

# Options for managing a sudden rise in public debt

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22 July 2019

## Question

*What options are there for managing a sudden rise in public debt, including examples of how this has successfully been tackled.*

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# 1. Summary

Debate has raged over whether and when debt reduction is appropriate, particularly in advanced economies. Arguments for lowering public debt are based on the costs and risks generated by high public debt; debt reduction is generally deemed appropriate when the risks associated with it are greater than those associated with debt-reducing policies (Best et al 2018: 2). The literature on public debt reduction can be grouped into three broad strands (i) studies that describe episodes of debt accumulation and its sources; (ii) studies that assess the economic implications of high debt (on economic growth and interest rates); and (iii) studies that focus on debt reduction episodes, fiscal adjustment and its impact on the economy (Baldacci et al 2012: 370). This review draws mainly from the third strand.

Options for managing high public debt generally fall into three categories:

- **Conventional options**, including fiscal consolidation, growth promoting policies (Best et al 2018); and the privatisation of government assets (Reinhart et al 2015)
- **Unconventional options**, including monetary policy (taxing wealth, inflation) and financial repression (Best et al 2018; Reinhart et al 2015)
- **Radical options**, such as outright default and debt restructuring (Best et al 2018; Reinhart et al 2015)

This report focuses on the first two categories. The more radical approaches to dealing with high public debt are considered out-of-scope for this particular research question.<sup>1</sup>

Key findings from this report:

- The most substantial body of evidence identified on options for reducing public debt focuses on fiscal consolidation. The literature on other types of interventions is less forthcoming.
- The findings from the financial consolidation literature are mixed, in terms of assessments of how effective the approach is as a debt reduction strategy. This will depend on whether the country in question is an advanced, emerging or developing economy; whether the accumulated debt is primarily domestic or foreign; as well as specific characteristics of the fiscal adjustment.
- Much literature on successful fiscal consolidations focuses on the size and composition of fiscal adjustment episodes and the likelihood of their short-term success. Evidence on interventions and their impact over the medium and longer-term is less forthcoming (Baldacci et al 2012: 368)
- There is evidence that the impact of different interventions varies between advanced, developing and emerging economies. Evidence from developing and emerging economies is more limited than from advanced economies.
- The impact of interventions also depends on the structure of the debt that is to be reduced. Options are 'more generous and more diverse for debt that is governed by the

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<sup>1</sup> For more detail on the radical options, see Ams et al (forthcoming) on sovereign default and Buchheit et al (forthcoming) on debt restructuring.

domestic legal system, owned by domestic residents and is denominated in domestic currency' (Reinhart et al 2013: 1-2).

- Although the literature on debt reduction generally does not specify the timing of debt increases (i.e., whether they were sudden or not), evidence cautions against implementing rapid debt reduction interventions in response to high debts.
- Despite the existence of numerous successful episodes of debt reduction historically, detailed case studies on how these were successfully implemented, particularly in developing and emerging market contexts, are scant.

## 2. Options for managing public debt

### Conventional policy approaches

#### Fiscal consolidation

Fiscal consolidation, defined here as 'budgetary measures taken by the government to improve its fiscal position and reduce its debt-to-GDP ratio', is the most direct policy tool by which a government can reduce its debt (Best et al 2018: 6-9). It aims to enable governments to adjust their fiscal policies by running primary budget surpluses to lower their debt, primarily through revenue-enhancing and expenditure containment measures in the budget (Best et al 2018: 9; Nickel et al 2010). In shorthand, these policies to reduce fiscal deficits and debt levels are referred to as 'austerity' (Ostry et al 2016).

Although fiscal consolidation has been called 'the key' to debt reduction (Baldacci et al 2012: 369)<sup>2</sup>, the evidence on its impact on debt reduction is mixed. Best et al (2018: 48) suggest that 'with the exception of a few hyperinflationary episodes', fiscal surpluses often contribute to successful debt reductions. They subsequently define a successful fiscal adjustment as being large enough to put debt on a sustainable path; durable (that is, difficult to reverse) with minimised efficiency cost of consolidation (Best et al 2018: 10-11; Primovac 2012). Alesina and Ardagna (2009) argue that if the initial condition features a large government, then a government contraction emphasising spending cuts (as opposed to tax hikes) may be effective. Reinhart et al (2015: 25) state that the empirical literature supports a positive correlation between the size of the primary surplus and the level of public debt relative to GDP – although they also highlight the experience of Europe between 2010 and 2013 as an exception to this. On the other hand, DeLong and Summers (2012) and Krugman (2015) argue that in a depressed economy, austerity is harmful to growth, and shrinks tax revenues, leading to larger government deficits.

Differences have been identified in the literature between the outcomes of fiscal consolidation in advanced, emerging and developing economies. Generally, developing countries have received 'scant attention' in the literature on the fiscal response to debt (Small et al 2019: 9). Small et al's (2019) study based on data from 53 developing countries finds evidence of a positive relationship between the debt and primary surplus. Baldacci et al (2013) assesses the effects of fiscal consolidation associated with public debt reduction on medium-term output growth of 107 countries during 1980-2012. This highlights observed differences between advanced and

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<sup>2</sup> Baldacci et al (2012: 369) also highlight the 'not negligible' contribution of the interest-rate growth differential to lowering debt.

emerging economies, suggesting that large fiscal adjustments have been a key driver of debt reduction in the former, and a negative interest rate-growth differential in the latter (Baldacci et al 2012: 372). Schaltegger and Weder (2015) estimates the effects of fiscal adjustments on the probability of default in the short-term, looking at 104 developing countries between 1980 to 2009. This finds that fiscal adjustments, even large ones, generally do not reduce the probability of default significantly. Instead, the composition of the budget consolidation is key to reducing risk of default. In low and middle-income countries, revenue-based adjustments significantly reduce the default risk, whilst expenditure-based adjustments 'appear more harmful' in low income countries (Schaltegger and Weder 2015: 100). This challenges the findings from empirical literature on fiscal adjustment in industrialised countries that expenditure-based adjustments are 'more likely to be successful, more likely to lower debt levels and less likely to be harmful for growth.' Although additional research is needed, it appears that this is because low and middle-income countries are more limited in raising additional revenue and cutting expenditure.

It has been argued that fiscal consolidations can raise economic output and employment, in part by increasing private sector confidence and investment<sup>3</sup>. However, Ostry et al (2016: 40) finds that fiscal consolidation leads, on average, to decreases in output. It is important to recognise the potential 'welfare cost' to fiscal policy (Ostry et al 2016). Ball et al (2013) find that fiscal consolidation has typically led to a 'significant and long-lasting increase in inequality'. Best et al (2018: 48) suggest that fiscal policy can result in sharp trade-offs between debt reduction and welfare, since fiscal policy shifts resource allocation by adjusting expenditures and the burden of taxation. Ostry et al (2016) caution that the cost of austerity policies may exceed their benefit because, in order to achieve a lower debt level, taxes that distort economic behaviour must be temporarily raised and/ or productive spending cut. The costs of these tax increases or expenditure cuts may be much larger than the reduced crisis risk generated by the lower debt. Whilst high debt is also bad for growth and welfare, the welfare cost from the higher debt (i.e., the 'burden' of the debt) has already been incurred and cannot be recovered. In addition to generating substantial welfare costs due to supply-side channels, austerity policies can also hurt demand, thus worsening unemployment and undercutting growth (Ostry et al 2016: 40).

### **Growth-enhancing policies**

Growth-promoting policies aim to raise the growth rate of potential GDP, contributing to debt reduction directly through boosting the denominator in the debt-to-GDP ratio and, indirectly, via the primary balance (Best et al 2018: 21). Focusing on growing the economy is seen as an attractive option since 'even relatively modest improvements in GDP growth rates can substantially improve the prospects for debt reduction and reduce the need for adjustment via other policies.' (Best et al 2018: 48). Economic growth can also raise welfare alongside diminishing the debt burden (Best et al 2018: 21; Reinhart et al 2015: 3).

However, Best et al (2018: 21) warn that growth-promoting options are not straightforward, whilst Reinhart and Sbrancia (2011:2) characterise them as 'not particularly practical from a policy

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<sup>3</sup> Proponents of this view include Harvard economist Alberto Alesina in the academic world and former European Central Bank President Jean-Claude Trichet in the policy arena (Ostry et al 2016).

standpoint.' Moreover, Reinhart and Sbrancia (2011: 2) point out that 'high levels of public debt appear to be associated with lower growth'.

There is evidence that supply-side measures boost medium and long-term potential output and demand management policies boost short-term growth. Policies which raise short-term growth without boosting long-term potential output may only have minor economic implications for long-term debt reduction. Nonetheless, by offsetting adverse (short-term) economic impact of other debt-reducing measures, or increasing their political feasibility, growth enhancing policies can play an important supporting role (Best et al 2018: 24)<sup>4</sup>.

Policies to boost long-term growth can be roughly grouped into three broad categories (see Best et al 2018: 25- 27):

(1) Reforms that aim to increase the size and skills of the labour force:

- **Policies to reduce structural unemployment** usually focus on increasing the demand for labour and boosting unemployed workers' ability and incentives to find jobs (e.g., reforms to unemployment benefits and the labour-tax wedge<sup>5</sup>).
- **Measures to boost labour force participation** often target under-represented groups such as women, young and older workers (e.g., enhancements to child-care provision, youth-specific minimum wages and increases in state retirement ages).
- **Improving the skills and health of the workforce** through enhancing health and education systems can deliver significantly growth benefits in the long-term, particularly where social returns to education are high.
- **Population growth** is most affected by migration policy in the near-term, but some governments have sought to raise fertility rates (e.g., through financial incentives).

(2) Reforms that aim to boost investment and promote accumulation of human capital:

- **Strategies to promote private investment** typically focus on the financing and business environment (e.g., barriers to entry).
- **Increasing public investment** has a direct fiscal cost but should boost GDP. Under certain conditions, public investment can be 'self-financing' (e.g., it reduces the debt-to-GDP ratio in the medium term even if it is financed by borrowing).
- **Improving the efficiency of public investment** could potentially boost growth even at existing investment rates by promoting better project appraisal, selection and execution, particularly in developing countries.

(3) Policies to boost the allocation of capital and labour across and within industries and encourage the development and adoption of new technologies:

- **Strategies to encourage the reallocation of capital and labour** include enhancing the flexibility of labour and product markets, reforms to improve the allocation of resources by the financial sector and industrial policies.

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<sup>4</sup> Best et al (2018: 21-24) also discuss the potential role of interest rates on economic growth and debt reduction.

<sup>5</sup> The labour-tax wedge is the difference between before-tax and after-tax wages.

- **Promoting the development of new technologies** can involve changes to intellectual property laws, but there may also be gains from encouraging research and development expenditure (e.g., through tax incentives)
- **Common strategies to promote the adoption of technologies from abroad** include capital account and trade liberalisation, which expose firms to foreign competition and learning opportunities, although empirical evidence on these effects is mixed (Best et al 2018: 25- 27)

The list of potential policies is extensive. For more advanced economies, the scope for a boost to GDP per capita through structural reform may be modest, due in part to societal preferences and political barriers. There is potentially greater scope for growth accelerations in developing and emerging economies, regardless of debt-level (Best et al 2018: 48). Given the range of policy options, however, it is crucial for policymakers prioritising debt reduction to determine where the potential gains are the largest. These are likely to vary between countries, depending on their level of economic development (Best et al 2018: 27). Therefore, translating this list into practical policies requires that reforms are considered in the context of their reactions with fiscal policy and their possible political implications (Best et al 2018: 28-29).

## Privatisation

Privatisation of state-owned assets can also impact debt dynamics. Such policies can reduce gross debt by generating cash that can support an economy with short-term liquidity problems (Best et al 2018: 7; Reinhart et al 2015: 29). Nevertheless, they also reduce government assets, which may limit effects on government solvency (Best et al 2018: 7). Reinhart et al (2015: 4) also suggest that ‘unless the private sector is more efficient than the public sector at providing the service being privatised, selling public assets has no first-order effect on the government’s long-term budget constraint. Indeed, if sold at too low a price, the impact may even be negative. Exceptions may include where the government is ‘a poor custodian’ of its assets (for example, where corruption, or waste associated with rent seeking, are at play); where appropriate allocation of resources are hindered by binding procurement regulations or complex labour rules; or where privatisation can enhance the liquidity of the government’s balance sheet by converting ‘valuable but highly illiquid’ assets (Reinhart et al 2015: 29-30).

## Unconventional policy approaches

### Monetary policy

Central banks have used monetary policy to reduce the government debt burden, through several channels, including by generating surprise inflation that reduces real interest rates on (domestic) government debt and by generating seigniorage revenues<sup>6</sup>. Although they may have

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<sup>6</sup> In some countries, where governments rely heavily on the issuance of central bank money as a source of revenue. Where central banks do not pay interest on money, they make a profit by holding interest-bearing assets such as government debt and funding themselves with money. Typically, this profit is passed to the government and counts towards government revenue. This can help alleviate the government debt burden. The change in the amount of central bank money – the amount of money printed or credited to the accounts of commercial banks – is known as ‘seigniorage’ (Best et al 2018: 31)

short-term impacts on real GDP, these policy strategies may entail challenges and tend, therefore, to not be 'a first resort' (Best et al 2018: 38).

Moderate, temporary increases in inflation may sometimes be appropriate as part of a package of measures to reduce the debt burden. Central banks can reduce the debt burdens of governments which have issued debt denominated in domestic currency, by creating a surprise increase in inflation, which can reduce the real value of debt. They can also raise the nominal value of GDP and therefore the tax revenue used to pay back government debt. In this sense, domestic currency debt can be 'inflated away'. Inflating away debt is a form of tax but the tax base consists of the holders of the government debt. Debt dominated in domestic currency can be inflated away completely: the central bank just needs to set the interest rate at zero and wait until the price level becomes arbitrarily high. However, debt denominated in foreign currency or a commodity (e.g., gold) cannot be inflated away (Best et al 2018: 34-37).

Many emerging market governments, however, have a mixture of both domestic and foreign currency debt. In these countries, the impact of unexpected inflation on the government debt burden is lower. Furthermore, inflating away domestic currency debt in countries with large foreign exchange exposures can be challenging to manage (Best et al 2018: 37). A temporary, surprise period of inflation is likely to be both more effective and less costly than other forms of inflation. Inflation targeting<sup>7</sup> may generate a reduction in foreign currency share of sovereign international debt, although has not been found to have an effect on domestic-held debt (Ogrokhina and Rodriguez 2018).

Governments without domestic currency debt must rely on seigniorage, which is associated with much higher rates of inflation. Because most central banks do not pay interest on money, they make a profit by holding interest-bearing assets such as government debt and funding themselves with money. Typically, this profit is passed to the government and counts towards government revenue. This is an attractive source of income and, along with other types of revenue, can help alleviate the government debt burden (Best et al 2018: 31). However, printing money is not without challenges. Best et al (2018: 32) highlight that, 'if the central bank creates a lot of new money and purchases government debt with it, the public will spend the money. In the short run, this might lead to a boom in production and jobs. But after a few years, the main impact is higher prices; 'in other words, \$1 no longer buys as much [so] those people who held money over the period of inflation have lost out' Best et al (2018: 32). Additionally, there are limits to the volume of revenue that can be raised by the seigniorage tax.

## **Financial repression**

The term 'financial repression' refers to reducing the rate of return on domestic government debt by creating frictions in financial markets and/ or captive audiences for government debt (Best et al 2018: 41). Although often stigmatised as a strategy, financial repression has historically been utilised to reduce the cost of servicing public debt in both advanced and emerging economies. It is a natural complement to monetary policies (e.g., inflation), with which it is frequently used, and acts as an implicit tax on holders of government debt and money (Best et al 2018: 49; Reinhart et

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<sup>7</sup> Inflation targeting is a monetary policy where the central bank sets a specific inflation rate as its goal. The central bank does this to make you believe prices will continue rising. It spurs the economy by making you buy things now before they cost more. (See <https://www.thebalance.com/inflation-targeting-definition-how-it-works-3305854>)

al 2015: 5). Some fear that financial repression generates negative consequences for growth, particularly in an era of significant global financial integration (Best et al 2018: 49). However, others argue that financial repression was widely used worldwide from 1945 to the early 1980s and played a key role in reducing the public debt of many advanced economies during and after WWII (Best et al 2018: 49; Reinhart et al 2015: 37). It is most relevant as a strategy when debt is denominated in local currency (Best et al 2018: 40). Common forms of financial repression include restrictions on banks (e.g., ceilings on interest rates, direct lending and reserve requirements). Capital controls are also a form of financial repression. In some cases governments have also used moral suasion to persuade investors to act in a certain way without imposing explicit restrictions (Best et al 2018: 42).

### 3. Examples of how to successfully tackle public debt

Literature on successful fiscal consolidations focus on size and composition of fiscal adjustment episodes and their likelihood of short-term success (Alesina and Perotti 1995; Giavazzi and Pagano 1990; Baldacci et al 2012: 368). However, there is a gap in the literature with regards to analyses of the factors that explain longer-term debt reduction and the factors that contribute to this (Baldacci et al 2012: 368)

Generally, the historical contribution of different policies to debt reductions has varied widely, depending on country circumstances and the international context (Best et al 2018: 7). For example, Reinhart et al (2015) study of the experiences of 22 advanced economies since 1800 in their efforts to limit debt, finds 70 distinct episodes of significant debt reversals. And those efforts employ 'all the policy levers available, both orthodox and heterodox' (Reinhart et al 2015: 45-47). In these cases, high inflation and negative real interest rates often led to debt reduction during the recovery from war. The authors suggest that in times of peace, debt shrinks relative to income primarily since government runs larger-than-typical surpluses. Despite this, default of one form or another was not uncommon, in war as well as peace.

Best et al (2018: 8) note that prior to WWI, advanced economy debt reductions relied mainly on primary surpluses and were often conducted in the context of modest growth and low inflation. In the interwar period, debt overhangs were initially addressed through a mixture of hyperinflations (Germany, Austria) and primary surpluses (France, United Kingdom) - ultimately defaults were widespread. Post-WWII, debt reductions relied primarily on very favourable interest-growth differentials thanks to a combination of rapid growth, financial repression and persistent inflation while primary surpluses played only a small role (Best et al 2018: 8)

Abbas et al (2013) highlight that since the 1970s, large debt reductions in advanced economies have not been frequent<sup>8</sup>. Those that did occur relied primarily on fiscal consolidation, as well as output growth. Inflation, interest rates, and stock-flow adjustments also affected debt dynamics, although they played relatively minor roles.

Since the 1980s, non-default debt reductions have generally fallen into one of two broad categories: those in which negative real interest rates were the main driver of debt reduction (e.g., Poland and Hungary in the 1990s and Serbia in the 2000s); and moderate inflation episodes in which real growth rates typically accelerated, and the contribution of primary

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<sup>8</sup> Examples include Ireland and New Zealand from the 1980s, Belgium and Denmark from the 1990s.

surpluses and growth to debt reduction was similar (e.g., Indonesia and Uruguay in the 2000s) (Best et al 2018; Abbas et al 2010).

IMF (2018: 49) identifies seven sustained non-default debt-reductions in low-income countries since 2000. Policy responses to these varied. In Papua New Guinea, Uzbekistan and Solomon Islands, the decline in debt burdens was aided by rising prices of export commodities, backed by fiscal policies that saved a part of the associated increase in budgetary resource revenues. In Nepal, fiscal consolidation contributed to debt reduction, supported by an increase in tax revenue (in turn, underpinned by a surge in relatively easy to tax imports and some revenue administration measures) and expenditure restraint that reflected limited capacity to execute investment spending. In Djibouti and Lao P.D.R., high investment levels produced robust GDP growth that lowered debt ratios. In Lao P.D.R., major hydroelectric works proceeded with a large private investment component; whilst in Djibouti, privatization receipts contributed to debt reduction even as large public investment weighed on the fiscal accounts. In Myanmar, high inflation in an environment of financial repression shrank the domestic debt burden. In all of these cases, negative real interest rates contributed to debt reduction while the accounting contribution of growth to debt reduction exceeded 10 percentage points of GDP in all countries, except Papua New Guinea.

Generally, discussion of successful fiscal adjustment policies has generally focused on a number of factors: size of fiscal consolidation, speed and composition of adjustment, accompanying policies, political economy and institutional factors (Best et al 2018: 10-11; Baldacci et al 2012: 370)<sup>9</sup>.

- **Composition** has been identified as critical to successful fiscal adjustments. Fiscal adjustments that relied on expenditure cuts (in particular lower public sector wages and untargeted transfers) were longer lasting and had a higher likelihood of success in both advanced countries and in emerging market economies (Baldacci et al 2012: 371-372; Alesina and Ardagna 2009). Baldacci et al (2012: 369) suggest that expenditure-based fiscal adjustments are more successful than revenue-enhancing measures in reducing the duration of debt consolidation episodes. However, they go on to say that, when adjustment needs are large, revenue-enhancing measures are more likely to accelerate debt consolidation than expenditure-based cuts only.
- **Timing of fiscal adjustments** is also important. Analysts warn against rapid adjustments to bring debt back to targeted levels because debt reduction strategies are already costly, and rapid policy adjustment is likely to increase costs (Best et al 2018: 4). Rapid adjustments, particularly during times of weakened economy should generally be avoided. Where a government has substantial space relative to a 'safe' debt level, a policy of gradual adjustment is preferable (Best et al 2018: 4). Baldacci et al (2013) finds that fiscal adjustments that are gradual, and a combination of revenue and expenditure measures (rather than only spending cuts) can support medium-term output expansion, while reducing public debt. However, Baldacci et al (2012:368) also warn – although there are a limited number of systemic studies on long-term debt consolidation - that slower pace of fiscal consolidation can 'weaken confidence and cause spreads to widen', making public debt unsustainable.

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<sup>9</sup> See Best et al (2018: 9-21) for greater detail on designing fiscal consolidation.

- **Minimising welfare trade-offs** requires carefully designing fiscal consolidations; policy makers may prefer to support fiscal adjustments with other policy instruments (Best et al 2018: 48). Fiscal consolidation must be complemented with policies that promote growth (Primovac 2012; Baldacci et al 2010). Additionally, fiscal consolidation strategies can be designed to minimize the adverse impact on low-income groups; in other cases, the negative distributional consequences will need to be remedied after they occur through taxes and government spending to redistribute income (Ostry et al 2016: 40). Research by Small et al (2019), on the fiscal response of 53 developing countries to changes in their debt-to-GDP ratio, suggests that developing countries adjust along both the revenue and expenditure margins, indicating 'deliberate policy on the part of governments not to engage in asymmetric policy changes that could impact negatively on overall welfare.'
- **Political costs of reform** are often immediate and concentrated on particular groups in society, whilst the gains are usually more spread out and may take longer to materialise. Consequently, the potential 'losers' from reform have stronger incentives to prevent their adoption. One way to overcome obstacles to reform is to attempt to compensate the 'losers' (Best et al 2018: 28-29). One way to overcome the political drawbacks of a surprise inflation is to be explicit about why inflation deviates from its target (or why currency devaluations occur), ideally ahead of time (Best et al 2018: 48-49).

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## Acknowledgements

We thank the following experts who voluntarily provided suggestions for relevant literature or other advice to the author to support the preparation of this report. The content of the report does not necessarily reflect the opinions of any of the experts consulted:

- Alex Pienkowski, International Monetary Fund

## Suggested citation

Orrnert, A. (2019). *Options for managing a sudden rise in public debt*. K4D Helpdesk Report 645. Brighton, UK: Institute of Development Studies.

## About this report

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