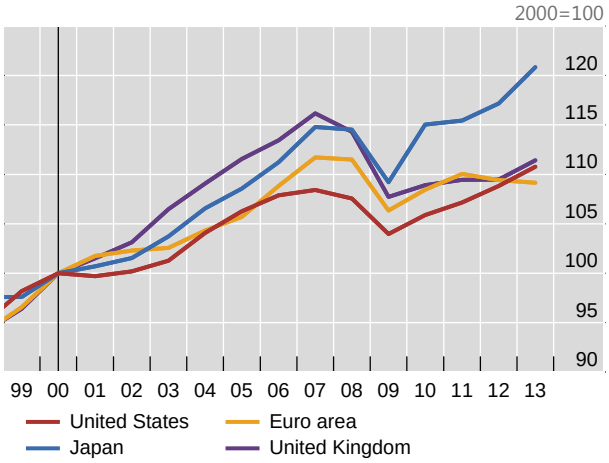
imbalances, as well as to growth and inflation, when deciding on our monetary policy stance.

Real GDP per capita trends — Graph 4

Real GDP per capita




Real GDP per working age population[1]




[1] Working age population refers to the 15–64 year olds.

Sources: IMF, *World Economic Outlook*; OECD; Eurostat; BIS calculations.

## The international dimension of monetary policy in the context of the zero lower bound

The second element that might have some bearing on monetary policy regime is the international dimension of monetary policy. Our traditional intellectual framework on this point is the open economy trilemma: conducting autonomous monetary policy is feasible under free capital flows if, and only if, exchange rates are flexible and floating. But the reality is gradually changing. It seems that domestic financial conditions are becoming increasingly influenced by global financial conditions. It is hard to pin down the exact factors affecting global financial conditions but the monetary policies of the major advanced economies are surely becoming more important. Probably, the truth is somewhere in between: under free capital flows, a fixed exchange rate deprives a country of an autonomous monetary policy but at the same time, it is too sanguine to think that a floating exchange rate can guarantee autonomy in monetary policy.[7]

Such a spillover effect itself is nothing new, at least qualitatively. Until relatively recently, however, we could reasonably neglect the significance of such effects and, given that our knowledge of interlinkages among economies is limited and that the mandate of each central bank is understandably to achieve domestic stability in its own jurisdiction, it was enough to "put one's own house in order". That was

[7] See Hélène Rey (2013).

practically the global optimum and the principle may still hold true. At least, this is what central bankers, including myself, used to hope for and it was also about as much as they could realistically do.

But now it seems that spillover effects are becoming significant. If this is the case, the logical conclusion is for central banks to "internalise" the spillover and any eventual feedback effects. Of course, I fully recognise that it is difficult to implement such a process but at least we should seek a clear understanding of what is happening in terms of the spillover and its eventual feedback effects. Since many of these issues are discussed by Maurice Obstfeld in a paper presented to this conference (Obstfeld (2014)) as well as by Hélène Rey (2013), I would like to draw your attention to the issue unique to the environment constrained by the zero lower bound.

Faced with the zero lower bound, central banks have resorted to unconventional monetary policy. Unconventional monetary policy is innovative and does have some effect. But at the same time, central banks should not oversell it. They have to be accountable in a democratic society. Probably it is fair to say that the effectiveness of such policies is diminishing. At any rate, in terms of the spillover effect, a sensitive issue is that the possible effects are increasingly likely to stem from the exchange rate channel. For Japan, this issue was very serious. One of the crucial factors affecting the exchange rate is the expected path of the interest rate differential between the home country and abroad. As the global financial crisis deepened, Japan's policy rate was already practically at zero and long-term interest rates were lowest. In this environment, there was essentially no room for the Bank of Japan to narrow the interest rate differential by means of its policy measures, because the interest rate differential was passively determined by foreign central banks with much larger room for a decline in interest rates depending on global economic forces. But now many central banks are more or less in the same situation as the one faced by the Bank of Japan some years ago. If central banks continue with a very accommodative monetary policy in the face of the zero lower bound, any possible effects will increasingly accrue from the exchange rate channel, regardless of the central banks' stated aim of monetary easing. But the greater the number of central banks that approach the zero lower bound, the more the effect on their exchange rates is cancelled out. In the end, the result might add up to a global easing bias, which is not necessarily optimal in global terms.

## Some final thoughts

I have so far discussed the issue of too much debt. The economic consequences of too much debt include financial system instability and weak growth over a protracted period. The mechanisms whereby too much debt is generated are complex, but the special characteristics of "elastic finance" play a critical part. What strikes me most is that, over the past 20 years, we are witnessing problems with too much debt – that is, bubbles and financial crises – ever more frequently. Policymakers and academics alike need to reflect on why this should be the case.

One hypothesis is that a change in the monetary policy regime as perceived by investors and the public has created a tendency to take on too much debt. This is only a conjecture and it needs serious study. In my view, the role played by the monetary policy regime is more important than we tend to think. Central banks are

striving to cope with the current situation and the measures taken have been quite innovative and useful, especially in crisis situations. At the same time, a series of monetary policy actions over the past 20 years, and particularly following the eruption of the global financial crisis, have gradually created a new perception of how central banks behave. And once such a perception is created, central banks themselves are constrained by such perceptions, because actions that do not conform to this tend to cause some adverse impact on the macroeconomy, that is, growth and inflation.

More than 30 years ago, Arthur Burns made a famous speech on "The anguish of central banking" (Burns (1979)). In this speech, he lamented the environment that, in his view, was responsible for the Federal Reserve's loss of control over the inflation rate. In the final part of his speech, he said the following:

> *"In view of the strong and widespread expectations of inflation that prevail at present, I have therefore reluctantly come to believe that fairly drastic therapy will be needed to turn inflationary psychology around"*. (p 24)

Interestingly, just after his speech was delivered, the Fed instituted a new monetary policy regime. Central banks are institutions in democratic societies and thus have to be attentive to the "environment" and various other voices. But, at the same time, as an accountable institution in a democratic society, a central bank has to explain the cumulative effects as well as the costs of any actions, because the ultimate objective of central bank policy is to contribute to achieving sustainable growth thorough the policies at its discretion. At the current juncture, I don't know whether the most desirable monetary policy would be "drastic therapy" or a minor adjustment but at least we should continue to develop the conduct of monetary policy. To this end, further research and serious debate are called for.

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