Preserving Government Solvency: A Global Policy Perspective

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Introduction

The global financial crisis has left us with the highest public debt stock since the Second World War. It exceeds 100 percent of GDP in many countries, including Italy, the US, Japan and Spain and it exceeds the EU Maastricht threshold of 60 percent in almost all major industrialised countries. This limits governments' policy room for manoeuvre and makes us vulnerable to future crises. At the same time, private sector debt has been rising to historic highs too. The problem is no longer limited to some – seemingly – distant parts of the world. It has become a global challenge affecting advanced, emerging and developing economies at the same time.

In addition, most advanced and many emerging economies are expected to encounter an unprecedented period of population ageing with major increases in ageing-related expenditure over the coming decades. Finally, the experience and perception of governments as insurers of last resort at the national and international level for all kinds of calamities – including bank bail-outs, environmental problems, and international financial crises – has raised the scope of the additional implicit or contingent liabilities of public sectors (Schuknecht 2013).

Politicians, academics and market participants are holding heated debates on the right way forward. Many see an urgent need to reduce debt in order to raise the prospect of sustainable public (and private) finances in the long run, and more resilience to crises and spillovers in the short run. Otherwise, we may risk a more serious and even systemic global fiscal crisis.

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In this article, we present an analysis of the existing debt overhang and look at ways to resolve it and prevent future over-borrowing. In the next section we present some trends in public and private sector debt around the globe, which increasingly call sustainability into question. The subsequent section describes different approaches to dealing with a debt overhang. Building on past experiences with these approaches, we discuss the institutional settings needed to achieve and preserve debt sustainability in the following section. The last section concludes with a call for an institutional framework that aligns individual incentives with the common goal of stability.

Unhealthy debt levels

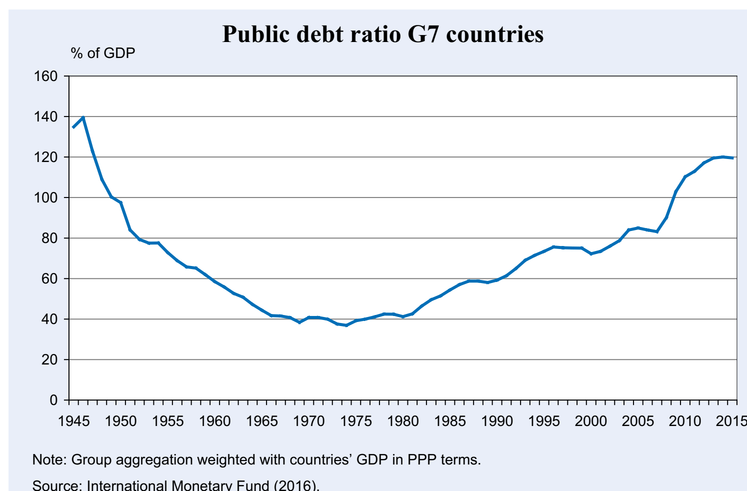
Concerns about public debt levels are no longer only an issue for developing and emerging economies. Nor is the increasing private sector debt stock a source of vulnerability for advanced economies alone. Unhealthy debt levels have assumed a potentially systemic dimension. This was revealed rather starkly when the fiscal-financial crisis in Europe spread from Greece to Spain and Italy in 2011–12.

Since the 1970s, public debt in advanced economies has been increasing steadily. A big increase has taken place since the outbreak of the international financial crisis in 2007. Public sectors have transferred large amounts of private sector debt onto their balance sheets, thereby further aggravating the already existing detrimental fiscal trends.

The aggregate debt ratio of G7 countries has reached its highest point since World War II (Figure 1). Following some consolidation efforts and the recent moderate economic recovery, public debt ratios are expected to peak in most advanced economies, but hardly any decline is discernible in the years ahead. Although starting at a much lower level, public debt in many emerging markets has also been on the rise, particularly in resource-rich countries suffering from low oil and gas prices (IMF 2015b).

Private sector debt in several advanced and some emerging economies are at problematic levels too

Figure 1



Note: Group aggregation weighted with countries' GDP in PPP terms.
Source: International Monetary Fund (2016).

Declining trend growth in advanced economies and a succession of economic, fiscal and/or financial crises around the globe have exposed the limits of the debt-based global growth model. Financial boom-bust cycles may have contributed to the downward trend in potential growth observed over recent decades.[2] Apart from undermining growth and efficiency, credit-fuelled boom-bust cycles have also had disruptive distributional implications via the allocation of losses within and contagion across countries.

(Table 1). Australia, the Netherlands and Switzerland stand out in terms of household debt, while China, France and Sweden exhibit elevated levels of corporate debt. Looking at total non-financial private sector leverage, Canada, Australia and China have the highest levels among G20 countries with around 200 percent of GDP, while a number of others have also reached levels well above the EU's indicative warning threshold of 133 percent.

According to BIS data (Cecchetti, Mohanty and Zampolli 2011), public and private non-financial sector debt taken together in 18 OECD countries almost doubled, from 167 percent to 314 percent of GDP, within three decades between 1980 and 2010. McKinsey Global Institute (2015) found a similar pattern when adding up public and private debt including the financial sector. The aggregate leverage of 47 advanced and emerging economies reached 286 percent of GDP in 2014, an increase of USD 112 trillion or 40 percentage points since 2000.

A growing number of economists and institutions are pointing to the risks of rising indebtedness. The political economy literature has explained public deficit and debt biases as a result of politicians' incentives to burden future generations with the costs of public programmes. This literature has also identified rules and institutions as a solution, e.g. balanced budget rules or quantitative debt limits (Buchanan and Wagner 1977; von Hagen 2005; von Hagen and Harden 1994; Strauch and von Hagen (Eds.) 2000).

High debt levels can place a drag on economic growth, limit the scope for policy action during acute crises, and increase financial market vulnerabilities (BIS 2015).

Approaches and experiences

There are five – actual or alleged – options for resolving a debt overhang, all of which have been pursued to a differing extent at various times.

"Organic" debt pay-down

The organic approach envisages a steady redemption of public debt through growth-friendly fiscal consolidation. Smaller deficits or even fiscal surpluses and higher economic growth bring public debt ratios down.

Successful consolidation means more than simple budgetary cuts. It includes a reprioritisation of fiscal means towards growth-enhancing expenditure such as infrastructure and education, a streamlining of public sectors, and supply-side reforms of labour and product markets. In general, expenditure reforms are more likely to succeed than tax increases, which are usually accompanied by distortions to private-sector activity (Alesina and Ardagna 2012; Alesina and Perotti 1996). The size of the public sector can be reduced by re-focusing on the provision of essential public goods, streamlining social welfare and privatising business activities. Similarly, the government's role in stimulating the economy is most effective when limited to providing a functioning framework for the private sector to prosper, while automatic fiscal stabilisers reduce demand volatility over the cycle. Apart from sound public finances, such a frame-

[2] Borio et al. (2015) argue that credit boom-induced capital and labour misallocations undermine productivity growth during a boom as well as afterwards.

Table 1

Total debt by sector (excluding the financial sector) in percent of GDP

	Level in 2014				Change since end–2007[1]			
	House-hold	Corpo-rate	Govern-ment[2]	Total	House-hold	Corpo-rate	Govern-ment[2]	Total
Advanced economies[3]	*74*	*89*	*96*	*259*	*–4*	*4*	*32*	*32*
United States	78	68	88	235	–17	1	38	21
Japan	66	103	209	379	0	4	59	62
Euro area	61	103	92	257	2	6	25	33
France	56	122	95	273	10	18	30	58
Germany	55	55	75	185	–8	0	10	2
Italy	43	79	132	254	6	6	30	43
Netherlands	113	124	68	305	4	–1	24	28
Spain	73	114	96	284	–7	–8	59	44
Australia	116	75	30	221	10	–3	22	29
Canada	93	103	64	260	17	14	15	46
Hong Kong SAR	64	218	5	287	13	87	3	103
Korea	83	104	38	225	11	14	14	43
Singapore	60	80	99	239	21	24	12	57
Sweden	83	166	41	290	19	36	1	56
Switzerland	120	90	34	245	12	19	–6	25
United Kingdom	88	77	88	253	–7	–9	46	30
Emerging markets[3]	*26*	*88*	*42*	*156*	*10*	*33*	*2*	*44*
Argentina	6	10	43	59	2	0	–4	–2
Brazil[4]	25	47	62	134	12	19	–2	29
China	35	154	41	230	16	53	6	76
India	9	51	66	126	–2	9	–9	–1
Indonesia	17	22	25	64	6	8	–9	5
Malaysia[4]	68	62	53	183	13	0	11	25
Mexico	15	21	33	69	2	7	12	21
Russia[4]	19	50	15	86	8	10	5	26
Saudi Arabia	11	37	2	50	–1	4	–19	–16
South Africa	38	33	53	123	–4	–1	20	16
Thailand	68	50	30	148	23	4	7	34
Turkey	21	51	34	106	10	27	–8	29

[1] In percentage points of GDP. [2] BIS Credit to the government at nominal values except for Korea for which only market values are available. [3] Weighted averages of the economies listed based on each year GDP and PPP exchange rates. [4] Breakdown of household debt and corporate debt is estimated based on bank credit data.
Sources: IMF; OECD; national sources; BIS database on total credit.

Source: Financial Stability Board (2015).

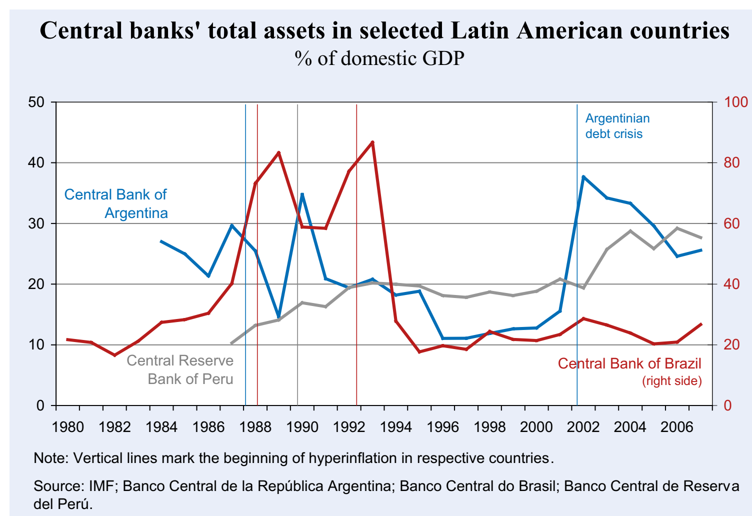
work also includes a reliable political, legal and judicial system, efficient labour markets and sensible regulation of product, service, and financial markets.

Successful episodes of organic debt reduction can be found e.g. in Belgium and Sweden from the mid-1990s until the global financial crisis. Belgium succeeded in reducing its public debt ratio from more than 130 percent of GDP in 1995 to about 87 percent in 2007. Sweden slashed public debt from over 70 percent of GDP in 1996 to below 37 percent in 2008, while also building up significant government pension assets. In both countries public deleveraging was accompanied by far-reaching expenditure reforms and drastic cuts in the size of the

state, including the rationalisation of welfare systems and improved fiscal governance (Tanzi and Schuknecht 2000; Hauptmeier, Heipertz and Schuknecht 2007).[3] Such an approach has also been successfully applied in several European countries to halt adverse debt dynamics since the crisis (Hauptmeier, Sánchez-Fuentes and Schuknecht 2015).

While this strategy of debt reduction seems to be the least distortive and most lasting approach, it comes with an important challenge. Unfortunately for politicians, it requires a considerable adjustment, which is often unpopular with the domestic electorate. If it involves cuts to the privileges of special groups of the population who have a disproportionately large say in collective decision-making, such adjustment becomes even more difficult. The tangible fruits of necessary reforms are often only reaped by successor governments. Nevertheless, comprehensive reform is not necessarily detrimental to re-election (Alesina, Carloni and Lecce 2011).

Figure 2



Monetisation and financial repression

Monetisation of public debt and financial repression redistribute wealth from creditors to debtors through an ultra-expansionary monetary policy that erodes the real value of debt via negative real interest rates.

The benign aim of expansionary monetary policy, including quantitative easing and extremely low interest rates, is to stimulate economic growth and prevent hysteresis directly after a crisis. Low interest rates also help debtors grow out of debt by limiting their debt service costs and by stimulating economic activity via the credit channel.

However, central banks can also monetise public debt by acquiring government bonds on the primary or secondary market, thereby steadily inflating their balance sheets. When money supply far exceeds the liquidity needs of the domestic banking sector, the central bank's role expands from "lender of last resort" for commercial banks during a liquidity crisis to "lender of last resort" for governments. In the past this has frequently led to accelerating inflation via cash and credit creation, expectations, and contracting money demand.

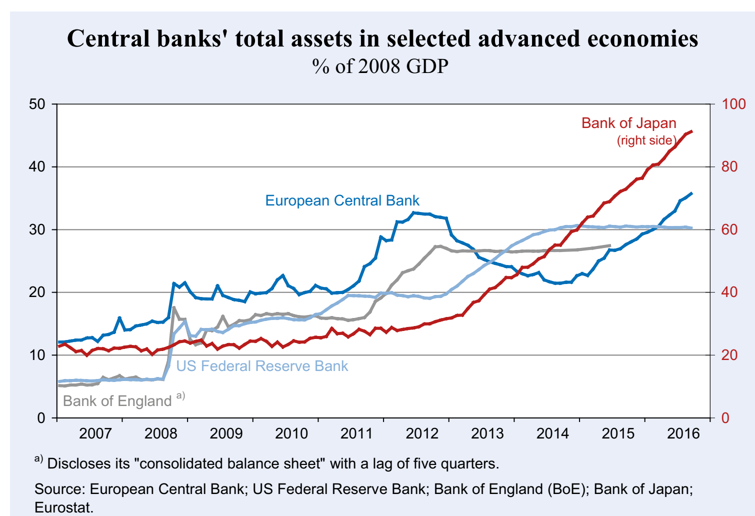
But even without accelerating inflation, central banks' loose policies can reduce interest rates to negative real or even negative nominal territory. This gradually reduces the real value of the debt stock (financial repression or "cold" monetisation).

Other policy tools that can help put public debt at a funding advantage over other liabilities include preferential treatment of government bonds in bank regulation, political interference in bank governance bodies or moral suasion on domestic financial institutions (Reinhart and Sbrancia 2011). Central banks can also "monetise" debt held in the private sector, for example, by buying mortgage-backed debt securities, by lending against very poor collateral, or through emergency liquidity assistance to commercial banks that are only notionally solvent. Such central bank subsidisation of private debt may appear to politicians to be an easier alternative to the socialisation of losses via public budgets or the risk of private agents bearing the costs of bankruptcies.

Experiences with monetisation and financial repression over the last hundred years are mixed, at best, and the risk of losing control over inflation is always present. In Latin America the dramatic increase in the size of central banks' balance sheets led to hyperinflation in several countries in the late 1980s and early 1990s and to sovereign insolvency in Argentina in the early 2000s. This

[3] The fiscal rule in Sweden requires a surplus in net lending of the public sector of 1 percent of GDP on average over a business cycle. The rule was introduced in 1998 and, after a transition period, became fully effective in 2000 (Jonung 2014).

Figure 3



Central banks' total assets in selected advanced economies
% of 2008 GDP

a) Discloses its "consolidated balance sheet" with a lag of five quarters.
Source: European Central Bank; US Federal Reserve Bank; Bank of England (BoE); Bank of Japan; Eurostat.

approach also proved to be a failure in Germany in 1923, when all government bonds ended up in the hands of the central bank and disastrous hyperinflation wrecked the economy. By contrast, after the two World Wars, a number of advanced economies managed to use financial repression for public debt reduction without losing monetary control. However, this typically required extensive government intervention in capital allocation.

Recently, experiences with central banks' zero-interest rate and asset purchase policy in advanced economies have proven relatively benign to date. Economic growth has returned, while inflation expectations in all advanced economies remain anchored at low levels. Institutional credibility has probably facilitated a situation whereby financial repression via balance sheet expansion can go much further than previously thought. Balance sheet expansion in the US, the UK, the euro area and Japan has nevertheless reached similar proportions as in Latin America during the 1980s until 2002 (Figures 2 and 3). Moreover, the limit to balance sheet expansion in advanced economies before disorderly developments and "hot" monetisation and inflation set in is not yet known.

There are important risks to both monetisation and financial repression. As mentioned, when central banks take on fiscal responsibilities, they may eventually lose control over monetary policy. Other negative side effects are capital misallocation, the zombification of banks and corporations, and asset price bubbles as interest rates lose their signalling role. As mentioned, subsequent inefficiencies in the real economy and possible financial crashes could both cause a long-term drag on growth.

On the policy side, the ability to borrow cheaply creates moral hazard for governments. The resulting lack of policy adjustment in turn increases the need to continue the extraordinary monetary stimulus. The redistributional effect from creditors to debtors not only affects the state and the financial sector, but also has an impact on society. Wealthy households with a diverse portfolio can hedge against inflation more effectively and are better placed to benefit from asset price increases, including shares and real estate, while the middle class suffers from low returns on ordinary savings and old-age provisioning (Schuknecht 2013).

International insurance

Countries may also seek international assistance or "insurance" when highly indebted. International insurance can work explicitly through existing institutions such as the IMF and multilateral development banks, new institutions such as the European Stability Mechanism (ESM) and the Banking Union in Europe, or implicitly through "hidden" channels such as the European settlement system TARGET2.

Disorderly sovereign default would come at economic and political costs to the country concerned and, in an interconnected world, to others as well. Therefore, there is a collective interest in stabilising an ailing economy and avoiding spillovers, especially if it is unclear whether the country is illiquid or insolvent. In order to prevent temporary (liquidity) assistance from becoming a bailout, reform incentives that address the roots of a crisis need to be maintained. To this end, international financial assistance usually applies an adapted form of the Bagehot principle of lending to solvent parties at high rates against good collateral: In times of crisis, such international insurance provides temporary liquidity support in exchange for reform conditionality and assumes a preferred creditor status vis-à-vis pre-existing creditors.

Experiences with international insurance mechanisms have been mixed. Several countries in Europe have used international financial assistance in return for domes-

tic reforms. Ireland, Spain, Portugal and Cyprus successfully concluded the adjustment programmes set up during the European debt crisis. In Greece, programme implementation has been more challenging, as domestic ownership has been weak and uneven adjustment efforts have hindered the economic recovery. There are also several examples of IMF programmes outside Europe where successive financial assistance packages have ultimately failed, illustrating that international insurance is no panacea.

It is important to remember that the credibility of international insurance mechanisms is based on reliable and financially robust shareholders. Financial assistance by the IMF has essentially been based on loans being provided by strong member countries such as the US and other advanced economies. More recently, an increasing share has also come from strong emerging markets.

For all insurance mechanisms, it is true that risks do not disappear by simply shifting them onto somebody else. Only risk reduction – through national fiscal adjustment and structural reforms, cleaning up banks' balance sheets, etc. – allows debtors to regain stability and win back confidence. If, however, the necessary conditionality is softened to an extent that programme targets and debt sustainability can no longer be achieved, there is a risk of overburdening solvent sovereigns – or central banks. The world came close to the latter situation in 2011 when governments discussed (and eventually rejected) the idea of having the IMF print Special Drawing Rights in order to lend these monetary means on to crisis-stricken countries. International insurance can only work in a sustainable way if the anchor role of financially strong members is preserved and the number of insurance cases is kept limited.

Sovereign debt restructuring

An over-indebted country may choose default over monetisation. The reduction of a government's debt can take place in the form of a write-off on the nominal value or a reduction in net present value terms through maturity extension, grace periods or lower coupon payments, for instance.

A sovereign default would entail high economic and political costs. However, a lack of debt sustainability cannot be addressed with the temporary liquidity assistance envisaged in international insurance schemes. If public debt is no longer sustainable, it is less detrimental to realise losses in a timely manner than risk a steady and long-lasting economic and political degradation (IMF 2013).

Debt restructurings to date have tended to be ad-hoc exercises. Evidence on whether they have been adequate in terms of volume, timing, and management is inconclusive. In the early 1990s, Latin American states and a few other countries saw a restructuring of their debt through the Brady bond initiative. This usually implied debt forgiveness of 30–35 percent, although individual arrangements differed in their terms, volume and participation (Cline 1995). While the initiative was quite successful at the time, public debt in beneficiary countries has subsequently risen again. The default by Argentina in 2001 was not resolved until 15 years after the event.

In 2012, the private sector granted relief on Greek debt, which resulted in a cut in the face value of participating bonds of over 50 percent and reduced Greece's public debt stock by about EUR 107 billion, corresponding to 50 percent of its GDP at the time (Zettelmeyer, Trebesch and Gulati 2013). The 2015 deal for Ukraine included a 20 percent upfront haircut on the bonds held by private sector creditors, resulting in immediate relief of USD 3.6 billion or 4.3 percentage points of the country's debt-to-GDP ratio. The global restructuring of low-income countries under the Heavily Indebted Poor Country (HIPC) Initiative led by the IMF and the World Bank entailed total costs to creditors of USD 75 billion in end-2013 present value terms (IMF 2014).

A significant challenge to public debt restructuring is its timing and legal framework. Market confidence is likely to take a hit and a disorderly procedure may prolong the period that a restructured country is shut off from international capital markets.

Reining in private sector debt

While the above-mentioned approaches relate directly to public sector debt, instruments to rein in excessive private sector debt are an important complement. Otherwise, public budgets remain exposed to vulnerabilities arising from spillovers from over-indebted households, companies, and the financial industry.

Individual actors behave most responsibly when they are held accountable for their actions and have to bear the consequences of their decisions. If they have reason to expect that someone else will foot the bill, they may

take on excessive risks. Therefore, responsibility and decision-making power need to go hand in hand to avoid moral hazard. To protect this principle and keep incentives aligned, public bail-outs of private sector risks should generally be ruled out. A limited and conditional public bail-out should only be considered in exceptional cases of significant spillovers to other countries or segments of the economy that do not bear responsibility for the crisis.[4] In order for such cases to remain rare exceptions and limited in volume, private sector risks need to be kept in check so that they do not grow to become systemically important. In this respect, tax systems should be designed in a way that does not reward higher indebtedness. In addition, regulatory and macroprudential measures may be needed to avoid excessive debt and exaggerated asset prices.

Yet what we see in many countries is the opposite or deficient. Non-performing loans, especially in some European countries, still represent a heavy burden on the banking system and impede the overall economic recovery.[5] The transmission of monetary policy easing is hampered if banks cannot increase their lending due to legacy problems. To be fair, there has been some progress in individual cases, such as Spain and Ireland, which – helped by their financial assistance programmes – embarked on a deleveraging path involving the establishment of bad banks, the restructuring of viable banks, and improvements to their insolvency regimes.

As with the solutions to resolve the public debt overhang, reining in private sector debt is politically not easy. Governments can only influence private sector decisions indirectly by setting the right incentives. This includes vigilant supervision, appropriate regulation, macroprudential policies and the elimination of adverse fiscal/tax incentives. In a globalised world, regulation is most effective when it is internationally coordinated so as to minimise the side-stepping of rules or unfair competition.

The need for institutional reforms

The growing public debt burden over recent decades, the huge socialisation of private debt in the context of the financial crisis, unsustainable social spending trends, and the limited ability of governments to undertake fiscal and structural reforms have raised the spectre of more outright or indirect government default in the future, even in advanced economies. Efforts to stabilise markets, banks and governments post-crisis has left our system with little resilience to further adverse developments, and we do not know how much scope for more debt there is before confidence caves in.

Moreover, the consensus to deal with the debt overhang via orderly pay-downs (in line with contracts and ex ante expectations of creditors and debtors) seems to have been replaced by the tacit expectation and desire on the part of many to get at least some help from financial repression, inflation or international risk shifting. With debt, moral hazard has increased as well. Central banks are also at risk of being compromised by so-called fiscal dominance, where fiscal (and/or financial) stability risks could hamper their ability to adjust interest rates in a timely fashion.

All this goes hand in hand with a serious and potentially destabilising deterioration in institutional frameworks aimed at preserving hard budget constraints and fiscal solvency. Fiscal rules that aim to address government deficit and debt biases have eroded in line with a more cavalier view of deficits and debt. The European Stability and Growth Pact is a case in point. Private sectors have been given the impression that public balance sheets are readily available for debt shifting in the context of crisis-related bail-outs.

Nevertheless, it is important to carry out a conceptual and empirical analysis of what could work and what has worked in preventing and resolving over-indebtedness in the most market economy-friendly manner. Constitutional economics, or the related concept of *Ordnungspolitik* in Germany, emphasises the importance of rules and institutions to provide the right, time-consistent incentives for economic actors. Hard budget constraints, with economic actors taking responsibility for gains as well as losses resulting from their actions, constitute the appropriate macro- and micro-economic principles to guide the design of such institutions. Conditionality must continue to make financial assistance politically costly in cases where it cannot be avoided.

[4] For the prerequisites of successful banking crisis resolution, see Lindgren, Garcia and Saal (1996).

[5] According to IMF (2015a), gross non-performing loans as a percentage of total loans in 2014 stood at around 45 percent in Cyprus, 35 percent in Greece and 20 percent in Italy.

Public debt – achieving and preserving sustainability

As regards public debt, there are easy institutional solutions to this problem, the most simple of which is a balanced budget requirement. In principle, a balanced budget requirement is a guarantor of fiscal sustainability. The German and Swiss *Schuldenbremse* (debt brake), the Maastricht Treaty requirements, and balanced budget requirements for most US States are good examples of such institutional safeguards.

Balanced budget rules may not only be excellent preventive devices. Over time, they may also contribute to resolving debt overhangs. As mentioned above, Sweden as of the mid 1990s is a prominent example in this regard.

However, such rules have proven difficult to implement in the past for reasons related to transparency, political economy and ideology. First, all fiscal responsibilities, including contingent and implicit ones, have to be included. Fiscal accounting and transparency, however, remains a major challenge in many countries. Government guarantees to the private sector or regional bodies and future social security obligations are often not provisioned for in annual budgets. Balanced budget rules may then not provide a full picture; they may even encourage liabilities to be moved off budget.

Perhaps even more importantly, the design of fiscal rules is crucial. Such rules should not allow too much leeway for interpretation. Incentives for strict implementation and provisions for enforcement need to be sufficiently strong. This is the only way that the political economy-related deficit bias can be broken. The European Stability and Growth Pact does not entirely live up to these requirements: rules are often complex (after two rounds of revisions that addressed symptoms, rather than causes) and provide leeway for almost any possible interpretation. This leeway is prone to being taken advantage of in the course of politicised implementation, and there is a lack of enforcement provisions. German and Swiss rules are stricter. However, the *Schuldenbremse* has not yet been tested in bad times, at least in Germany. In any case, the more credibly a no-bail-out regime is communicated and implemented, the higher the efforts of a government to actually observe its fiscal rules are likely to be.

A third obstacle is the prevailing macroeconomic doctrine advocating fine tuning and deficit spending. Just as in the 1970s, “naïve” Keynesianism provided the intellectual underpinning to deficit spending in bad times that never stopped in better times. Under the pretext of continued weak demand, fiscal consolidation has basically stopped throughout the industrialised world, although deficits in several countries continue to be very high.

Central banks – rebuilding credibility

Developments relating to the quasi-fiscal role of central banks are possibly the most worrying. Zero interest rate policies coupled with massive QE programmes have reduced market monitoring and incentives for fiscal discipline. Once this has happened, it is hard to convey credibly to governments that it will not happen again. An eventual exit to normal size balance sheets and interest rates could well lead to major financial and economic upheaval.

Nevertheless, it is important to recall the “old” principles of sound central banking and reflect on the implications for the future central banking order. Institutional and policy independence remains critical. But what should this imply for the future? Two ideas are to ensure that there is more accountability to the public rather than to politicians and markets; and to fill positions on central bank boards with end-career personalities, rather than inept politicians or captured bankers.

The time-tested Bagehot principle for monetary operations needs to be re-established. The inability of a commercial bank to provide high-quality securities or to pay penalty rates to receive emergency liquidity should lead to the bank’s restructuring or resolution. Monetary policy should not get involved in fiscal or quasi-fiscal policies. This is the role of national or international assistance programmes where conditionality limits moral hazard and fiscal dominance. A great deal of further thinking will be needed on this important challenge in the years ahead, as the debate on the future anchoring of monetary institutions and their credibility is only just beginning.

International insurance – preserving the IMF-based order

Unfortunately, the possibility that government entities might get into financial trouble cannot be ruled out. If this happens to a city or a region, the federal government might provide conditional support or let the entity fail. But if whole nations are at risk of going bankrupt, the costs of economic and political destabilisation in that country and via global interlinkages might be too high.

To prevent moral hazard, the principle of lending against conditionality is essential. The political stigma of "having to go to the IMF" (and the ESM in Europe) constitutes such a cost and should continue to work as a deterrence. In fact, the IMF is a strong institution in this regard and provides an important international stability anchor. IMF support should therefore remain a prerequisite for other international and regional safety-net lending. This also holds for Europe, where demands for ESM lending without IMF involvement seem motivated by a desire to benefit from solidarity without conditionality, thus violating the two principles specified above. But the IMF has also been subject to a number of demands to soften national budget constraints via unconditional international insurance. A lively debate on the future institutional design of global financial safety nets and the balance of incentives can also be expected in this area.

International debt restructuring – strengthen institutions via a contractual approach

Despite the above-mentioned international insurance, there are instances in which a country is unable to repay its legacy debt. Rather than resorting to indirect default via financial repression or inflation, debt restructuring may well be desirable for both debtors and creditors. Again, this should take place in an appropriate institutional context. Conditionality should ensure an adequate participation of debtor countries by making sure that domestic incomes and assets are taxed and state assets are liquidated.

Moreover, the process should be orderly. A contractual insolvency procedure could give the necessary clarity to a restructuring process, ensure efficient risk pricing beforehand, and keep incentives aligned. Such a restructuring regime would serve as a tool for crisis resolution and, perhaps more importantly, crisis prevention, as it would strengthen market discipline on the part of both creditors and debtors. To this end, debt relief should mainly be at the expense of private creditors so as to guarantee future market monitoring as a deterrent against renewed indebtedness. Restructuring should be commensurate with the solvency problem and ensure that the country can make a fresh start.

Timing is a challenge. When restructuring is done too early, it imposes undue costs on the creditor, while the debtor government could avoid necessary adjustment efforts. When done too late, many private sector creditors can exit prior to the event and thus shirk responsibility. This further aggravates the financial situation and unnecessarily raises the costs for the country in question, the remaining bond holders and global taxpayers. The other challenge is collective action. Without appropriate aggregation clauses, there is a risk that holdout creditors seek preferential treatment via litigation – at the expense of those creditors negotiating in good faith. The better the timing, the more orderly the process, and the better the policy programme accompanying a debt deal is, the better the prospects for a swift return of trust and credibility, low losses and, ultimately, market access.

Recent initiatives in this regard have been quite promising. Euro area members and a number of other governments have included collective action clauses in all new central government bonds. This is the basis for an orderly negotiation process. In order to prevent the socialisation of private losses via international financial assistance, an IMF-supported programme should include the prolongation of bonds held by the private sector. Such prolongations could apply in cases where a country applying for financial assistance has lost market access, exhibits public debt or financing needs above a certain threshold, and its debt sustainability is in doubt. In some cases mandatory debt restructuring may also be required. Changes in IMF procedures have been moving in this direction.

The euro area crisis and notably the Greek experience have shown that avoiding adverse feedback loops between banks and governments is essential. An excessive exposure of banks to certain governments could undermine required private sector bail-in if there is a risk of spreading financial instability. It is therefore essential to break the bank-government loop by removing regulatory privileges for government bonds on banks' balance sheets, notably their exemption from risk-weighted capital requirements and from large exposure limits.

Apart from addressing the debt overhang, the mere existence of an orderly debt restructuring option would already work as a crisis prevention tool, as it would enhance market discipline and, thereby, reduce governments' debt bias.

Private debt – promoting private sector responsibility

Finally, institutional solutions could reduce public sector risks arising from private sector exposures. The real economy and the financial sector have an inherent in-

centive to socialise private debt. It is therefore important to have strong property rights underpinned by a well-functioning legal and judicial system that make market transactions and the enforcement of contracts cheap and reliable. This deters debtors ex ante from opportunistic debt accumulation. While this suggestion is almost embarrassingly common place, things often look different in reality and there is a great need for action, not least in Europe, as many indicators and anecdotal evidence show.

Moreover, capital and ownership structures, notably in the financial sector, have been deficient in the past, meaning that governments could all too easily be blackmailed into expensive bail-outs. There has been significant progress in this area. The global community has embarked on an ambitious financial regulation agenda under the auspices of the FSB, while Europe has made progress towards a level playing field and coherent application of rules through the Banking Union's single supervision and bank resolution framework. Notable enhancements are global requirements for more capital (core and contingent) and bank resolution plans, especially for systemic players. Bail-in requirements have been enshrined in (European) law, thus protecting tax-payers from private losses migrating onto public balance sheets. It is now crucial to implement these agreements.

Conclusion

Global over-indebtedness poses systemic risks to economic growth and stability. There has recently been some progress in deficit reduction and the stabilisation of the debt stock. However, little, if any, progress has been made in deleveraging in the public and private sectors.

There is also good news and bad news in Europe. EU members found an appropriate response to the financial and subsequent debt crisis; but once immediate stability risks abated, complacency set in. This is all the more worrisome as systemic risks from global debt trends loom large.

In this article we argued that the debt crisis was the result of an institutional crisis. To preserve solvency, we called for an institutional framework that aligns individual and political incentives with the global interests of stability and sustainability. Hard budget constraints for public and private sector debt are one side of the coin. The other side are transparent, effective rules and de-politicised enforcement procedures that ensure compliance. Discipline can only be re-established when all actors (politicians, investors, corporations and the financial industry) are held accountable for their decisions.

Picking up on Buchanan's ethical debate on public debt (Buchanan 1987), we do not see default as a solution to remedy a possible "immoral" use of money borrowed by the government in the past. Instead, we agree with Brennan and Eusepi (2002) that spent money, whether it has been used efficiently or not, cannot be recouped by reshuffling claims and liabilities between present bond holders and tax-payers. Similarly, we do not see inflation and financial repression as an acceptable way out of debt. The people who are likely to bear the costs of such implicit default are the middle classes. Let's not prove Marx right after all in his view that capitalism, market economies and democracies destroy themselves. Instead, we need to strengthen national and international institutional underpinnings to ensure that contracting parties are able and willing to serve their obligations. This would seem to be the best way to prevent and resolve over-indebtedness.

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