

IMF POLICY PAPER

REASSESSING THE ROLE AND MODALITIES OF FISCAL POLICY IN ADVANCED ECONOMIES

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REASSESSING THE ROLE AND MODALITIES OF FISCAL POLICY IN ADVANCED ECONOMIES

June 21, 2013

EXECUTIVE SUMMARY

This paper investigates how developments during and after the 2008–09 crisis have changed economists' and policymakers' views on: (i) fiscal risks and fiscal sustainability; (ii) the effectiveness of fiscal policy as a countercyclical tool; (iii) the appropriate design of fiscal adjustment programs; and (iv) the role of fiscal institutions.

Advanced economies have experienced much larger shocks than was previously thought possible and sovereign-bank feedback loops have amplified sovereign debt crises. This has led to reassessing what constitutes "safe" sovereign debt levels for advanced economies and has prompted a more risk-based approach to analyzing debt sustainability. Precrisis views about the interaction between monetary and fiscal policy have also been challenged by the surge in central bank purchases of government debt. This has helped restore financial market functioning, but, to minimize the risk of fiscal dominance, it is critical that central bank support is a complement to, not a substitute for, fiscal adjustment.

The crisis has provided evidence that fiscal policy is an appropriate countercyclical policy tool when monetary policy is constrained by the zero lower bound, the financial sector is weak, or the output gap is particularly large. Nevertheless, a number of reservations regarding the use of discretionary fiscal policy tools remain valid, particularly when facing "normal" cyclical fluctuations.

The design of fiscal adjustment programs, and particularly the merit of frontloading, has returned to the forefront of the policy debate. Given the nonlinear costs of excessive frontloading or delay, countries that are not under market pressure can proceed with fiscal adjustment at a moderate pace and within a medium-term adjustment plan to enhance credibility. Frontloading is more justifiable in countries under market pressure, though even these countries face "speed limits" that govern the desirable pace of adjustment. The proper mix of expenditure and revenue measures is likely to vary, depending on the initial ratio of government spending to GDP, and must take into account equity considerations.

The crisis has revealed the challenges involved in establishing credible medium-term budget frameworks and fiscal rules to underpin fiscal policy that are also sufficiently flexible to respond to cyclical fluctuations. Moreover, shortcomings in fiscal reporting point to the need to reassess the adequacy of fiscal transparency institutions.

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INTRODUCTION AND MOTIVATION

1. Before the 2008–09 crisis, the consensus view was that fiscal policy should play a limited role as a stabilization tool.¹ Monetary policy was seen as a sufficient tool for short-term macroeconomic stabilization. Numerous studies questioned the effectiveness of fiscal policy for stabilization purposes, partly based on Ricardian considerations, and instead emphasized the long-term goals of fiscal policy, including the provision of public goods and services, and long-term fiscal sustainability. In addition, sovereign debt crises were seen primarily as a phenomenon of emerging market and low-income countries, of limited practical relevance for advanced economies.² Before the crisis, it was also believed that when risk premia and sovereign borrowing costs were high, “non-Keynesian” confidence effects or supply-side improvements, such as lower labor costs, could offset much of the negative direct effects of fiscal adjustment on economic activity.

2. Despite this precrisis consensus, almost all advanced economies deployed fiscal stimulus at the start of the crisis. This renewed reliance on fiscal policy may have been driven in part by the depth of the downturn, interest rates at the zero lower bound (ZLB) for some advanced economies that limited the scope for traditional monetary policy, and a moribund credit channel. New research points to large fiscal multipliers when economic conditions resemble those prevailing in advanced economies in the post-crisis period. Against this background, debate continues on the merits of frontloaded versus gradual (but steady) fiscal adjustment when financing permits. In addition, the scale of the current fiscal problem has revived the debate on the importance of institutions that underpin fiscal adjustment.

3. This paper provides an organizing framework to draw preliminary fiscal policy lessons from the crisis. It addresses four main areas: (i) fiscal risks and fiscal and debt sustainability; (ii) the effectiveness of fiscal policy as a countercyclical tool; (iii) the design of fiscal adjustment; and (iv) fiscal transparency, fiscal rules, and budgetary institutions. The analysis will focus on advanced economies, the country group most directly affected by the crisis.

FISCAL RISKS, SOLVENCY, AND SUSTAINABILITY

4. The crisis has exposed macro-fiscal vulnerabilities in advanced economies (AEs) that were not fully recognized beforehand. It has revealed that fiscal risks and the buffers required to protect against them are much larger than previously thought. For example, headline fiscal surpluses can mask large structural deficits during asset price booms and contingent liabilities stemming from large internationally-connected domestic banks can dwarf reported public debts. Thus, assessments of fiscal sustainability—traditionally rooted in headline fiscal balances and debt ratios—are now

¹ When the paper uses terms such as “we,” “our views”, or “the consensus view,” it is referring to common or widespread views of economists and policymakers.

² While some analysts did point to concerns about long-run sustainability in advanced economies, these were based on the long-term demographic pressures, not doubts about short-term solvency.

being reconsidered to take better account of the underlying (structural) fiscal position, the likelihood of events that could threaten fiscal sustainability, and the speed with which markets' perceptions of sovereign risk can change.

5. The sovereign debt crisis in the euro area has shown that the precrisis belief that AEs were not at risk of a fiscal crisis was misplaced. Among other things, the crisis exposed shortcomings in the euro area institutional architecture, including those that prevented the provision of timely and sufficient support to banks and sovereigns under duress (Ghosh, Ostry, and Qureshi, 2013). In light of central banks' recent role in eliminating risks of bad equilibria, economists have also questioned the precrisis consensus on avoiding central bank financing of the government. This section will lay out the precrisis views on each of these topics and assess how the crisis and its aftermath have caused our thinking to evolve.

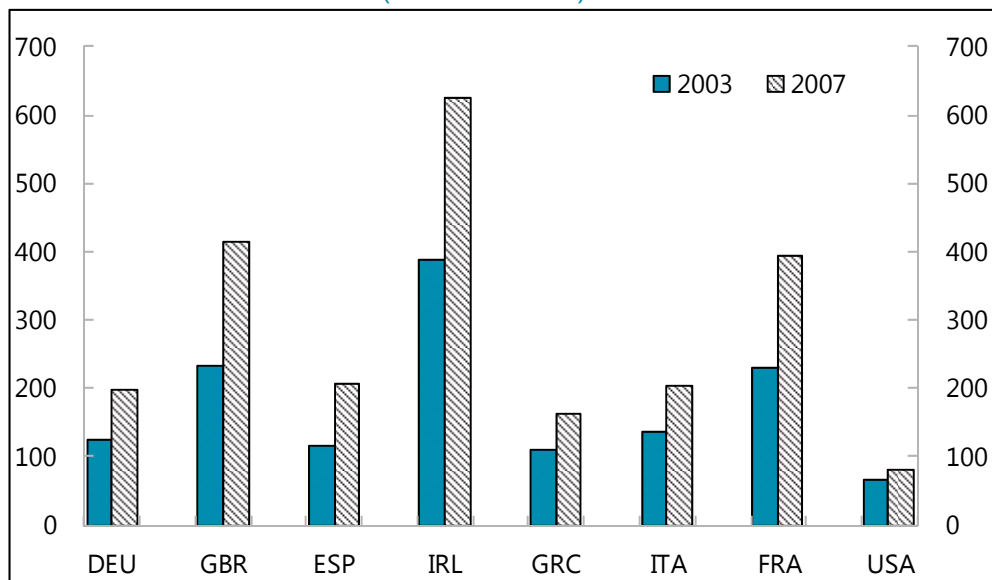
A. Fiscal Risks, Fiscal Solvency, and "Safe" Levels of Debt

6. Before the crisis, we thought AEs were less exposed to fiscal risks. During the two decades preceding the crisis—a period referred to as "The Great Moderation"—AEs exhibited much less volatility in macroeconomic variables than did emerging markets (EMs) and low-income countries. Also, systemic financial crises in AEs were thought to be relatively rare and the related contingent liabilities, if they were to materialize, were thought to pose a limited risk to these countries (Laeven and Valencia, 2012). Moreover, little attention was paid to possible adverse feedback loops between bank risk and sovereign risk, despite the presence of large financial sectors in many AEs (Figure 1).

7. The probability of a full-blown fiscal crisis in AEs was generally considered remote, despite the looming fiscal impact of aging-related spending. Before 2007 there appeared to be little concern about the short-run fiscal solvency of most AEs, in spite of nontrivial fiscal deficits, particularly in the euro area, and relatively high debt-to-GDP ratios (Figure 2).³ This reflected a number of factors. First, the view prevailed that when financial markets are sufficiently developed and deep, they can easily absorb temporary surges in public debt. Second, advanced economies were perceived as having fiscal institutions that would ensure that debt surges would lead to later fiscal corrections. Third, in the euro area, membership in the area was seen as sufficient to avoid a surge in interest rates since government bonds issued by different countries could be regarded as (nearly) perfect substitutes. However, there was significant concern about the impact of population aging on fiscal solvency in many AEs over the long run (Heller and Hauner, 2005; Hauner, Leigh, and Skaarup, 2007).

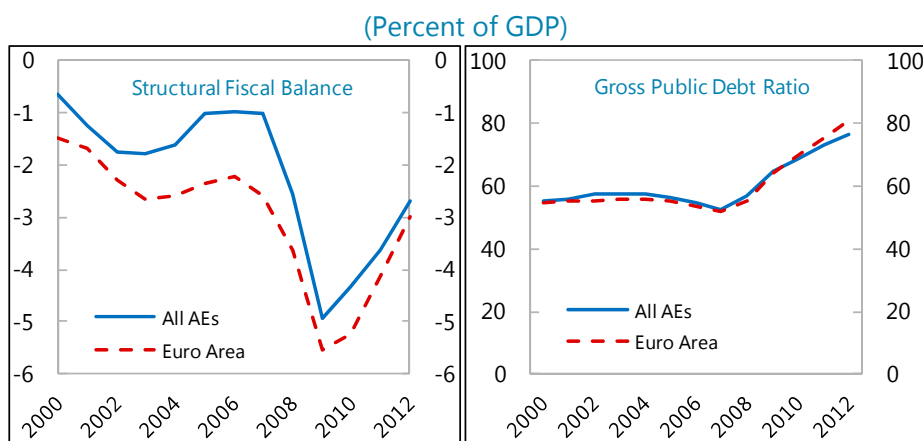
³ The structural deficits depicted in Figure 2 are current estimates. As noted, before the crisis structural deficits appeared to be smaller.

Figure 1. Commercial Bank Assets for Selected Countries Before the Crisis
(Percent of GDP)



Sources: IMF Global Financial Stability Report, various issues.

Figure 2. Average Structural Balance and Public Debt Ratios for Advanced Economies and the Euro Area
(Percent of GDP)



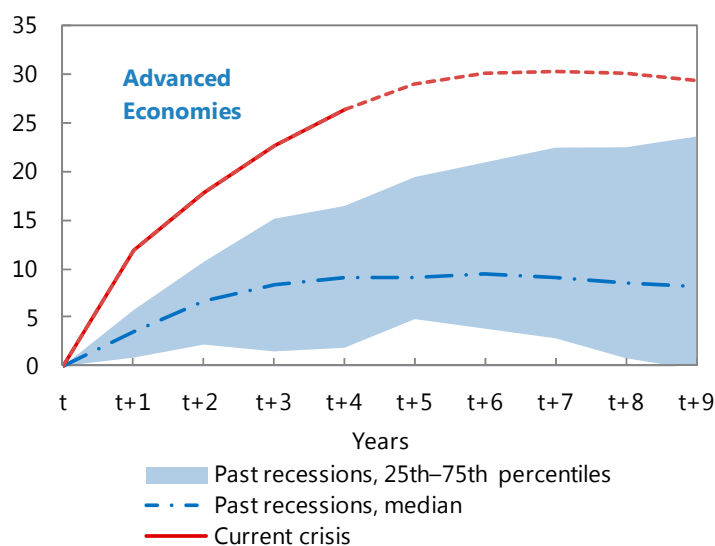
Sources: IMF World Economic Outlook (WEO), Fiscal Monitor, and Historical Public Debt Database.

8. The precrisis build up of fiscal and macro-financial imbalances in AEs posed much larger risks than previously thought. Partly owing to the difficulty of diagnosing asset bubbles until they have burst, such bubbles emerged undetected. In some countries, such as Ireland and Spain, headline fiscal surpluses generated by housing and credit booms masked unsustainable

structural fiscal positions that were revealed when the crisis struck.⁴ The fiscal risks created by large (relative to GDP), growing, and interconnected financial sectors were also underappreciated, partly because of confidence in financial markets' capacity to self-regulate (Greenspan, 2010) and the opacity of cross-border exposures.⁵

9. During the crisis, debt increased much more than was thought possible, raising doubts about what level of debt could be regarded as "safe." Since 2008, macroeconomic and fiscal shocks have been much larger than previously anticipated, which has caused debt-to-GDP ratios to rise much faster than in prior downturns (Figure 3). On average, most of the surge in debt-to-GDP ratios has been due to a shortfall in revenues as a byproduct of sluggish growth in the aftermath of the financial crisis, rather than to direct fiscal costs from bailing out banks (Figure 4).⁶ However, in Ireland and Iceland, bank rescues drove an (unexpected) increase in the debt ratio of 41 and 43 percentage points of GDP, respectively. These two cases illustrate that even levels of debt well below what was considered prudent before the crisis may not be "safe" in the face of large potential contingent liabilities.

Figure 3. Cumulative Change in Gross Debt to GDP Since the Start of Recessions
(Percent of GDP)



Sources: Kinda, Poplawski-Ribeiro, and Woo (2013), and IMF staff estimates and projections.

Notes: Solid line corresponds to 2008—12, and dashed line to 2013—17.

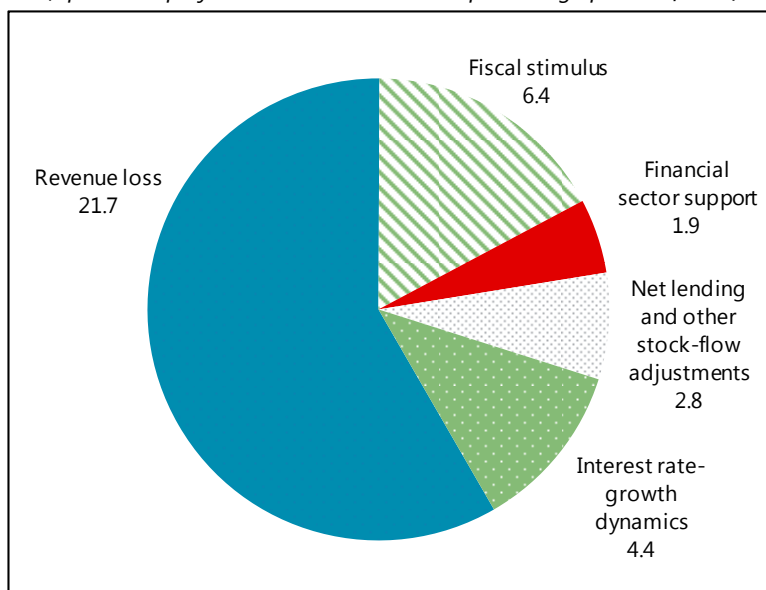
⁴ The structural balance is generally defined as cyclically adjusted balance corrected for "one-off" items. Newer measures of the structural balance also make adjustments for factors beyond the business cycle, such as asset price cycles (e.g., housing, stock markets). The cyclically adjusted balance is the difference between the overall balance and the automatic response of fiscal variables to changes in output (i.e. automatic stabilizers).

⁵ A prime example of cross-border exposures is the exposure of German banks, especially the publicly-owned *Landesbanken*, to complex asset-backed securities (e.g., backed by sub-prime mortgages) from the United States.

⁶ Note, however, that part of the revenue loss is not regarded as cyclical, not only because revenues were inflated by asset price bubbles but also because part of the output loss during the crisis is regarded as permanent.

Figure 4. G-20 Advanced Economies: Increase in General Government Debt, 2008–15
(Percentage points of GDP)

(April 2013 projected total increase: 37.1 percentage points of GDP)



Sources: IMF staff estimates and projections based on the Fiscal Monitor (see IMF, 2011a).

Note: Weighted average based on 2009 purchasing power parity-GDP.

10. As a result, there is a need for a more holistic approach to measuring public debt and determining “safe” levels of debt. The official debt ratio fails to reflect contingent liabilities, which are often underestimated until they materialize (Irwin, 2012). This argues for a much lower “safe” debt level than was thought necessary before the crisis (Ostry and others, 2010; Blanchard, Mauro, and Dell’Ariccia, 2013). On the other hand, the crisis has also shown that for some AEs considered safe havens (Japan and the United States, for example), markets can tolerate much higher debt ratios than previously thought, at least for a time. Since sentiment can shift quickly, a cautious government may rationally err on the side of having a low debt ratio in order to avoid the risk of punishment by the market (Mendoza and Ostry, 2008; Ostry and others, 2010). These issues have prompted new research on assessing fiscal space in AEs (Box 1).

Box 1. Fiscal Space and Prudent Debt Levels: Issues to Consider

The literature has recently proposed various definitions of fiscal space. Aizenman and Jinjarik (2010) use the debt-to-revenue ratio as a simple measure of fiscal space (with a lower ratio meaning more space). Bi and Leeper (2012) propose the notion of country-specific *fiscal limits*, defined as “the point at which for economic or political reasons taxes and spending can no longer adjust to stabilize debt,” at which point, fiscal space runs out (see also Bi, 2012). Focusing on the debt level, recent IMF research has developed a new and more precise definition of *fiscal space*, defining it as the distance between the current (or projected) debt ratio and the *debt limit*, the point above which the sovereign loses market access (Ostry and others, 2010; Ghosh and others, 2013). The *debt limit* is determined by the maximum primary balance (PB) that can be sustained both economically and politically (i.e. the *fiscal limit*) and the interest rate-growth differential ($r-g$), which is the difference between the real interest rate on public debt and the real GDP growth rate (IMF, 2011b). While the assessment of $r-g$ is essentially forward looking, a country’s historical experience can be informative. Comparator countries’ experiences could also be used, where appropriate.

There are several approaches to gauging the level of the maximum sustainable primary balance. One may look at a country’s history, institutions (and how they might change), at periods of extraordinary fiscal effort, or regional peers (Abiad and Ostry, 2005). Using a country’s best historical fiscal performance as a proxy for future fiscal performance helps inform the assessment of what constitutes the maximum fiscal effort. As Rogoff, Reinhart, and Savastano (2003) argue: “history matters: a country’s record at meeting its debt obligations and managing its macroeconomy in the past is relevant to forecasting its ability to sustain moderate to high levels of indebtedness for many years into the future.” However, this does not take into account that relatively low primary surpluses in the past may simply reflect a period in which there was not an urgent need for fiscal adjustment. Thus, historical experience does not necessarily imply that a country cannot achieve higher surpluses when it has a high (or unsustainable) debt level and wants to put the debt ratio firmly on a downward trajectory.

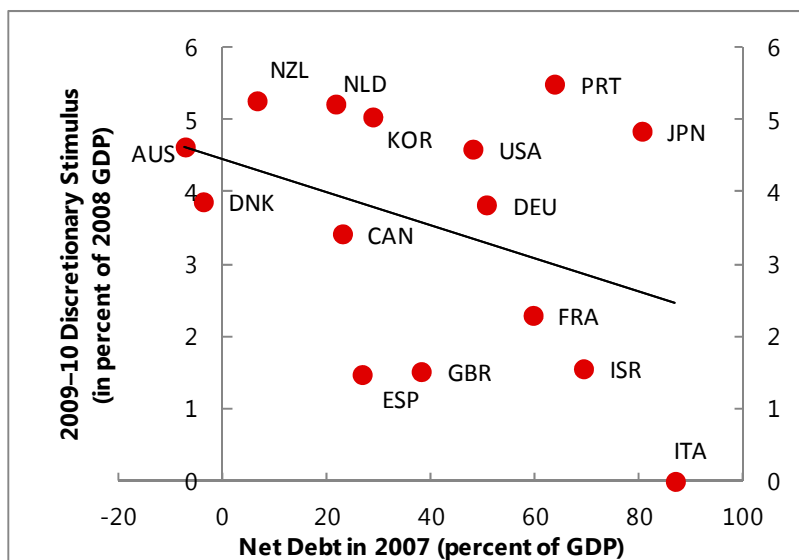
A country’s desired degree of fiscal space should account for fiscal risks. Assessments of country-specific fiscal risks can help inform the decision on how much fiscal space to maintain. For example, stochastic projection methods that model correlated shocks, such as the “fan chart” approach developed by Celasun, Debrun, and Ostry (2007), can help estimate the size of the risks posed by macroeconomic shocks. Such assessments should also take into account the country’s policy flexibility (e.g., monetary sovereignty), long-term fiscal pressures (e.g., aging-related spending), risk management (e.g., fiscal institutions that conduct regular risk assessments) and mitigation measures (e.g., higher capital requirements for banks if the banking sector is large relative to the economy), as well as the degree of cross-country risk sharing available to offset different shocks (e.g., a banking union in the euro area). In sum, this means there is not a one-size-fits-all “safe” level of debt.

11. Countries may also want to maintain lower debt levels to create fiscal space for countercyclical fiscal policy. Christiansen and Perez Ruiz (2013) find that over the past four decades, discretionary countercyclical fiscal responses have been provided mainly by governments

with lower debt levels. Consistent with this finding, in the recent crisis the discretionary countercyclical fiscal policy response of AEs appears to be negatively associated with their initial debt levels (Figure 5).

Figure 5. Advanced Economies: Fiscal Stimulus and Precrisis Net Debt Levels

(Percent of 2008 GDP and percent of 2007 GDP, respectively)



Sources: IMF staff estimates based on WEO and Fiscal Monitor data (IMF, 2010a).

Notes: Sample includes Australia, Canada, Denmark, France, Germany, Israel, Italy, Japan, Korea, the Netherlands, New Zealand, Portugal, Spain, the United Kingdom, and the United States. The fiscal stimulus measure is from the Fiscal Monitor database. Several countries for which data are available that have a net debt ratio less than -10 percent of GDP (Norway, Finland, and Sweden) are excluded for presentational purposes. Including these outliers would strengthen the relation between the size of stimulus measures and initial net debt levels.

12. In light of the above lessons, debt sustainability analysis should take a more risk-based approach than in the past.⁷ Most importantly, sensitivity analyses need to capture country-specific fiscal risks and vulnerabilities, especially risks from the financial sector.⁸ The macro-fiscal shock scenarios should also reflect interactions among key variables, and capture the impact of correlated shocks (for instance through a fan chart). To help prevent contingent liabilities from public enterprises and other state-related entities from catching policymakers off-guard, analyses should be conducted using the broadest possible definition of the public sector. For example, in the United States, potential contingent liabilities stemming from the debt of government-related enterprises is estimated to exceed 50 percent of GDP (IMF, 2013a).

⁷ For further details see IMF Policy Papers "Modernizing the Framework for Fiscal Policy and Debt Sustainability Analysis for Market-Access Countries" (IMF, 2011b) and "Staff Guidance Note for Public Debt Sustainability Analysis for Market-Access Countries" (IMF, 2013b).

⁸ This includes vulnerabilities stemming from not having monetary sovereignty, as in a currency union.

B. Financial Market Discipline of Sovereigns and Multiple Equilibria

13. The ability of financial markets to “discipline” profligate governments was a subject of active debate before the crisis.⁹ Financial markets discipline government finances primarily through the response of the sovereign debt risk premium to higher fiscal deficits and public debt levels, with markets demanding higher interest rates to compensate for a perceived rise in default risk and, in extremis, by denying access to financing altogether (Akitoby, 2006; Akitoby and Stratmann, 2008). In the euro area, some thought that the Maastricht Treaty’s “no bailout” clause would reinforce financial market discipline. However, skepticism about the effectiveness of the market discipline mechanism was also present in the early stages of the European Monetary Union (EMU), and was indeed the main rationale for the introduction of fiscal rules in the area. The 1989 Delors Report noted that “[t]he constraints imposed by market forces might either be too slow and weak or too sudden and disruptive.”

14. It is still an open question as to why market discipline may have been ineffective in the euro area.¹⁰ The focus on headline fiscal positions, temporarily inflated in some countries by asset prices and credit booms, distracted attention from the widening of underlying fiscal deficits and the buildup of private sector imbalances (e.g., in Ireland and Spain). Investors may also have rationally believed that the “no bailout” clause lacked credibility. This could reflect the presumption that, for either political or economic reasons, an EMU member facing sovereign debt distress would be supported by other member states or the ECB, which treated all members’ public debt as risk free (Jahjah, 2001; Buiters and Siebert, 2006; Gros, 2013).¹¹ While this belief was partly confirmed by the euro area’s response to the crisis, the expected bailouts did not materialize smoothly. This may have caused markets to revise their assumption that the “no bailout clause” lacked credibility. In fact, spreads for the crisis-hit countries widened to levels that greatly exceeded what deteriorating fundamentals alone could explain (Poghasyan, 2012; IMF, 2012a; De Grauwe and Ji, 2013), as market attention focused on the difficulties of adjustment inherent in currency union membership (Ghosh, Ostry, and Qureshi, 2013) and concerns about currency convertibility risk re-emerged (i.e. that a country would exit the euro area).¹²

15. The sovereign debt crisis in Europe has brought to light the risk of multiple equilibria. Multiple equilibria risks can emerge if investors become concerned about the possibility of

⁹ See, for instance, Alesina and others (1992) for some earlier evidence supporting the market discipline hypothesis.

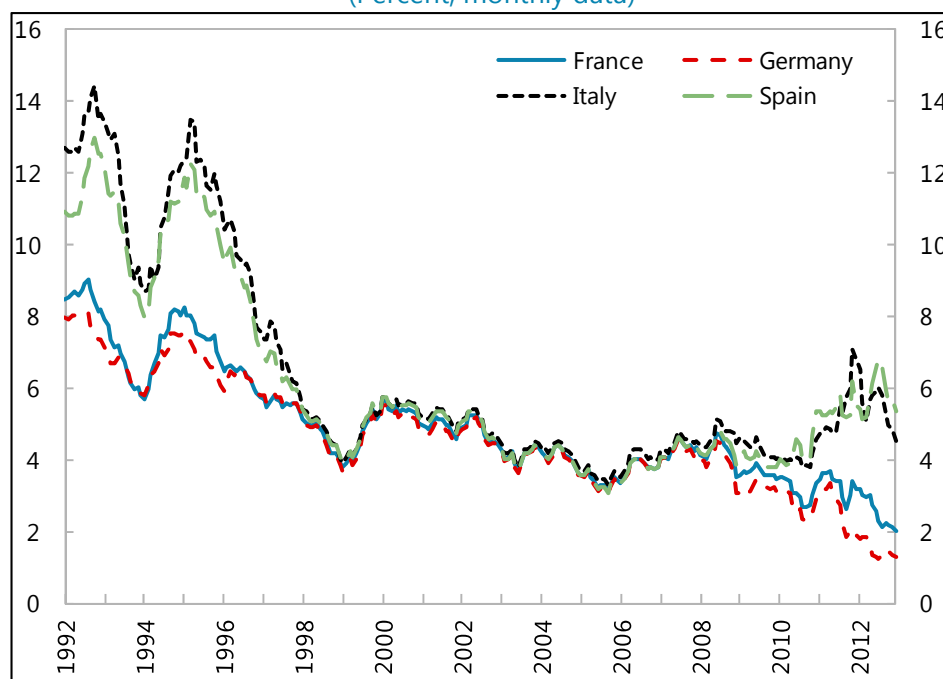
¹⁰ Although part of the precrisis convergence to very low interest rate spreads among member states reflected the convergence of their inflation rates and removal of currency devaluation risk with the adoption of the euro, the wide variance in the underlying fiscal positions of the member states may have justified wider spreads. For instance, in 2005, interest rate differentials on government bonds were only about 30 basis points, with budget balances ranging from a 2 percent of GDP surplus to a 5 percent deficit and debt ratios between 7 percent and 108 percent of GDP.

¹¹ Despite how it was presented, the “no bailout clause” did not technically prevent some sort of assistance to distressed members, which may also account for some of the skepticism.

¹² See the July 26th, 2012, speech by Mario Draghi, the President of the ECB at the Global Investment Conference in London. Available online at: <http://www.ecb.int/press/key/date/2012/html/sp120726.en.html>.

sovereign default and begin to demand higher interest rates. This makes it more costly for a sovereign to service its debt, thereby increasing the risk of default and potentially making investor concerns self fulfilling. Multiple equilibria can emerge even at low levels of debt, but are more likely at high debt levels, since a smaller move in interest rates can shift the sovereign from solvency to insolvency (Blanchard, Mauro, and Dell’Ariccia, 2013).

Figure 6. Sovereign Bond Yields for Select EMU Countries, 1992–2012
(Percent; monthly data)



Sources: National Data, Bloomberg, and European Central Bank.

16. In principle, a central bank can prevent a bad equilibrium by committing to provide liquidity to the sovereign bond market to facilitate its monetary policy objectives. Events during the crisis suggest that currency union members, in particular, are prone to multiple equilibria risks. The market’s differentiated treatment of the United Kingdom and Spain—two countries with similar fiscal and debt dynamics—seems to suggest that the Bank of England was able to prevent the risk of a liquidity crisis in the UK sovereign debt market (De Grauwe, 2011), although the long average maturity of UK sovereign debt also reduced rollover risks. The commitment of the ECB to intervene, if necessary and conditional upon fiscal adjustment, appears to have reduced the risk of “bad equilibria” in the euro area (Abbas and others, 2013). However, in practice intervention could require large purchases and there are likely to be limits on how much a central bank can do. It can be difficult to distinguish between illiquidity and insolvency situations, so the central bank may worry it is taking too much credit risk (Blanchard, Mauro, and Dell’Ariccia, 2013).

C. Central Bank Financing and Fiscal Dominance

17. Central bank financing of the budget could undermine its independence and its control of inflation. A key lesson from the “unpleasant monetarist arithmetic” of Sargent and Wallace (1981) is that lax fiscal policy can put pressure on the monetary authorities to monetize public debt. If fiscal imbalances are sufficiently large over a long period, it creates a risk that monetary policy could eventually become subservient to fiscal considerations (so-called “fiscal dominance”) and the central bank’s inflation objective would be seriously compromised. To avoid this state of affairs, prior to the crisis monetary policies in AEs were typically focused on price stability as their main objective and central banks were given operational independence, including prohibitions on directly funding government deficits (Mishkin, 2000).

18. Central banks’ actions since 2008 have challenged our precrisis views about fiscal and monetary interactions. The surge in central bank purchases of government debt has been spectacular in some countries. For instance, the U.S. Federal Reserve has purchased large quantities of U.S. government debt as part of its unconventional monetary policy (UMP) measures, more than doubling its holdings between 2007 and 2011. Similarly, by the end of 2012, the Bank of England increased its holdings of U.K. government debt from almost nothing to more than a quarter of the outstanding stock.¹³ So far, the massive expansion of some central banks’ balance sheets—aimed at repairing the broken monetary policy transmission mechanism—has not undermined the credibility of fiat money, as inflation expectations remain well anchored in the context of a liquidity trap.¹⁴

19. Central bank purchases of government debt have turned out to be useful to allow for a more gradual fiscal adjustment. Accommodative monetary policy can support fiscal adjustment in that it reduces the cyclical impact of fiscal adjustment and the risk that fiscal tightening is counterproductive (leading potentially to a rise in interest rates; Cottarelli and Jaramillo, 2012). However, given high debt levels in most AEs, fiscal adjustment is necessary to avoid the risk of fiscal dominance down the road. The risk of governments pressuring central banks to help limit borrowing costs may arise if public debt levels remain high when it is time to normalize monetary policy (Blanchard, Mauro, and Dell’Ariccia, 2013).

D. Sovereign-Bank Links and Risks from Private Sector Balance Sheets

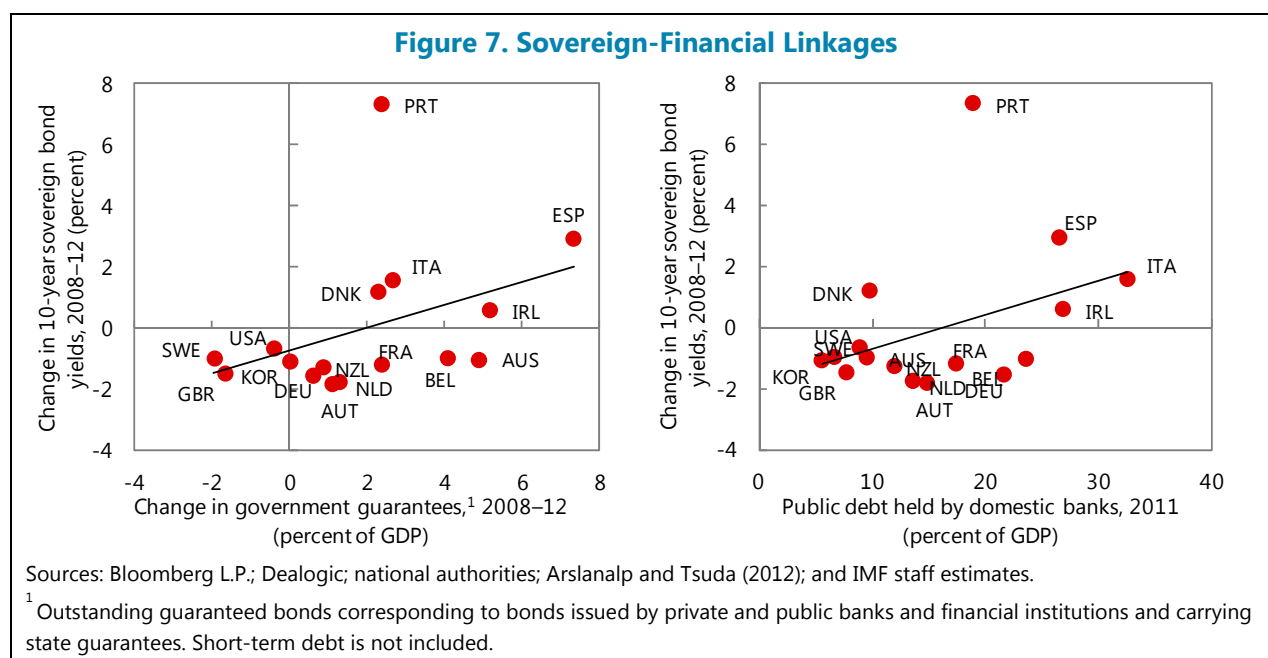
20. Domestic bank holdings of public debt were not thought to pose a risk to the financial system in AEs. If anything, holding sizable amounts of safe and liquid assets, like government debt,

¹³ Prohibitions on “monetary financing” of the government did not include the purchases of government bonds from secondary markets, since these are often used to conduct open market operations in some countries. Thus, the increase in purchases of government bonds by central banks has not violated existing legislation.

¹⁴ See IMF (2013d) for further discussion of UMP measures. Also, forthcoming work by IMF staff will examine fiscal and monetary policy interactions, the quasi-fiscal aspects of UMP, and implications for Fund policy advice on central bank purchases of government debt, as well as broader issues related to policy coordination between central banks and governments, including in the case of a deep crisis.

was thought to make banks less risky. This view was reflected in the regulatory capital rules that allowed banks to assign a zero-risk weighting to holdings of their own government's debt.

21. We have seen that a sovereign-bank feedback loop can emerge and amplify a sovereign debt crisis. A sovereign-bank feedback loop can initially stem from either a rise in sovereign yields diminishing the value of public debt held by domestic banks, raising concerns about banks' solvency when they hold large quantities of public debt, or from systemic banking sector problems, with the potential fiscal costs raising concerns about fiscal solvency (Adler, 2012). In such situations, a feedback loop emerges that is often fueled by increasing uncertainty regarding the solvency of both the government and the banks, leading investors to demand higher default risk premia and creating self-fulfilling crisis dynamics, as seen in the euro area crisis countries (Figure 7).



22. Decisive actions to reduce uncertainty and the risk of multiple equilibria are critical to severing the sovereign-bank feedback. Severing sovereign bank links in the short run requires short circuiting the emergence of self-fulfilling crisis dynamics. This calls for: (i) central bank provision of sufficient liquidity to the financial sector and the sovereign bond market to ensure a liquidity problem does not become a solvency problem; (ii) transparent and credible stress tests and, if needed, plans to recapitalize or restructure weak banks at minimal fiscal cost; and (iii) formulating and announcing a credible medium-term fiscal adjustment plan to reassure investors concerned about fiscal solvency. As in the case of monetary financing of the deficit, the provision of large

(potentially unlimited) amounts of liquidity to banks cannot be a substitute for addressing the underlying problems.¹⁵

23. For the euro area, a cross-country risk-sharing mechanism is needed to help break national sovereign-financial linkages.¹⁶ Given the size of national banking systems, banking sector problems can easily overwhelm the fiscal capacity of a single member state. To prevent this, a common backstop for dealing with distressed banks is needed. Recent policy announcements — including the ECB’s Outright Monetary Transactions (OMT) and the political agreement to allow bank capitalization directly through the European Stability Mechanism (ESM)—have provided some financial respite. However, so far, other efforts to develop more robust risk-sharing mechanisms have faced significant political economy hurdles. For example, proposals for “Eurobonds,” for which EMU members would share joint liability, have not gained traction.

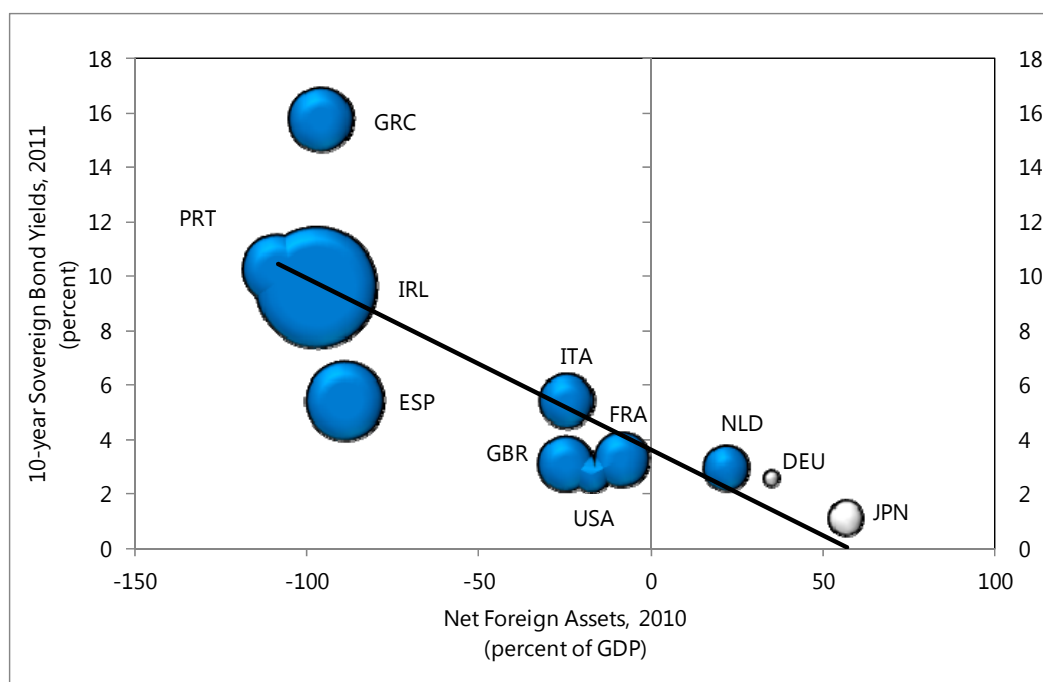
24. Macro-financial imbalances stemming from private non-financial sector balance sheets can also pose risks to the sovereign. During the European sovereign debt crisis, a striking correlation has emerged between the rise in private sector indebtedness (indicated by the area of the bubble), the external liabilities of a country (as measured by the net foreign assets (NFA) positions) and sovereign yields (Figure 8). This may be indicative that markets see a large increase in private sector leverage as a risk factor for the sovereign, whether indirectly through lower growth if deleveraging is drawn out or directly if the government is pressured to help bailout important firms or industries. Such private sector indebtedness can also create additional indirect pressures on the sovereign through the financial sector, as loan defaults rise. If the increase in private sector indebtedness is externally financed, this may also compound a country’s vulnerability to a “sudden stop” of capital flows because foreign creditors are more sensitive to changes in perceived risks (IMF, 2012b). In sum, private sector balance sheets should not be ignored when assessing fiscal risks and sustainability.

¹⁵ Although beyond the scope of this paper, the first response to large bank systems requires more fundamental financial sector and regulatory reforms (IMF, 2013c; Global Financial Stability Report, various issues).

¹⁶ See IMF (2012c) for a further discussion of issues related to creating an EMU banking union.

Figure 8. Sovereign Bond Yields, Net Foreign Assets, and the Change in Non-financial Private Sector Indebtedness from 2001–10

(In percent and percent of 2010 GDP, respectively)



Sources: IMF International Financial Statistics, OECD.

Notes: The area of the bubbles represent the change in the non-financial private sector debt-to-GDP ratio between 2001 and 2010. The color of the bubble indicates whether the change is positive or negative, with blue indicating an increase and white indicating a decrease

FISCAL POLICY AS A COUNTERCYCLICAL TOOL

25. The prevailing consensus before the crisis was that discretionary fiscal policy had a limited role to play in fighting recessions. The focus of fiscal policy in advanced economies was often on the achievement of medium- to long-run goals such as raising national saving, external rebalancing, and maintaining long-run fiscal and debt sustainability given looming demographic spending pressures. For the management of business cycle fluctuations, monetary policy was seen as the central macroeconomic policy tool. Fiscal contraction was sometimes recommended during periods of economic overheating as a means of supporting monetary policy, for example to take pressure off the exchange rate in the face of persistent capital inflows. However, during downturns, it was deemed that there was little reason to use another instrument beyond monetary policy.

Automatic stabilizers could be left to operate in economies that did not face financing constraints, but there was little call for a more activist approach to fiscal policy.¹⁷

26. There were many reasons for this consensus. First, there was widespread skepticism about whether discretionary fiscal policy would have any meaningful impact on economic activity, while it was generally accepted that monetary policy would do so. Second, lags in the design and the implementation of fiscal policy, together with the short length of recessions, implied that even if fiscal measures did affect output, their impact would likely come too late to be of much help. By contrast, monetary policy could react more nimbly to economic developments, particularly when conducted by a central bank with operational independence. Third, due to political constraints, fiscal expansions in particular were seen as being easier to initiate during economic downturns than to reverse during economic expansions, implying a ratcheting up of government spending and debt over time.

A. Fiscal Policy Effects

27. For much of the two decades preceding the crisis, there was skepticism, both in academia and among policymakers, regarding the macroeconomic effects of fiscal policy. The skepticism, though not universal, reflected the possibility of a private sector offset to fiscal stimulus and a lack of consensus in the empirical literature regarding the sign, let alone the magnitude, of fiscal multipliers—the change in output resulting from a discretionary change in a government spending or taxes.¹⁸ Part of the literature even found evidence of negative multipliers. For example, in seminal contributions, Giavazzi and Pagano (1990, 1996) showed that a number of fiscal adjustments were correlated with expansions in private demand in the short term, providing evidence of “expansionary fiscal contractions.”

28. The resurgence of countercyclical fiscal policy at the start of the crisis coincided with new research on its macroeconomic effects. Some of this research, typically based on data covering the precrisis period, concludes that fiscal multipliers have been low in advanced economies, around 0.5 or less (Alesina and Ardagna, 2010; IMF, 2010b; Barro and Redlick, 2011, for example). Other studies, also based on data covering normal times, find evidence of larger multipliers, well above 1 (Romer and Romer, 2010, for example). However, in view of their reliance on data covering the precrisis period, these studies are unlikely to fully reflect the peculiarities of the current economic environment.

¹⁷ It is worth acknowledging that the rejection of discretionary fiscal policy as a countercyclical tool was not universal, and was perhaps stronger in academia than among policymakers. Discretionary fiscal stimulus measures were sometimes deployed in the face of severe shocks—for example, during the Japanese crisis of the early 1990s.

¹⁸ This uncertainty reflected various factors, including the difficulties involved in identifying the causal effects of fiscal policy on economic activity due to two-way causality; different types of taxes and government spending; the temporary or permanent nature of the measures; the initial state of the fiscal accounts; and different responses of monetary policy.

29. While debate continues, the evidence seems stronger than before the crisis that fiscal policy can, under today’s special circumstances, have powerful effects on the economy in the short run. In particular, there is even stronger evidence than before that fiscal multipliers are larger when monetary policy is constrained by the zero lower bound (ZLB) on nominal interest rates, the financial sector is weak, or the economy is in a slump. A number of studies have also questioned the earlier evidence of negative fiscal multipliers associated with expansionary fiscal contractions. Beyond this general conclusion, however, many open questions remain—in particular, on the differential effects, if any, of changes in government spending and taxes, or the dependence of the multiplier on the initial state of the fiscal accounts.

Fiscal multipliers: at the zero lower bound

30. During the crisis, central banks in most advanced economies quickly cut their policy rates to close to zero. By most estimates, central banks would if possible have decreased policy rates well below zero in the absence of the zero nominal interest floor constraint. For example, Rudebusch (2009) estimates that, in the United States, based on the typical response of the Federal Reserve to economic conditions before 2008, the federal funds rate would have declined to -5 percent in 2009. After economies hit the ZLB, central banks moved to using various unconventional monetary policies. IMF (2013d) concludes that, while these policies generally reduced tail risks, evidence regarding the policies’ macroeconomic effects is less clear cut. Similarly, Chung and others (2012) conclude that “the Federal Reserve’s asset purchases, while materially improving macroeconomic conditions, did not prevent the ZLB constraint from having first-order adverse effects on real activity and inflation.”

31. A number of studies suggest that the ZLB constraint increases the size of fiscal multipliers. Coenen and others (2012) quantify the effect of the ZLB on fiscal multipliers based on seven macroeconomic models developed at six policy institutions.¹⁹ In all seven models, fiscal multipliers associated with various fiscal instruments rise substantially at the ZLB.²⁰ Based on data for 27 economies during the 1930s—a period during which interest rates were at or near the ZLB—Almunia and others (2010) conclude that fiscal multipliers were about 1.6. For the current crisis, Blanchard and Leigh (2013) argue that fiscal multipliers have been above 1 in economies at the ZLB, at least in the early years of the crisis, based on the relation they find between growth forecast errors and fiscal consolidation forecasts for these economies. Additional evidence that fiscal

¹⁹ The seven models employed by the study are the Bank of Canada Global Economy Model (BoC-GEM), the FRB-US and SIGMA models of the Board of Governors of the Federal Reserve System, the New Area-Wide Mode (NAWM) of the European Central Bank, the QUEST model of the European Commission, the Global Integrated Monetary and Fiscal Model (GIMF) of the IMF, and the OECD Fiscal Model.

²⁰ See also, Christiano, Eichenbaum, and Rebelo (2011). In these studies, the ZLB amplifies the effects of fiscal policy because policy interest rates do not respond to changes in fiscal policy in an offsetting manner. For example, at the ZLB, central banks cannot cut policy interest rates to offset the negative short-term effects of a fiscal consolidation on economic activity. By the same token, as long as the unconstrained policy rate is negative, the policy interest rate does not rise during a fiscal expansion, and monetary policy thus accommodates the expansionary effects of fiscal stimulus.

multipliers can be large in settings where monetary policy is constrained come from studies based on regional data from a particular country.²¹

32. A related implication of the ZLB constraint on monetary policy is that fiscal policy changes abroad are likely to have larger effects on the domestic economy. This is relevant for settings where fiscal stimulus or consolidation occurs simultaneously in many economies (also see the next section on the design of fiscal adjustment). Fiscal consolidation abroad reduces domestic growth by reducing export demand. When the ZLB constrains the ability of the domestic central bank to cut interest rates in an offsetting manner, the negative effect on the domestic economy is likely to be larger (see IMF, 2010b, for an example). It is worth clarifying that the effect of fiscal consolidation abroad comes in addition to the effect of any domestic fiscal consolidation. Since the multiplier is larger at the ZLB—for any exogenous shock to aggregate demand—the final contraction in output in response to the combined shock is likely to be larger when monetary policy is constrained.

Fiscal multipliers: when the financial sector is weak

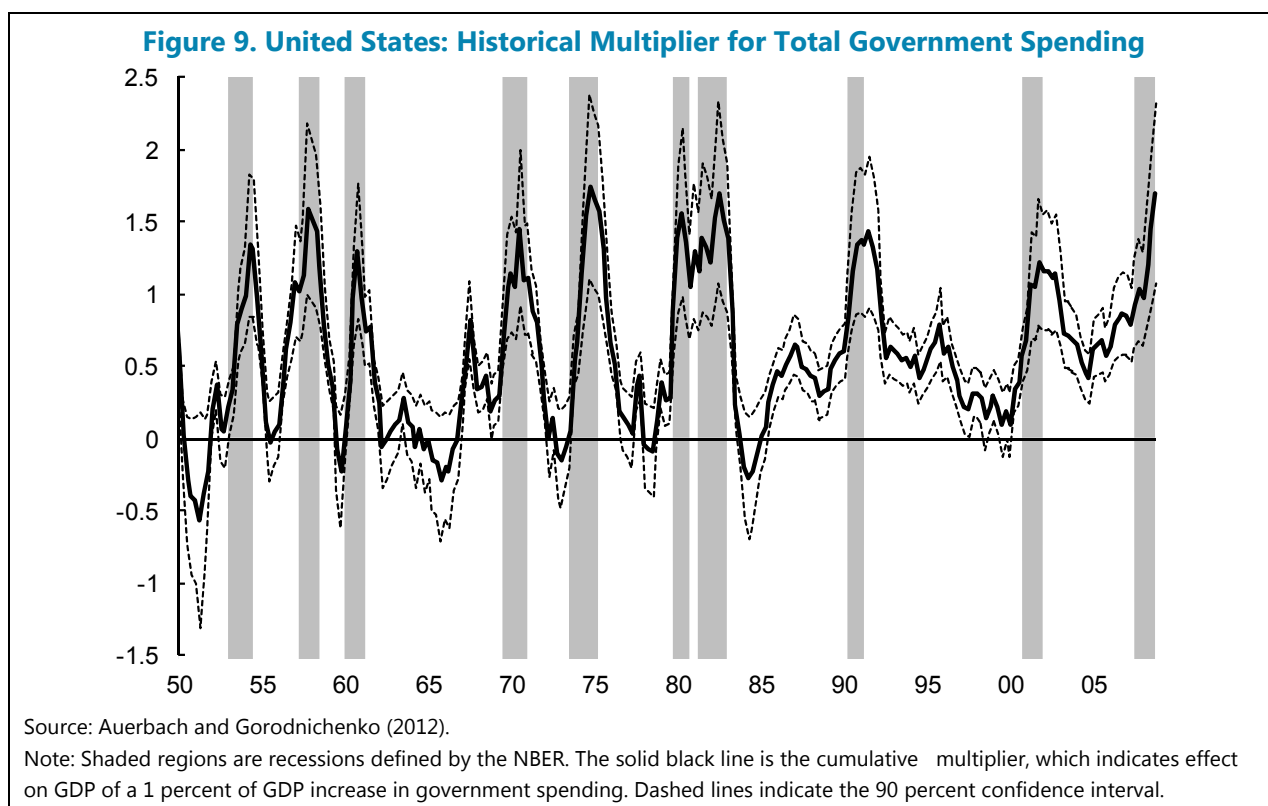
33. A key feature of the crisis has been the reduced availability of credit to households and firms. Numerous advanced economies have experienced a systemic banking crisis (Laeven and Valencia, 2012), with an associated reduction in the supply of loanable funds. More limited access to credit implies that consumption and investment depend more strongly on current than on future income. Therefore, fiscal policy changes, by affecting current income, have larger multipliers in economies characterized by tighter credit constraints. To the extent that households and firms become more credit constrained during financial crises, model simulations predict that fiscal multipliers are likely to be larger during such episodes.²² In line with this logic, Corsetti, Meier, and Müller (2012) find that during actual historical episodes of financial crises, the responses of output and consumption to public spending are substantially higher than during normal times, and are consistent with fiscal multipliers as large as 2.

²¹ See, for example, Chodorow-Reich and others (2011) and Nakamura and Steinsson (2011) based on U.S. regional data, and Acconcia, Corsetti, and Simonelli (2013) based on regional data from Italy. An important caveat applies to studies that estimate fiscal multipliers based on subnational data. Taxpayers outside the region receiving central-government funds may anticipate higher taxes in the future and reduce their spending accordingly through a negative wealth effect. Since this negative wealth effect is limited at the regional level, the multiplier estimated at the regional level would overstate the overall (national) output effect. At the same time, spending in one region could increase demand in other regions, and such positive spillovers could imply that multipliers estimated at the regional level would understate the overall output effect.

²² See Perotti (1999) and Fernandez-Villaverde (2010), for example. In related work, Eggertsson and Krugman (2012) highlight the role of a private debt overhang in amplifying fiscal multipliers based on a New Keynesian theoretical model. In their model, the debt limit of “impatient” households (who borrow from “patient” households) is suddenly reduced. This makes these households’ spending more dependent on current income and, as a result, fiscal multipliers rise well above 1.

Fiscal multipliers: in slumps

34. Earlier research often assumed that the impact of fiscal policy was similar across different states of the economy, but a number of recent empirical studies suggest that fiscal multipliers may be larger during periods of slack. Importantly, since these studies' results are based on precrisis data, their findings of larger multipliers in slumps reflect mechanisms distinct from the ZLB and financial sector weaknesses discussed above. Instead, the authors of these studies appeal to the early Keynesian notion that, when the economy has slack, fiscal expansions are less likely to crowd out private spending. Using U.S. data, Auerbach and Gorodnichenko (2012) find that fiscal multipliers associated with government spending fluctuate widely across the business cycle: from 0–0.5 during expansions to 1–1.5 during recessions (Figure 9).²³ However, in this literature, the definition of fiscal shocks and the measure of slack are important. Owyang, Ramey, and Zubairy (2013), using a narrative approach to derive a different measure of government spending shocks, find no evidence of higher multipliers during high-unemployment periods from U.S. data going back to 1890, although they do find such a result for Canada.



²³ Other studies, including Auerbach and Gorodnichenko (2013), Baum, Poplawski-Ribeiro, and Weber (2012), Batini, Callegari, and Melina (2012), and IMF (2012d), find some supporting evidence for other OECD economies. It is worth noting that, according to these studies, multipliers sometimes vary substantially across countries and across different fiscal instruments.

35. A separate, but related, issue is that fiscal policy may have more persistent effects during periods of economic slack. While this is still the subject of some debate, DeLong and Summers (2012) argue that, during the recent long-lasting slump, a process of “hysteresis” links the short-term cycle to the long-term trend, so that a temporary change in unemployment has a tendency to become permanent. According to this view, in a depressed economy, low rates of investment imply a deterioration of physical capital, human capital declines as workers without employment lose their skills, and the long-term unemployed face a declining likelihood of being rehired. All of these factors influence potential output. Thus, if hysteresis effects are stronger during slumps, then fiscal policy is likely to have more persistent effects on economic activity.

Expansionary contractions and confidence effects

36. Before and early on in the crisis, a number of researchers and policymakers argued that positive confidence effects could dominate the adverse mechanical effects of cuts in spending or increases in revenues, and lead to “expansionary fiscal consolidations.” However, recent research suggests that previous findings of expansionary effects are sensitive to how fiscal consolidation is defined (IMF, 2010b; Guajardo, Leigh, and Pescatori, 2011), and that the most famous episodes of expansionary contractions observed in Europe in the 1980s and 1990s were typically driven by external demand more than by a surge in internal private demand on the back of confidence effects (Perotti, 2011). While more evidence needs to be gathered, it does not appear that confidence effects have played a major role in this crisis. In particular, a key channel through which expansionary effects could occur—namely by decreasing risk premia on sovereign bonds and, thereby, on domestic lending rates—has not been at work, since risk premia were already quite low in most advanced economies when consolidation took place, although they were elevated in several peripheral euro area countries.

37. The scope for confidence effects to offset the direct Keynesian effects of fiscal policy could also be hampered by the reaction of spreads to economic activity. There is some evidence that sovereign spreads appear to react strongly to output growth as well as to changes in the fiscal accounts (Cottarelli and Jaramillo, 2012; Romer, 2012). These results—suggestive as they are—imply that a fall in fiscal deficits associated with fiscal consolidation could, perversely, trigger a rise in sovereign borrowing costs if the impact of lower growth dominates, thus contributing to a further fall in output. In this case, confidence effects would reinforce rather than offset the direct effects of fiscal policy (see also the next section on the design of fiscal adjustment plans).

B. Fiscal Policy Implementation

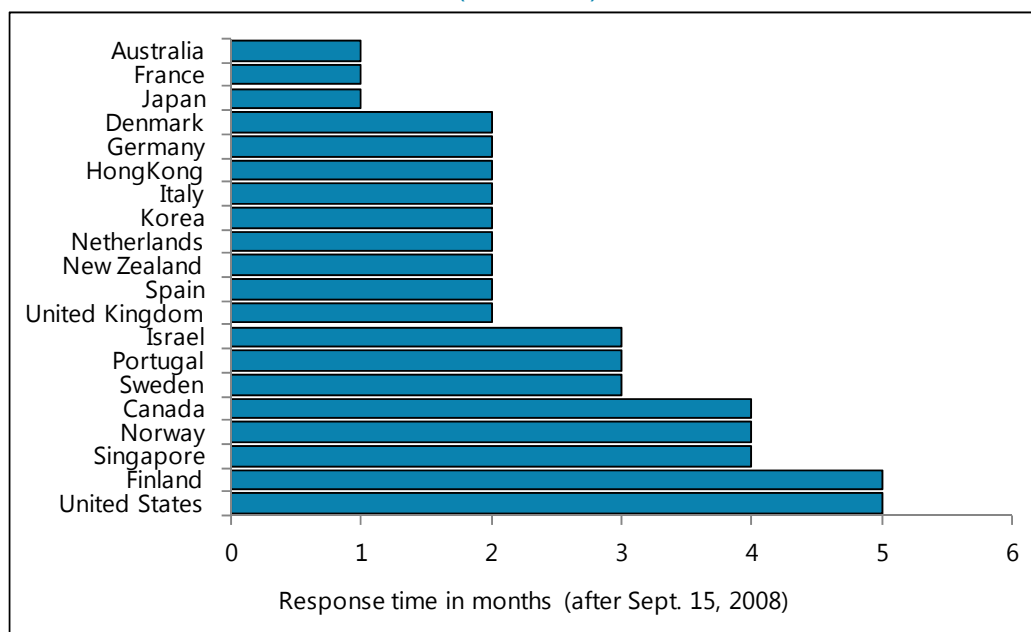
38. For fiscal policy to be truly effective as a countercyclical tool, a number of additional conditions, beyond positive fiscal multipliers, need to be satisfied. First, fiscal authorities should have room to maneuver so that the increase in debt associated with a fiscal expansion does not trigger a sovereign debt crisis. As the previous section argued, the crisis has shown that this is a concern for a number of AEs. Second, fiscal authorities should have the ability to respond to economic developments in a timely and temporary manner. Prior to the crisis, a widely-held view was that fiscal policymakers, unlike monetary policymakers, would respond too slowly to be able to

deliver fiscal stimulus during a recession.²⁴ In addition, there was suspicion that stimulus introduced during downturns would not be subsequently fully withdrawn, leading to overheating (Taylor, 2000) and a ratcheting up of government debt over time. This subsection assesses what lessons have emerged from the crisis about these important real-world issues. Given the recent (and, in some economies, ongoing) nature of the crisis, any lessons are necessarily tentative.

Fiscal response lags: this time was different

39. The experience with discretionary fiscal policy since the crisis demonstrates that policymakers can rapidly deploy substantial fiscal stimulus. After the failure of Lehman Brothers in September 2008, it became clear that the global financial sector was suffering a shock of a magnitude unprecedented in the postwar period. Fiscal policymakers in most advanced economies passed fiscal stimulus packages by the end of 2008—a relatively fast pace for discretionary fiscal policy, albeit slower than that of monetary policy (Figure 10).

Figure 10. Advanced Economies: Time Lag Between Lehman Failure and Fiscal Stimulus Packages
(In Months)



Sources: International Institute for Labor Studies (2011), IMF (2010a), and IMF staff estimates.

Notes: Figure indicates time in months until first fiscal stimulus package announced after September 15, 2008. Stimulus measures announced prior to that date, are not included in the chart.

²⁴ Fiscal policy lags would arise because of delays both in assessing the need for stimulus after the onset of a downturn, and in legislating and implementing countercyclical legislation. Relatedly, Romer and Romer (1994) concluded that U.S. discretionary fiscal policy played a minor role in ending recessions from 1950 to the early 1990s, while monetary policy played a substantial role. Auerbach (2009) and Auerbach and Gale (2009) find that U.S. discretionary fiscal activism increased during the 2000s.

40. In the United States, the country at the center of the global financial crisis, discretionary fiscal policy had already started in February 2008. The Economic Stimulus Act provided around US\$150 billion in stimulus to the economy in the same year, primarily through refundable tax rebates targeted to low- and middle-income households, who started receiving the payments in May 2008. This occurred even before there was an accepted consensus that a recession had begun or would materialize (Auerbach, Gale, and Harris, 2009).²⁵ In July 2008, a new tax credit for first-time homebuyers was also passed to target weakness in the real estate sector.

41. There was heterogeneity across countries in the size and time profile of stimulus measures. Of the advanced economies in the Group of Twenty (G-20), Australia, Canada, Germany, Japan, Korea, and the United States launched fiscal stimulus packages following the Lehman episode that exceeded 3 percent of 2008 GDP in discretionary stimulus over 2009 and 2010 (IMF, 2010a). The combined U.S. fiscal stimulus from all measures, including the American Recovery and Reconstruction Act (ARRA) passed in February 2009, amounted to 4.6 percent of 2008 GDP over 2009–10. The United Kingdom deployed nearly all its stimulus through temporary tax cuts in 2009. Australia also deployed significantly more fiscal stimulus policy in 2009 than in 2010. Canada, France, and Japan delivered stimulus fairly evenly over the two years, while Germany and the United States delivered more fiscal stimulus in 2010 than in 2009.

Fiscal response lags: why was this time different?

42. A number of factors explain the relatively rapid fiscal response during the crisis. The size of the shock to the world economy was, arguably, the primary factor. Another plausible explanation for the increased reliance on discretionary fiscal policy stimulus during the crisis was the ZLB constraint on monetary policy. Fiscal authorities especially stepped up their activism in the final months of 2008, around the time that nominal policy interest rates were coming close to the ZLB. Moreover, the shift toward discretionary fiscal stimulus in many economies coincided with a multilateral drive for global fiscal stimulus. On November 15, 2008, a G-20 communiqué urged a coordinated policy response to the crisis, including “fiscal measures to stimulate domestic demand to rapid effect, as appropriate, while maintaining a policy framework conducive to fiscal sustainability” (G-20, 2008). This was followed by a range of fiscal policy proposals from the IMF (Spilimbergo and others, 2008). Global coordination arguably helped policymakers recognize the positive spillover effects of expansionary fiscal policy.

²⁵ The Business Cycle Dating Committee at the National Bureau of Economic Research announced in December 2008 that the U.S. had entered recession in December of the previous year, when payroll employment started declining according to the Bureau of Labor Statistics large survey of employers. The first quarterly decrease in real GDP occurred in the third quarter of 2008. As late as March 2008, the Congressional Budget Office (2008) forecast growth rates of GDP of 1.9 and 2.3 percent for 2008 and 2009, respectively.

Fiscal response lags: which measures were implemented fastest?

43. Discretionary fiscal packages contained several types of stimulus measures, with some policies being implemented faster than others. As Table 1 reports, the policies with the fastest implementation times were tax relief measures, such as targeted tax rebates in the United States, value-added tax (VAT) cuts in the United Kingdom, and car scrappage schemes, such as those implemented in France, Germany, the United Kingdom, and the United States. Transfers programs, such as extensions and expansions of unemployment benefits and other social benefits had short to moderate lags. Finally, public infrastructure investments were implemented with longer lags arising from project evaluation and procurement procedures. Bringing forward pre-planned capital expenditures also mitigated this problem, as in the case of stimulus programs implemented in Belgium, France and the United Kingdom. Also, as the slump persisted for longer than expected, protracted outlays, such as those related to infrastructure projects, would have been timely and at the same time supportive of future growth. Assessing the specific impacts of these varied fiscal measures on economic activity is the subject of ongoing research.²⁶

²⁶ Feldstein (2009) and Shapiro and Slemrod (2009) calculate modest effects on aggregate U.S. consumption from the rebates of February 2008, which could reflect the fact that the payments reached a wide range of households, not all of whom were tightly credit constrained. Mian and Sufi (2012) find that the U.S. car scrappage program led to an increase in car sales, although over a short horizon, as purchases were brought forward. Chodorow-Reich and others (2011) show strong (regional) effects from U.S. federal aid to the states.

Table 1. Selected Fiscal Stimulus Measures Used by Advanced Economies

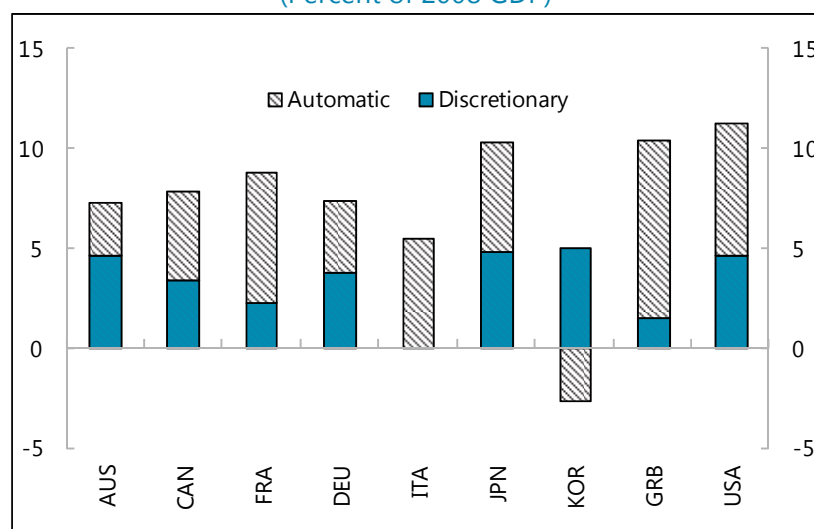
Type of measure	Selected country examples	Full impact	Target	Duration
Car scrappage schemes (replacing old cars with fuel-efficient vehicles)	France 2009: €1000 or more, depending on new car Germany 2009: €2500 incentive UK 2009: £2000 incentive USA 2009: \$3500 or \$4500, depending on new car	1-3 months	Automobile industry	From a few months to up to two years (often extended)
Temporary tax cuts and transfers	UK 2008: Temporary cuts to basic tax rate and VAT rate USA 2008: One-time refundable tax rebates. 2009: Two-year refundable rebates for low income households; one-year tax cut for medium-income households. 2010: Payroll tax cut	Immediate	Low and medium income households; consumption	1-2 years
Permanent tax cuts	Austria 2009: Pre-planned tax reform brought forward by one year, income tax cuts for medium to high income individuals Germany 2009: Rise in tax-free allowance and cut in basic rate Sweden 2009: Cuts in corporate tax, social security contributions and personal income tax	Some immediate, some phased in over time	Various	Envisioned to be permanent; Austria raised upper income tax rate in 2013
Expansion of targeted transfer programs	Belgium 2009: Higher unemployment and other social benefits USA 2009: Extension of unemployment benefits, funding for medical care and nutrition support for low income households	2009-2010	Liquidity-constrained households	Most of spending within 3-5 years
Government purchases of goods and services	Netherlands 2009: Energy efficiency and green growth measures Sweden 2009: School, vocational and research funding USA 2009: Renewable energy, transfers to states for education	Mostly 2009 and 2010, up to 2012 for USA	Education and green energy	1-3 years for education, 1-8 years for R&D
Infrastructure investment	Australia 2009: School building program Belgium 2009: New and accelerated public investments France 2009: Central and local government investments brought forward from 2010 to 2009 Germany 2009: Acceleration of transportation and other infrastructure spending Spain 2009: Public investment in municipal works USA 2009: New transportation and other infrastructure spending	2009 for accelerated investments, 2010-2011 for new projects	Education and transportation infrastructure	1-2 years for accelerated investments, 3-6 years for new investments

Sources: Budget documents, and Saha and von Weizsäcker (2009).

44. Finally, it is worth recognizing the sizeable role that automatic fiscal stabilizers, the size of which varied across countries, played during the crisis. Figure 11 reports a breakdown of the overall fiscal expansion across discretionary measures and automatic stabilizers for G-20 advanced economies. For this sample, it appears that countries with smaller automatic stabilizers provided larger discretionary stimulus.²⁷

²⁷ Relatedly, Auerbach (2009) argues that for the United States fiscal experimentation during the crisis was aided by the increasing fiscal activism of the preceding decade, in turn partly motivated by a decline in automatic stabilizers. Aizenman and Pasricha (2011) suggest another possible reason for the large discretionary fiscal impulse of the U.S. government is that it helped offset a strong contraction in fiscal expenditures at the state and local level.

Figure 11. G-20 Advanced Economies: Contributions of Discretionary Stimulus and Automatic Stabilizers to the Primary Fiscal Deficit, 2009–10
(Percent of 2008 GDP)



Sources: IMF staff calculations based on WEO and Fiscal Monitor (IMF, 2010a) data.

Notes: Sample comprises advanced countries in the G-20. Contribution of automatic stabilizers is calculated as the residual change in the primary deficit after accounting for the discretionary stimulus. Staff calculations indicate that Korea's automatic stabilizers damped the change in the primary deficit over 2009–10, consistent with strong nominal GDP growth.

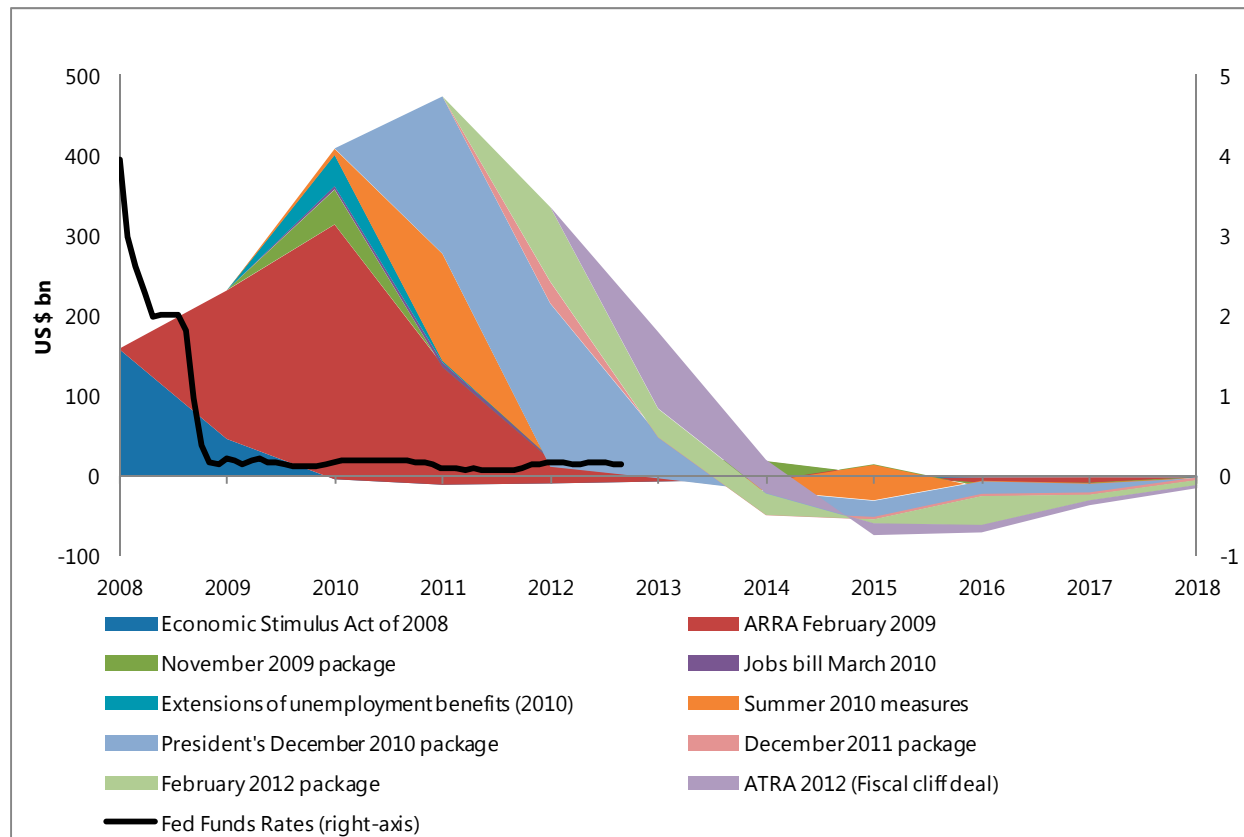
Reversibility of stimulus

45. The crisis also provided numerous examples of policymakers undertaking discretionary fiscal stimulus measures that, according to the evidence available thus far, were largely temporary. Temporary tax cuts and transfers were planned to be the largest single component of stimulus programs for the United Kingdom, the Netherlands and Belgium. The United Kingdom ended the temporary VAT tax cut at the end of 2009, and actually raised the VAT rate in 2010 above its precrisis level as part of its fiscal consolidation program.²⁸ Car scrappage schemes, used in several countries, were often extended, but eventually ended. Similarly, in the United States, as Figure 12 reports, fiscal stimulus took the form of a series of temporary fiscal packages. One-time tax rebates provided to low- and medium-income households in early 2008, and the rebates and transfers to these households and to social security recipients as part of the ARRA, were withdrawn as scheduled. Some temporary measures were extended in a limited fashion when economic activity remained sluggish: owing to persistently high unemployment, the payroll tax cuts implemented in 2010 were extended twice, before being terminated at the end of 2012.²⁹

²⁸ By contrast, permanent tax cuts and transfers accounted for a larger share of the fiscal stimulus packages in Germany, Austria and Sweden (Saha and von Weizsäcker 2009).

²⁹ At the same time, the precrisis tax cuts passed under the Bush administration, primarily for reasons other than countercyclical concerns (Romer and Romer, 2009), were largely made permanent.

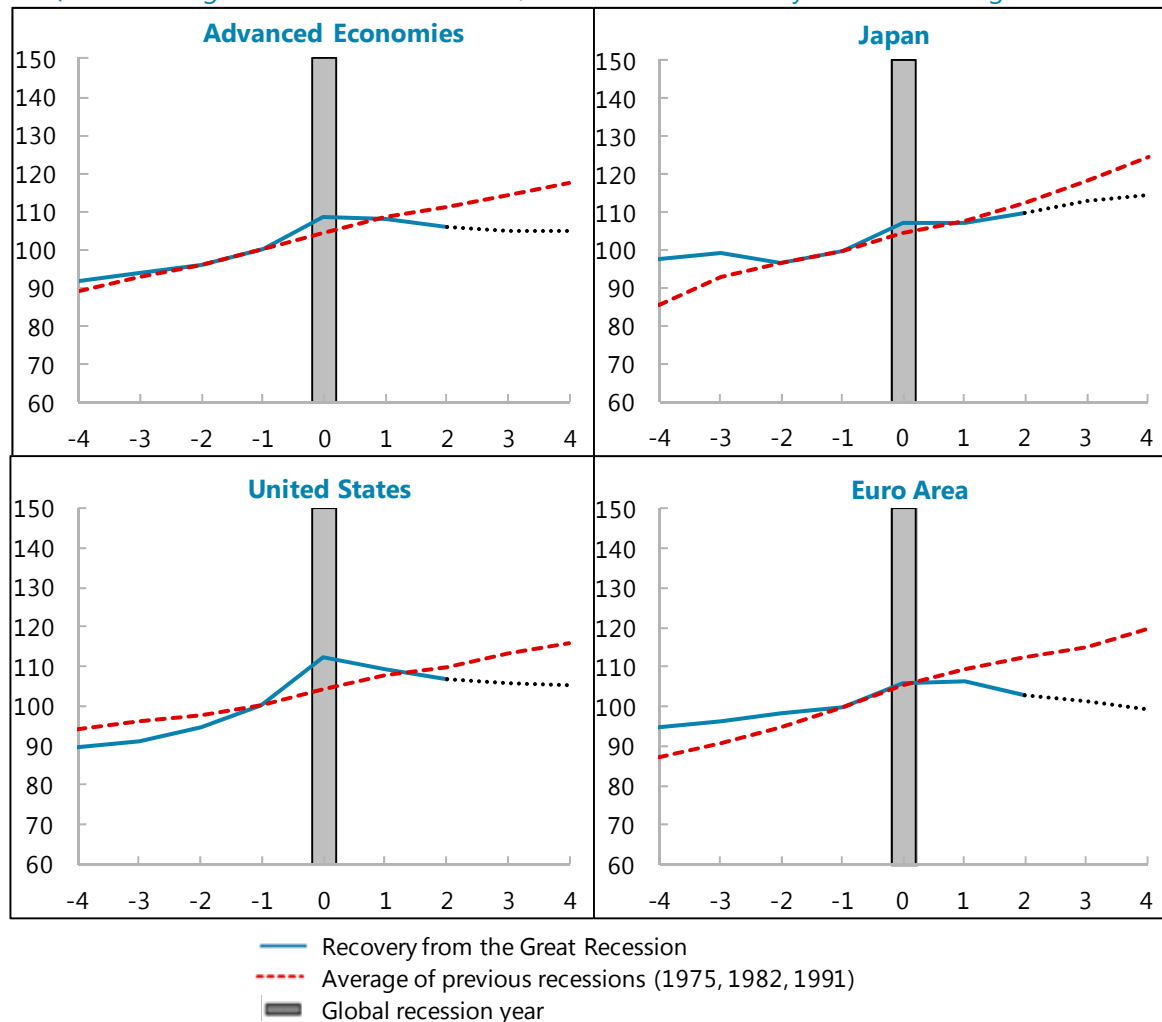
Figure 12. Timeline of U.S. Fiscal Packages and Federal Funds Rate, 2008–18
(In billions of U.S. dollars and percent, respectively; annual data)



Source: IMF staff calculations based on CBO and OMB data.

46. Moving from individual measures to the aggregate fiscal stance, many countries began reversing stimulus measures as early as 2010. This marked the start of multi-year consolidation plans in many AEs. While the fiscal adjustment in some AEs was induced by market pressure, the overall pattern of fiscal consolidation following fiscal stimulus in 2009 is striking. As Kose, Loungani, and Terrones (2013) point out, in AEs, the recovery from the global financial crisis has featured a more pronounced reduction in government spending than observed following previous recessions (Figure 13).

Figure 13. Government Expenditures During Global Recessions and Recoveries
 (Years from global recession on x-axis; indexes = 100 in the year before the global recession)



Sources: IMF Public Finances in Modern History database (Mauro and others, 2013); World Bank World Development Indicators database; and IMF staff estimates.

Notes: Expenditure series is real primary expenditures. Aggregates are purchasing-power-parity weighted. Dotted lines denote WEO forecasts.

THE DESIGN OF FISCAL ADJUSTMENT

47. The fundamental challenge facing policymakers today is to reduce deficits and debt levels in a way that ensures stability but is sufficiently supportive of short-term economic growth, employment, and equity. As many AEs grapple with high public debt and unsustainable fiscal deficits, the design of fiscal adjustment—in terms of both speed and content—has returned to the forefront of the policy debate. Recent international experience has stimulated an active debate regarding the optimal pace of fiscal consolidation and how that pace depends on the state of the economy, the conditions of public finances, and the extent of market pressures.

A. The Pace of Fiscal Adjustment

48. The choice of the appropriate speed of adjustment has to weigh the costs (i.e. adverse short-run effects on growth) against the benefits (i.e. reduction in sovereign risk) of a faster adjustment. Countries that have lost access to financial markets often have little choice but to frontload fiscal consolidation. For economies with access to markets, however, a number of country-specific factors are likely to shape the choice of the speed of adjustment.

49. Frontloaded fiscal consolidation was often thought to be the most effective approach to restoring the health of public finances. Based on a cross-country panel analysis, Alesina and Ardagna (1998) argues that frontloaded fiscal adjustment: (i) maximizes debt reduction, since the earlier a country achieves a high primary surplus, the higher would be the cumulative primary surpluses and therefore the more debt reduction over any given horizon; (ii) minimizes corporate and household uncertainties about (future) fiscal consolidation needs, which would otherwise weigh on private demand; (iii) boosts market confidence (especially in countries experiencing sovereign stress) and lowers government yields, with knock-on benefits for both fiscal indicators and private investment; and (iv) is associated with higher long-term growth and more durable debt reduction.

50. However, the desirability of frontloaded fiscal consolidations was less established in policy circles. Some IMF studies of large fiscal adjustments (Horton and others, 2006, for example) found that both frontloaded and phased consolidations could be durable. Moreover, for a sample of emerging economies, Baldacci and others (2006) found that “large and back-loaded fiscal adjustments have the highest likelihood of success.” A more recent study of 66 fiscal consolidation plans in the EU over 1991–2007 by Abbas and others (2011) also suggests that policymakers were not convinced about the benefits of frontloading consolidation, since less than one-fourth of the plans studied envisaged frontloaded consolidation.

51. The crisis has reignited the debate on the merits of frontloaded fiscal adjustment. As discussed above, there are reasons to believe that fiscal multipliers are higher during crises than in normal times, and that hysteresis effects could be more pronounced in deep recessions.³⁰ As a result, a view has emerged that excessive frontloading can hurt growth to the point that it undermines social and political cohesion, and weakens rather than strengthens market confidence (Cottarelli and Jaramillo, 2012). In such an environment, frontloaded efforts may even be “self-defeating,” and fail to achieve the consolidation targets in the short run due to negative growth and negative confidence effects. For this to happen, the initial level of the debt-to-GDP ratio must already be high and the negative growth impact on the denominator of the debt-to-GDP ratio must be large enough to increase the debt ratio in the short run (Eyraud and Weber, 2013). IMF (2012e) analyzes the case of the UK to show that the combination of multipliers that are asymmetrically

³⁰ Hysteresis is expected to be more pronounced during deep recessions: the unemployment rate, the duration of unemployment spells (which increases non-linearly with the unemployment rate), and the probability of dropping out of the labor market are all higher.

large in recessions and substantial hysteresis effects can render frontloaded consolidations welfare-reducing.

52. While too much frontloading may be “self-defeating,” excessive delay may also be very costly. In particular, if markets lose confidence in the government’s willingness eventually to put fiscal policy on a sustainable footing and start to demand higher interest rates, then debt dynamics can quickly become unsustainable. Given the uncertainty about the point at which a country will lose market access, and the possibility of multiple equilibria, judgments about whether consolidation programs are excessively frontloaded will be uncertain in practice: country authorities will never be in a position to know for sure whether a slightly more gradual adjustment path than that opted for would have been accepted by markets or would have led to a collapse of confidence. On the other hand, Blanchard, Mauro, and Dell’Ariccia (2013) have argued that given the limited empirical evidence in support of confidence effects, frontloading as a means to increase confidence does not seem desirable, except for countries facing market pressures.

53. The cost of excessive frontloading or excessive postponement can be particularly large, even nonlinear, during deep recessions.³¹ As discussed above, fiscal multipliers are especially large when monetary policy is constrained by the ZLB and credit is tight; and the cost of an output loss is larger and hysteresis effects are more pronounced than usual when the economy is in a slump. But the costs of indefinite postponement of needed adjustment are also particularly large during deep recessions because the risk of a confidence crisis and associated output losses may increase non-linearly with the size of fiscal imbalances. Even if a crisis can be avoided, a modest increase in interest rates can still have severe effects when government debt is high. The risk of a confidence crisis or higher interest rates may be high enough that there is social and political consensus to move ahead with fiscal adjustment.

54. As mere promises to undertake fiscal adjustment later may not be persuasive, gradual consolidation needs to be anchored in a credible medium-term plan. In countries with some fiscal space in the short run, policymakers concerned about the growth impact of fiscal adjustment could approve deficit reduction measures now, but phase in the actual spending cuts and tax increases. For example, reforms to public pension plans can be legislated now, but with much of the savings only starting to accumulate starting several years out, as seen with the reforms to Social Security in the United States in the 1980s (Romer, 2012). However, in the absence of a “perfect commitment technology” that can ensure that fiscal adjustment promised for later will be implemented, a gradual fiscal adjustment should, in general, involve a “modicum” of fiscal adjustment at an early stage and be anchored in a credible medium-term plan (Blanchard and Cottarelli, 2010; Cottarelli and Viñals, 2009; Abbas and others, 2010; IMF Fiscal Monitor, various issues). To reduce the risk of a negative market reaction, medium-term adjustment plans should be supported by reforms to strengthen fiscal institutions, as discussed below, and broader structural

³¹ For a more in-depth discussion of possible nonlinearities arising from following “extreme” approaches, see Cottarelli (2013).

reforms to boost growth (Everaert and Allard, 2010; IMF, 2012a).³² Given a credible plan supported by strong fiscal institutions, if growth does underperform (relative to expectations), the government should allow automatic stabilizers to operate. This means letting headline balances deteriorate, as long as the structural fiscal adjustment plan is on track and the market does not react badly (IMF, 2012d).³³

55. Countries under market pressures, however, may still have little choice but to frontload adjustment. They will face higher interest rates, which will translate into a higher debt service and crowd out socially beneficial spending (Debrun and Kinda, 2013). Moreover, these countries risk losing market access if adjustment efforts are not viewed as credible or sufficient (e.g., to stabilize the debt ratio and put it on a declining path over time). As we have seen for some euro area members, countries in a weak fiscal position that are facing market pressure or have lost market access have undertaken large and frontloaded adjustments (Figures 14 and 15; see also the IMF Fiscal Monitor, various issues). In many countries, fiscal imbalances are of such magnitude that addressing them in the near term would require adjustment on a scale that would dramatically impact economic activity and would have devastating consequences for the provision of government services. Depending on the elasticity of the response of output to deficit reduction, and of interest rates to growth, it is conceivable that a very large adjustment could lead—at least in the short run—to an increase, rather than a decline, in debt ratios and borrowing costs. Accordingly, even for countries under market pressure there are “speed limits” that govern the desirable pace of adjustment (Cottarelli, 2013).

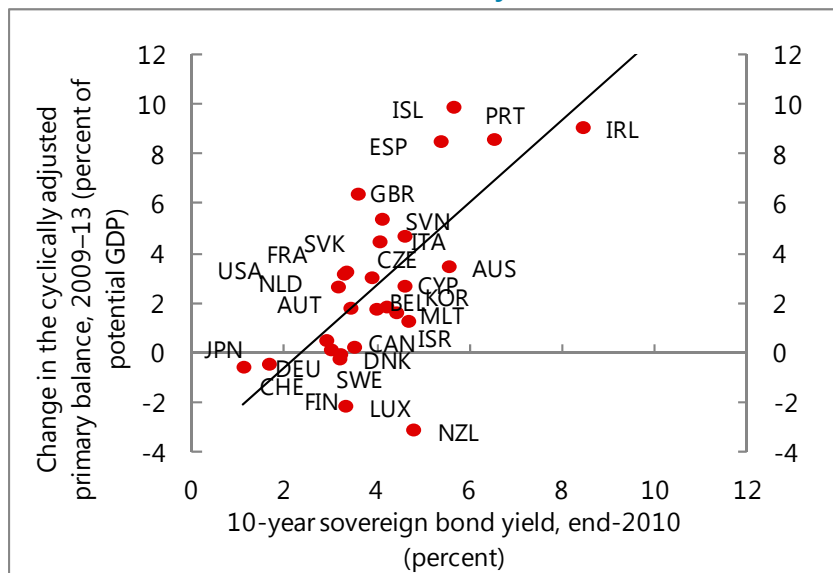
56. The crisis has reaffirmed the precrisis views on cross-country fiscal policy coordination and fiscal spillovers. In the early phase of the crisis, a fairly broad consensus emerged that the unprecedented shocks hitting AEs required international coordination of fiscal stimulus measures.³⁴ As the conventional view predicts, and the previous section illustrates, the channels along which fiscal spillovers operate can work during consolidations too, with effects of consolidation amplified when synchronized across countries, especially when monetary policy accommodation is constrained by the ZLB. This would argue in favor of coordinating policies across AEs to reduce the synchronization of fiscal adjustment efforts, but since 2010, this has not been achieved.

³² In this context, consideration could be given to making a more gradual adjustment contingent on a commitment to specific growth-enhancing structural reforms.

³³ Consistent with this, the IMF and some euro area member states have successfully argued for a relaxation of headline fiscal deficit targets, even in crisis countries such as Ireland and Spain, as long as progress is being made on structural fiscal adjustment plans. The Fund has also advised countries with relatively more fiscal space and the confidence of markets (e.g., Germany, the Netherlands, the United Kingdom, and the United States) to slow the pace of consolidation if growth slows down (IMF, 2012d).

³⁴ See the section on fiscal policy as a countercyclical tool and references therein.

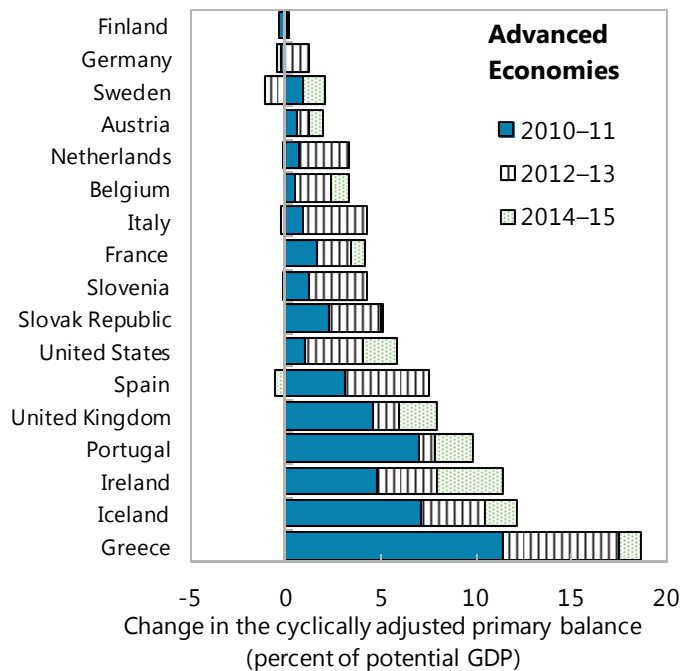
Figure 14. Advanced Economies: Fiscal Adjustment and Market Conditions



Sources: Bloomberg L.P., and IMF staff estimates and projections.

Notes: The relationship between the change in the cyclically adjusted primary balance (CAPB) and 10-year sovereign bond yield is statistically significant at the 95 percent confidence level.

Figure 15. Advanced Economies: Phasing of Fiscal Adjustment



Sources: IMF staff estimates and projections.

Notes: Fiscal adjustment in 2010–11 refers to the change in the cyclically adjusted primary balance (CAPB) in 2011 compared to 2009; 2012–13 refers to the change in the CAPB in 2013 compared to 2011; and 2014–15 refers to the change in the CAPB in 2015 compared to 2013.

57. The lack of broad support for coordinating adjustment efforts illustrates the challenges of policy coordination when national interests do not coincide. One argument for more gradual or back-loaded adjustment in countries with fiscal space is that, by reducing spillovers, it allows for slower (less frontloaded) adjustment in countries without fiscal space. However, countries may be reluctant to smooth frontloaded adjustments for the purpose of reducing negative spillovers if this puts market confidence at risk and reduces their own fiscal space. Although a coordinated adjustment could ultimately benefit all countries, a cooperative agreement may be hard to reach and, because countries have no ex-post incentive to comply, even harder to sustain (IMF, 2007a).

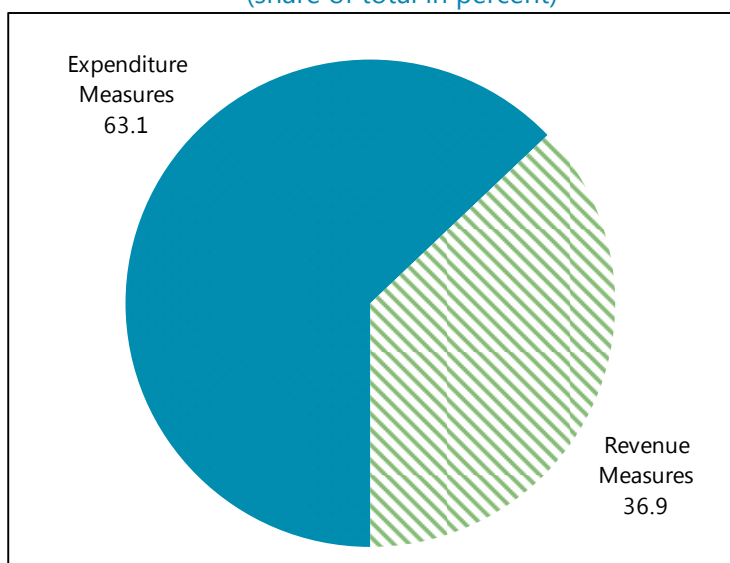
B. The Composition of Fiscal Adjustment

58. Before the crisis, expenditure-based consolidations were seen as generally more durable than revenue-based ones. A number of studies of fiscal adjustment in advanced economies before the crisis highlighted the *long-term* growth benefits and durable debt reduction from expenditure-based consolidation (see, for example, Alesina and others, 2002; Horton and others, 2006). The theory was that the distortionary impact of taxes (especially income taxes) would weigh on potential growth by reducing labor supply, investment and firm profitability. The marginal distortionary cost of higher taxation was considered to be non-linear, suggesting little or no room for tax increases in countries with already high revenue-to-GDP ratios. Moreover, an increase in indirect taxation could have inflationary effects, possibly triggering a monetary tightening.³⁵ On the other hand, expenditure cuts (especially to wages and welfare) lowered labor costs, and were thus associated with higher investment, net exports and growth (Alesina and Perotti, 1995, 1997; Alesina and Ardagna, 1998, 2010; and Alesina, Perotti, Tavares, 1998). Studies of the financial market response to consolidations suggest that sharper cuts to primary spending, transfers and the wage bill, in particular, are associated with lower interest rates and higher equity prices (Ardagna, 2009).

59. Most policymakers also supported expenditure-based consolidation. Four-fifths of the large fiscal consolidation plans designed in Europe over 1991–2008 were expenditure-based, and often provided for some tax *cuts* (Abbas and others, 2011). An analysis of discretionary changes in taxes and government spending incorporated in multi-year consolidation plans in 17 OECD countries confirms that almost two-thirds of the consolidation plans were expenditure-based (Devries and others, 2011), reflecting that many of the countries already had relatively high spending and revenue levels. In fact, some countries introduced consolidation packages that relied almost entirely on expenditure measures. Figure 16 illustrates the predominance of expenditure-based adjustments during 1978–2008.

³⁵ Effects on (short- and long-term) growth of revenue-based consolidations could be different, depending on the type of tax. The impact of an income tax increase on *long-term* growth via its distortionary effects on saving and investment is well established (Acosta-Ormaechea and Yoo, 2012). While consumption taxes are less damaging for long-run growth, hikes could dampen *short-term* growth if the inflationary consequences lead to monetary tightening in response or by directly reducing consumers' purchasing power when demand is already deficient. How important these various effects are empirically remains an open question.

Figure 16. OECD Countries: Average Composition of Fiscal Adjustment, 1978–2008
(share of total in percent)



Source: IMF staff calculations based on data from Devries and others (2011).

Notes: The data from Devries and others (2011) is based on 173 fiscal policy adjustments in 17 OECD countries, including: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, Portugal, Spain, Sweden, the United Kingdom, and the United States. The cumulative impact of adjustment measures (in percent of GDP) over 1978–2008 was calculated for each country. The cross-country average (mean) was then taken for each measure and then the share of the average total of adjustment efforts over 1978–2008 was calculated.

60. However, revenue-based consolidations, while not the norm, were not uncommon. For instance, in the aftermath of the oil shocks in the early 1980s, countries such as the United States, Japan, Germany, and Canada relied relatively more on tax increases. Horton and others (2006) argues that revenue-based consolidations could be durable, especially when initial revenue-to-GDP ratios are relatively low. Abbas and others (2011) make a similar argument for actual consolidations in the EU since 1990. Mauro and Villafuerte (2013) also show that the *ex post* composition of adjustment often turned out to be different than planned, with expenditure cuts falling short of target and revenue over-performing (see also, Mauro (ed.), 2011).

61. The crisis has not offered conclusive lessons regarding the relative size of revenue and government spending multipliers. Some recent studies suggest that spending multipliers are larger than revenue multipliers (Baum, Poplawski-Ribeiro, and Weber, 2012; Erceg and Linde, 2013), while others reach the opposite conclusion (Alesina, Favero, and Giavazzi, 2013).³⁶ Blanchard and Leigh (2013) find little evidence of a difference between multipliers for spending cuts and tax increases. Although the relative impact of spending and revenue measures is still subject to much

³⁶ Differences in the definition of government spending may help explain part of this difference in results. Baum, Poplawski-Ribeiro, and Weber (2012) define spending as direct purchases of goods and services by the government, while Alesina, Favero, and Giavazzi (2013) adopt a more comprehensive measure that includes government transfers.

debate, the size of short-term multipliers is only one of the many factors that need to be considered in determining the appropriate composition of fiscal consolidation for any single economy. Long-term effects on potential output are also important, and the already-high tax pressure in some countries (particularly in Europe) point to the need for expenditure-focused adjustment (IMF, 2012c).

62. A renewed emphasis on equity strengthens the case for better targeting of both spending and revenue measures. New research suggests that large expenditure-based consolidations tend to increase inequality (Woo and others, 2013; Ball and others, 2013), and that higher inequality can undermine growth (Berg and Ostry, 2011; Woo, 2011). Equity considerations suggest that a larger share of the adjustment burden could be borne by the rich, which could be achieved through revenue measures targeted at the higher income segments of the population (see Box 2). Revenue increases can therefore be an important component of consolidation packages, even in countries where the adjustment should focus on the expenditure side, as in a number of European countries. However, better targeted spending can also help achieve equity objectives, though there may be a trade-off between growth and equity concerns when choosing consolidation measures (see also IMF, 2011a, and IMF, 2012d).

63. In addition, political economy arguments related to the crisis have supported higher taxation of financial activities. Insofar as the need for fiscal consolidation is perceived to be due in part to the economic consequences of excessive risk taking in the financial sector, political economy arguments would point to taxes that internalize externalities associated with risky financial activities (e.g., a tax on banks' non-core liabilities).³⁷ In fact, a range of European countries (Austria, Germany, France, Hungary, Portugal, the United Kingdom, Sweden, and the Netherlands) have introduced some form of financial transaction tax or financial/banking sector levy.

64. Taking into account these new views, the composition of adjustment should continue to be calibrated with a view to minimizing the short- and long-term costs. In designing the composition of fiscal adjustment, the pre-adjustment levels of revenue and spending, the differential growth effects of various measures across time horizons, and the durability of the selected measures need to be considered. In a number of European countries, precrisis levels of spending and taxation were very high, pointing to the need for expenditure-focused adjustment. In addition to the aggregate expenditure-revenue mix, the efficiency, growth, and equity implications of individual measures should be considered. For instance, protecting the most progressive social benefits and better targeting of social welfare spending can help ensure that the burden of adjustment is distributed in an equitable manner.

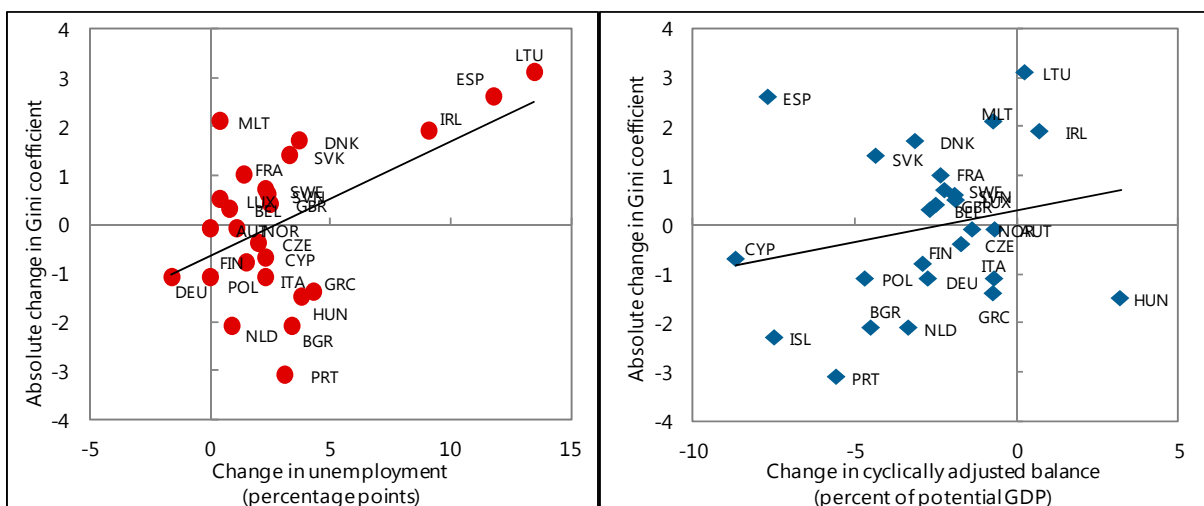
³⁷ For a more general discussion of financial sector taxation in the context of the crisis, see IMF (2010c).

Box 2. Equity Considerations for Program Design in the Crisis

A large and protracted fiscal consolidation is likely to exacerbate income inequality. Studies show that income inequality tends to rise during periods of fiscal adjustment, especially when it is based on a retrenchment in spending (see Woo and others, 2013; Ball and others, 2013).¹ Besides the direct impact of consolidation on different income groups, via particular tax or spending measures, unemployment appears to be an important channel through which fiscal tightening affects inequality.² Inequality has tended to rise most in countries with the sharpest increases in unemployment (Ireland, Lithuania, Spain) and to a lesser extent in ones that provided less discretionary fiscal support during the crisis (see Box Figure).

Adjustment packages should be carefully designed to limit their negative social effects and improve their sustainability. Fiscal adjustments that are seen as unfair are unlikely to be politically sustainable. As is generally true, but especially important in the current circumstances, better-designed tax measures and the more efficient allocation of spending, such as through better targeting social benefits, can help offset some of the adverse distributional effects of consolidation. For example, discretionary spending cuts could be combined with an enhancement of social safety nets, supported by means-testing. Alternatively, revenues raised through more regressive types of taxes can be used to finance expenditures that are more progressive, resulting in a net positive impact on low-income households. Finally, equity can also be improved by combating tax evasion, since, relative to low wage earners, large firms and wealthy individuals often have more of their income in forms that are easier to shield from scrutiny by tax authorities, stronger incentives to avoid taxes, and the means to do so. As the recent IMF Policy Paper on fiscal policy and employment noted, employment and earnings growth that benefits low-income groups, in particular, should be facilitated and encouraged (IMF, 2012f).

Box Figure. Selected European Countries: Change in Unemployment, Cyclically Adjusted Balance, and the Gini Coefficient, 2007–10



Sources: Woo and others (2013); EU Statistics on Income and Living Conditions (EU-SILC).

¹ See Bastagli, Coady, and Gupta (2012) and Woo and others (2013) for discussions on the various channels through which income distribution has been affected by fiscal consolidation.

² In most countries, other cyclical and structural factors besides fiscal adjustment also contribute to increases in unemployment.

BUDGETARY INSTITUTIONS, FISCAL TRANSPARENCY, AND FISCAL RULES

65. Although fiscal institutions are no substitute for political will, they have gained prominence as tools to underpin effective fiscal policy.³⁸ Already prior to the crisis, fiscal institutions were seen as an important device for sound public financial management (Akitoby and Stratmann, 2010). The crisis has highlighted further their crucial role in achieving the desired fiscal outcomes and, in particular, successful consolidations. However, the crisis has also shown that it is not easy to design effective institutions. For example, in the context of acute economic uncertainty, the crisis has revealed the challenges involved in establishing a credible medium-term budget framework (MTBF) that balances medium-term certainty against flexibility with regard to changing economic circumstances. It has exposed shortcomings in fiscal transparency standards and fiscal accounts in advanced economies, which resulted in large unreported deficits and debt. Finally, simple fiscal rules that relied on nominal variables were often procyclical and lacked the flexibility to accommodate major shocks, which made it more difficult to enforce the rules.

A. The Design of Medium-Term Budget Frameworks

66. Even before the crisis, multi-year budgeting was advocated as good practice. Multi-year budgeting provides insight into the implications of current policy decisions and future programs, and how these fit within sustainable medium-term budget envelopes.³⁹ It also helps to reduce fiscal risks due to inadequate planning. For instance, the absence of a binding/credible MTBF is associated, on average, with a much higher forecasting error than that of countries with a binding MTBF like Sweden or the UK (Figure 17).⁴⁰

67. The crisis has further illustrated the contribution of effective MTBFs to fiscal policy credibility. In most instances, MTBFs helped governments respond to the crisis by providing a well-established platform to plan, explain, and deliver both fiscal stimulus packages and subsequent fiscal adjustment programs, thereby improving the credibility of fiscal policy.⁴¹ As Harris and others (2013) argue, regardless of their debt levels in 2011, governments with binding MTBFs were better able to convince the markets that they would deliver on their medium-term fiscal adjustment plans in the wake of the crisis.

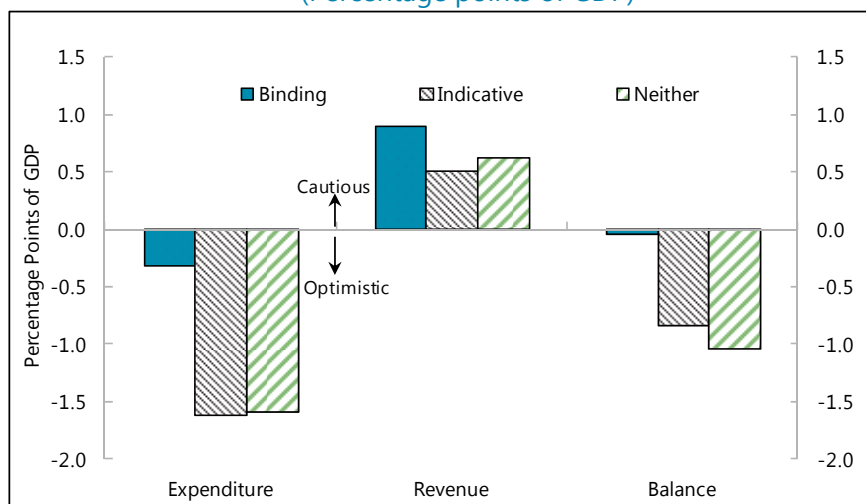
³⁸ As with all institutions though, the effectiveness of mechanisms like MTBFs, fiscal rules, and fiscal councils can depend on a range of factors, including cultural and political willingness to adhere by the restrictions such mechanisms place on policymakers and government officials.

³⁹ See, for example, Potter and Diamond (1999) and IMF (2007b).

⁴⁰ A binding MTBF holds the government accountable for multi-year expenditure parameters (e.g., ceilings), meaning that some corrective action is required if there is evidence that a previously set parameter will be exceeded (see Harris and others, 2013, p. 145).

⁴¹ While it is difficult to establish causality between the two, individual country cases may provide some insights (see Harris and others, 2013).

Figure 17. Average Three-Year Ahead Forecast Error, 1998–2007
(Percentage points of GDP)



Sources: EU Countries: Stability and Convergence Programs. All other countries: year-end budget reconciliation documents.

68. At the same time, MTBFs need to be sufficiently flexible to respond to adverse economic shocks. Successful MTBFs have combined multi-year discipline with responsiveness to shocks. This has been achieved in a number of ways, including:

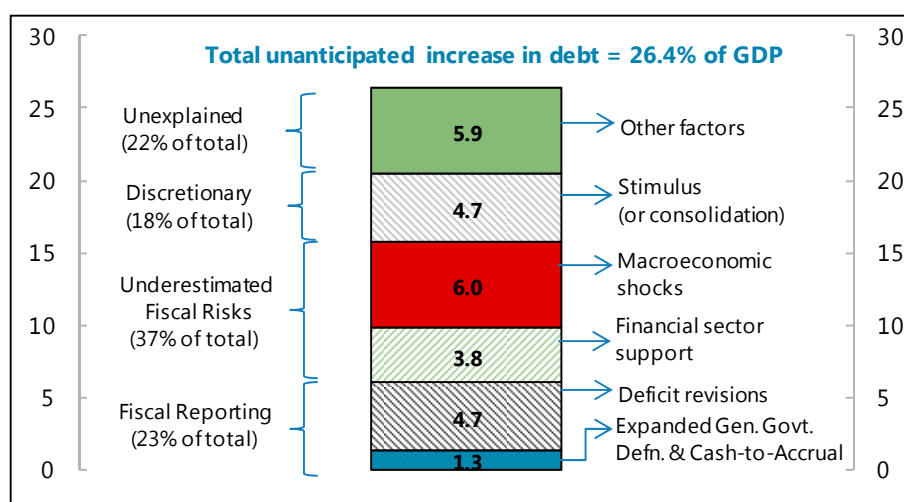
- Excluding cyclically sensitive expenditures like interest expenses and unemployment benefits from multi-year spending ceilings (e.g., Finland, France, the Netherlands, the United Kingdom);
- Setting targets in real or volume terms so the expenditure limits are automatically adjusted to reflect changes in the price level (e.g., the Netherlands) or number of beneficiaries (e.g., Finland);
- Building some unallocated spending into the overall expenditure limits that can be used to meet unanticipated spending needs (e.g., Sweden);
- Allowing spending to be reprofiled within multi-year limits, to bring some infrastructure spending forward during a downturn for instance (e.g., the United Kingdom);
- Designing escape clauses to deal with unforeseen and severe shocks. This will leave open the option to revise the entire MTBF, if the severity of the shock requires a fundamental change in fiscal policy. In this case, to safeguard the credibility of the overall framework, the government should provide a transparent account of the revisions to MTBF that clearly separates the impact of economic shock from other factors, including policy changes, as done in Sweden and Australia. Who decides when the escape clause is to be activated is also important. In this regard, fiscal councils can play a crucial role, including reviewing the MTBF revisions.

B. The Transparency of Fiscal Accounts⁴²

69. The decade before the crisis saw a concerted effort to develop a set of internationally accepted standards for fiscal transparency. There was also a steady improvement in the comprehensiveness, quality, and timeliness of public financial reporting in countries across the income scale.

70. Despite precrisis advances, shortcomings in fiscal disclosure resulted in an inadequate understanding of underlying fiscal positions and fiscal risks. Several countries have experienced large unexpected increases in deficits and debt as a result. For example, between 2007 and 2010, the average unanticipated increase in the general government debt ratio was about 26 percent of GDP for the ten countries with the largest unexpected debt increases (Figure 18). Roughly a quarter of the increase was due to failures in retrospective fiscal reporting and more than a third was due to underestimated fiscal risks from macroeconomic shocks and contingent liabilities. Less than one-fifth was attributable to discretionary fiscal measures (the balance is unexplained). As Ostry and others (2010) point out, a large fiscal revision can cause a bigger shift in market sentiment than the size of the revision alone would suggest.

Figure 18. Sources of Unanticipated Increases in Public Debt Between 2007 and 2010
(Percent of 2010 GDP)



Source: IMF staff estimates using WEO data.

Notes: The "unanticipated" increase in debt is measured as the difference between the actual 2010 general government gross debt-to-GDP ratio and the October 2007 WEO forecast of the 2010 debt ratio. The chart shows the GDP PPP weighted average across 10 countries: France, Germany, Greece, Iceland, Ireland, the Netherlands, Portugal, Spain, the United Kingdom, and the United States.

⁴² This section draws on the IMF Policy Paper "Fiscal Transparency, Accountability, and Risk" (IMF, 2012g).

71. The shortcomings in fiscal disclosure were mainly due to a narrow scope of fiscal reporting or weak compliance with fiscal transparency standards. In particular, the shortcomings related to:

- *Narrow scope of fiscal reporting:* Most countries report fiscal variables for the general government. However, this excludes a range of entities outside of the general government perimeter whose activities can have fiscal implications. For example, in Portugal about one third of the increase in the general government debt between 2007 and 2011 resulted from reclassifications of entities that were previously outside of the general government perimeter, notably, state owned enterprises (SOEs) and public-private partnerships (PPPs). These obligations dealt a blow to the government's finances when they were reclassified under the European fiscal reporting rules after the crisis struck.
- *Lack of timely information about the current fiscal position:* A number of countries did not fully report in-year fiscal developments. For example, in Greece, a lack of timely and accurate in-year fiscal data contributed to substantial revisions to initial estimates of the general government debt and deficit. These large *ex post* revisions rendered the fiscal adjustment plan out of date shortly after approval.
- *Shortcomings in fiscal forecasting:* There are no internationally accepted standards for the content and presentation of the budget and related documents. As a result, the production and presentation of fiscal forecasts and budgets varies greatly across countries and often with significant shortcomings.⁴³

72. Looking ahead, fiscal reporting should be enhanced to address the gaps in fiscal transparency standards and practices revealed by the crisis. While improving fiscal reporting cannot eliminate fiscal risks, it can help policymakers to identify, understand and respond to risks.⁴⁴ Some steps, discussed in the section on fiscal risks, include expanding the institutional coverage of fiscal reporting to capture risks from SOEs or PPPs, preparing and publishing broad fiscal risk assessments to determine the likely sources and sizes of contingent liabilities, and conducting stress testing of fiscal policy and debt sustainability under alternative macro-fiscal scenarios (as in the DSA).⁴⁵ Additional steps to address weaknesses in fiscal transparency practices include: (i) improving

⁴³ According to the OECD's 2007–08 Survey of Budget Practices and Procedures in 97 countries, the shortcomings relate to methodology (only one-third systematically distinguish the fiscal impact of current and new policies), construction and presentation (less than half prepare disaggregated multi-year budget estimates), and time horizon (less than one-quarter routinely produce long-term fiscal projections).

⁴⁴ Arbatli and Escolano (2012) have shown that increased fiscal transparency can also improve credit ratings and lower sovereign bond yields.

⁴⁵ It should be noted that assessing contingent liabilities is difficult in practice. Explicit contingent liabilities, such as government guarantees to SOEs or potential costs due to PPPs, are easier to estimate than implicit contingent liabilities, such as those generated by the financial sector during a crisis. Implicit contingent liabilities are difficult to estimate in part because the sources of such liabilities may not be recognized, but also because their ultimate cost is typically a function of policy choices. See Cebotari (2008) for more details.

the timeliness of reporting to ensure fiscal forecasts are based on an up-to-date understanding of the fiscal position, and (ii) adopting accrual-based reporting alongside cash-based reporting to help identify hidden liabilities (such as expenditure arrears) consistent with the Government Finance Statistics Manual (GFSM) 2001 standards.

73. The IMF’s Fiscal Transparency Code, Manual, and Assessment have been updated to reflect the lessons from the crisis.⁴⁶ The update involved: (i) broadening the institutional coverage of fiscal reports; (ii) providing balance sheet information; (iii) increasing the frequency of fiscal reporting; (iv) requiring greater disclosure and management of contingent liabilities; and (v) increasing the consistency between forecast, in-year, and year-end fiscal data. These revisions reinforce the focus on the quality of fiscal reports, rather than the adequacy of reporting procedures. By incorporating a set of qualitative fiscal transparency indicators that illustrate the materiality of any gaps in country’s reporting practices, the new assessment provides an answer to the question of whether available fiscal information provides an adequate description of the state of public finances. Finally, rather than providing a one size fits all approach, the new code and assessment are based on a graduated set of basic, good, and advanced practices that provide a guide for fiscal reporting at different capacity levels.⁴⁷

C. The Effectiveness and Design of Fiscal Rules

74. Before the crisis it was widely believed that keeping rules simple and transparent would help enforcement via market discipline and public pressure. Fiscal rules that impose long-lasting constraints through numerical limits on budgetary aggregates have traditionally been advocated by the Fund as a tool for disciplining fiscal policy and ensuring debt sustainability (e.g., Kopits and Symansky, 1998).

Fiscal rules need to be better enforced while allowing more flexibility to deal with shocks

75. One lesson from the crisis is that fiscal rules should be made more binding in good economic times, while allowing room to maneuver when the economy is weak. Precrisis budget balance rules, typically defined in headline terms, allowed for fiscal expansion during the boom (e.g., Spain) and called for procyclical and politically difficult tightening when the economy weakened. Moreover, with a few exceptions (e.g., Brazil, Switzerland), most precrisis fiscal rules did not explicitly foresee how to deal with exceptional economic circumstances. Consequently, during the crisis, many rules were put into abeyance to avoid required fiscal tightening and without a clearly defined path back. In this respect, national rules that provided some flexibility, either by accounting for the cycle (e.g., Australia, Switzerland) or by including explicit escape clauses (e.g., Brazil), generally fared better. This leads to three conclusions:

⁴⁶ For further information about the IMF’s work in the area of fiscal transparency see www.imf.org/fiscaltransparency.

⁴⁷ Further, the Special Data Dissemination Standard Plus (SDDS Plus) has been created as a third tier of the Fund’s data standards initiatives to help address data gaps revealed during the global financial crisis. SDDS Plus prescribes quarterly dissemination of general government operations and general government gross debt data.

- *Structural budget balance rules can better handle the trade-off between the objectives of counter cyclicity and sustainability than headline rules.* Using structural budget balances helps policymakers take a more medium-term perspective rather than attempting to fine-tune fiscal policy. Setting the limit in structural budget terms also allows excluding one-off effects, such as banking sector recapitalization measures. However, large “one-off items” can still have important implications for sustainability.
- *Computing structural budget balances is not straightforward, and results are difficult to communicate, thus calling for greater involvement of independent agencies.* As the crisis has revealed, focusing only on the output gap may not be sufficient since cyclical revenue can be associated with absorption or credit booms, as well as changes in the composition of GDP that would need to be corrected for. Moreover, the post-crisis uncertainty about the impact on potential GDP makes the structural budget balance prone to backward revisions, thus potentially changing the assessment of the fiscal stance. Though not a panacea, independent fiscal institutions can play an important role in avoiding having the costs of greater complexity and less transparency of structural budget balance rules outweigh their added flexibility. In particular, with the right expertise, independent fiscal institutions can estimate structural budget balances or assess those of the government, monitor their development, and explain changes and potential deviations from the rule to the public (further details below).
- *Well-defined escape clauses add welcome flexibility to fiscal rules.* They should clearly define under what circumstances and by whom the clauses can be triggered, as well as the timeframe for returning to the numerical limits.

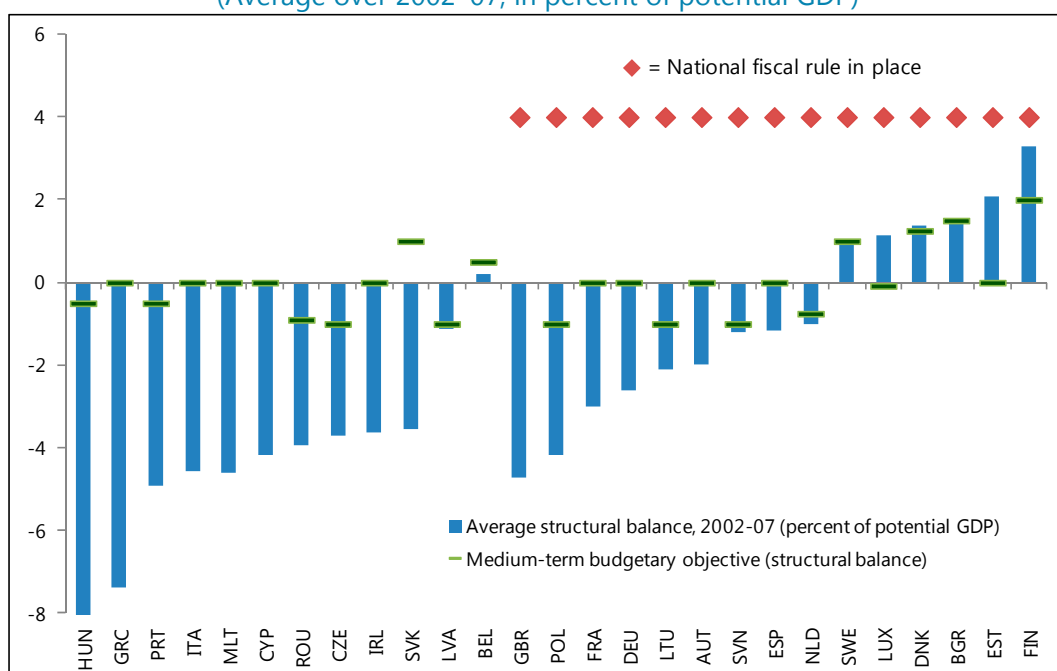
76. Enforcement mechanisms and other arrangements supporting the implementation of fiscal rules should be strengthened. In particular, attention has been focused on the role of corrective mechanisms for deviations, fiscal councils, and medium-term supporting frameworks. Specifically, automatic mechanisms that correct for past deviations from fiscal rule targets have emerged as a tool to strengthen enforcement since they require “undoing” past fiscal excesses and determine the path back to the fiscal rule. Independent fiscal councils are now increasingly viewed as natural complements to fiscal rules because they raise the reputational costs for deviating, including in the use of “escape clauses,” and help provide greater public scrutiny, particularly in cases where rules are more complex and less transparent (IMF, 2013e). Moreover, better supporting arrangements, such as medium-term forecasting, planning and reporting (see above) help support better monitoring and implementation of fiscal rules, thereby ensuring compliance.

77. Finally, supranational rules should be complemented with national fiscal rules. In the EU, supranational budgetary limits were not sufficient to ensure fiscal discipline at the national level. Precrisis structural deficits remained high in many EU countries,⁴⁸ though this was not as much the

⁴⁸ For most countries, this was already apparent from the estimates at the time, though the extent of the imbalances were larger in hindsight. Notable exceptions are Spain and Ireland, for which the revenues from their construction booms were not flagged as transitory in the standard structural balance measures, but only in augmented indicators (Martinez-Mongay, 2007, and Kanda, 2010, respectively).

case in EU countries with strong national rules in place (Debrun and Schaechter, 2013). For example, before the crisis the Netherlands and the Nordic countries, with their traditions of rules-based medium-term fiscal policy making, had small structural deficits or surpluses on average and were among the few to meet their medium-term budgetary objectives (Figure 19). Of course, supranational and national rules should be consistent with each other to avoid conflicting goals.

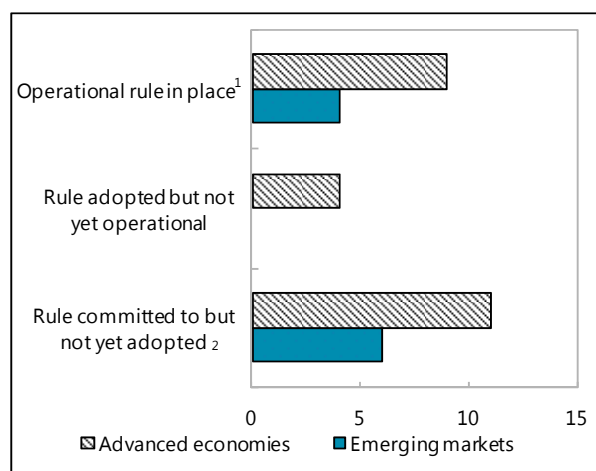
Figure 19. EU Countries: Precrisis Fiscal Performance and National Fiscal Rules
(Average over 2002–07; in percent of potential GDP)



Sources: IMF WEO data and IMF staff assessment.

78. A number of countries have already taken steps to reflect these lessons by adopting “next generation” fiscal rules. Such rules tend to explicitly combine the sustainability objective with more flexibility to accommodate economic shocks (Schaechter and others, 2012). Following the earlier examples of Chile, Germany, and Switzerland, many of the newly adopted rules set budget targets in structural terms (e.g., Austria, Colombia, France, Germany, Italy, Portugal, Spain, Switzerland), cyclically adjusted terms (e.g., the United Kingdom), or account for the cycle in other ways (e.g., Panama, Serbia) (Figure 20). In the EU, the so-called “Fiscal Compact” goes in the same direction. It requires that national legislation adopt a structural budget balance rule combined with legally enshrined automatic mechanisms for correcting deviations from the rule. In addition, the recent “Two Pack” reform calls for the creation of independent national bodies to assess compliance with the rule in EMU member states. Overall, the design features of fiscal rules have become more encompassing, as seen in the fiscal rules index in Figure 21.

Figure 20. Number of Countries with Budget Balance Rules Accounting for the Cycle
(Number of countries)

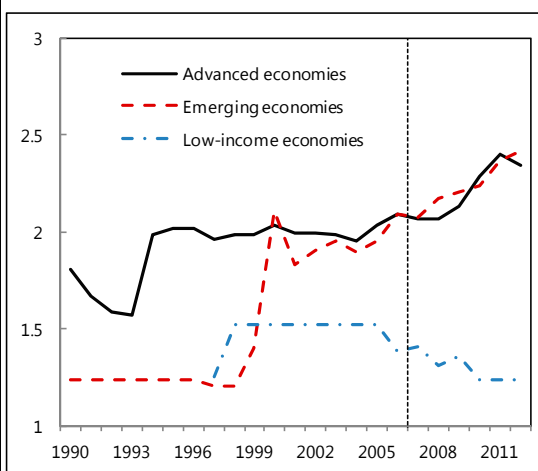


Source: IMF (2012a).

1/ Includes those with a clearly specified transition path.

2/ Includes those EU member states that have signed the Fiscal Compact but have not yet adopted a rule that accounts for the cycle.

Figure 21. National Fiscal Rules Index
(Index ranging from zero to five)



Source: Schaechter and others (2012).

Notes: The index is calculated by accounting for a number of characteristics, such as the legal basis, coverage, enforcement, and supporting procedures and institutions. The index has been standardized and ranges from 0 to 5.

Fiscal councils are important tools to enforce fiscal rules

79. Fiscal councils have been increasingly recognized as useful facilitators to maintain sound public finances.⁴⁹ Fiscal councils are publicly funded independent bodies with a mandate from elected officials to provide non-partisan oversight, analysis and/or advice on fiscal policy and performance (OECD, 2012). Based on experiences prior to and during the crisis, recent analysis has identified two main channels through which councils exert a positive effect on public finances. They: (i) influence the public debate, mainly through communications and formal appearances before parliamentary committees (Debrun, Gérard, and Harris, 2011), and (ii) provide or publicly assess macroeconomic and budgetary forecasts to be used for budget preparation (Frankel and Schreger, 2012).

80. In particular, fiscal councils can enhance the enforcement of fiscal rules (IMF, 2013e). Fiscal councils can help monitor fiscal rules as mandated, for example, by recent EU legislation.⁵⁰ With more countries formulating fiscal rules in structural terms, fiscal councils could also monitor the technically complex adjustment calculations for the cycle, watch over the appropriate use of escape clauses, and the implementation of adjustment paths. In many countries, the newly

⁴⁹ See the forthcoming IMF Policy Paper on fiscal councils (IMF, 2013e) for further discussion.

⁵⁰ They could be particularly useful in times of strong economic growth, when uncertainties about the permanence of revenue gains may feed complacency and hamper a sufficient build up of fiscal buffers.

established fiscal councils do have the mandate to monitor compliance with fiscal rules and targets (e.g., Ireland, Italy, Romania, Serbia, Sweden, the United Kingdom), as well as to assess or prepare macro-fiscal forecasts. However, in only a few cases are the fiscal council's views binding for the government (e.g., Slovenia, the United Kingdom), a practice which is more common across older fiscal council legislation (e.g., Belgium, Korea, the Netherlands).

81. Recent studies have attempted to identify good practices on fiscal council design (OECD, 2012). Three features seem to emerge. First, fiscal councils must have a mandate aimed at addressing the origin of the fiscal policy bias (e.g., the regional common pool problem in Belgium, and the optimistic forecasting bias in the United Kingdom). Second, they must be functionally independent. This implies not only guarantees against political interference but also resources commensurate with their tasks to safeguard against the political temptation to limit the fiscal council's activities (as illustrated by the fate of Hungary's council in 2010-11). Third, fiscal councils must be mindful of the political landscape and legal traditions.

Fiscal decentralization creates new challenges for the relations between the fiscal rules of central and subnational governments

82. The crisis has reaffirmed that subnational finances are often more difficult to control than central governments' finances. In particular, two classic drawbacks of fiscal decentralization have come to the fore during the crisis: deficit bias and coordination failures (see, for example, Eyraud and Moreno Badia, 2013):

- *Deficit bias.* A failure by lower level governments to fully internalize the costs of public spending tends to create overspending or undertaxation, resulting in a deficit bias (for example, overspending by regions in Spain resulted in larger than expected deficits, particularly in 2011).
- *Coordination failure.* In a decentralized system, subnational and central governments' policies may not be consistent and pull the fiscal stance in opposite directions. For example, countries with strictly enforced subnational nominal budget balance rules, such as the United States, experienced notable procyclical tightening by state and local governments during the crisis, while the central government was targeting a countercyclical stimulus (Aizenman and Pasricha, 2011; Jonas, 2012).

83. The crisis has also revealed that subnational governments had accumulated significant fiscal risks over the years. This was the case in countries both without and, to a lesser extent, with subnational fiscal rules (see, for example, Escolano and others, 2012). For example in Iceland, where in precrisis years there were no formal constraints on local government finances, local government debt surged to 37 percent of GDP at end-2009 and debt-to-revenue ratios exceeded 150 percent in two-fifths of municipalities owing to a lack of proper oversight.

84. In response to these experiences, institutional reforms are now focusing on making subnational constraints more binding. A number of countries without subnational constraints are in the process of putting them in place, and have typically opted for fiscal rules (e.g., Iceland). In

some countries with an earlier focus on cooperative arrangements between central and subnational governments (e.g., internal stability pacts), more emphasis is now placed on numerical rules (e.g., Austria, Germany). Finally, many countries with rules are strengthening them. For example, more countries are now imposing limits on the budget balance rather than, or in addition to, capping debt stocks. At the same time, enforcement is being strengthened, including through more/stricter options for remedial actions (e.g., intense central monitoring, fiscal adjustment plans, hiring or salary freezes, reductions of central transfers, suspension of fiscal powers).⁵¹

CONCLUSIONS AND IMPLICATIONS FOR FISCAL POLICY

85. The crisis has spurred a fundamental reappraisal of macroeconomic policy. Fiscal policy is at the center of that reassessment. From the lessons highlighted above, we can draw a number of implications for fiscal policy design and implementation, though for some issues conclusions are tentative and some open questions remain.

Fiscal risks, and fiscal and debt sustainability

86. The weaknesses of conventional fiscal indicators suggest that new measures of the structural fiscal position and fiscal risks are needed. Notably, both headline balances and precrisis estimates of structural balances that did not account for asset price cycles obscured the underlying structural weaknesses of fiscal positions in a number of AEs. The fiscal risks associated with financial sector balance sheets (sovereign-bank feedback loops) were underestimated and the transitory nature of revenue associated with real estate and financial market booms was not accounted for.

87. AEs can experience economic and financial shocks that are larger than what was thought possible, which calls for a reassessment of long-term “safe” public debt levels. The emerging post-crisis consensus suggests lower values for what constitutes “safe” debt to GDP ratios, to account for much-larger-than-imagined macroeconomic shocks and contingent liabilities. However, it is still an open question as to why and for how long the markets will tolerate very high debt ratios in some AEs (e.g., Japan, the United States).

88. AEs are not immune to sudden changes in market sentiment of the sort that have provoked past crises in emerging markets. The risk of multiple equilibria associated with high levels of public debt, especially for members of a currency union, has raised the stakes of maintaining a heavy debt burden and made it imperative to stabilize and reduce public debt ratios over the medium term.

⁵¹ Examples include Romania, where local governments can only commit to new spending after they have cleared their arrears, and Spain, where failure to meet fiscal targets requires presenting a correction plan and spending cuts are automatically triggered in the event of non-compliance with the plan.

89. Central banks can mitigate the risk of a bad equilibrium by committing to provide liquidity to the sovereign bond market to facilitate its monetary policy objectives. Large central bank purchases of sovereign debt do appear to have helped restore financial market functioning and intermediation. When output gaps are sizable and financial conditions severely distressed, coordination of fiscal and monetary policies becomes a requirement to facilitate the recovery. However, even if central bank purchases of government debt in pursuit of monetary policy goals can also support fiscal adjustment, they are not a substitute for it. Fiscal adjustment is essential to lower the risk of future political pressure on central banks.

Countercyclical fiscal policy

90. It remains an open question whether the conditions that warranted a greater use of discretionary countercyclical fiscal stimulus at the start of the crisis will recur in the future. Greater reliance on fiscal policy reflected constraints on conventional monetary policy (including those arising from the zero lower bound and a weak financial sector) and insufficient support provided by existing automatic stabilizers. One should not underestimate the possibility that such conditions could persist or recur in the future, especially if automatic stabilizers continue to provide insufficient support to the economy in severe recessions. Indeed, Japan's policy interest rates have been near zero since the mid-1990s, as have those of most other advanced economies since 2008, and there is wider recognition of the risk of banking crises in AEs. In addition, discretionary countercyclical fiscal policy may remain an essential tool as long as automatic stabilizers have not been made more effective in countering severe recessions. Of course, in deploying countercyclical fiscal policy, the authorities should ensure that they have sufficient fiscal room to maneuver so that the increase in debt associated with a fiscal expansion, on top of any realization of contingent liabilities, does not trigger a sovereign debt crisis. This may be a particularly relevant concern in economies that experienced a trend increase in the government debt-to-GDP ratio since the 1970s.

91. Countercyclical fiscal policies (either automatic or discretionary) could be made more effective. Automatic stabilizers are not typically designed to deliver the optimal fiscal policy response, since they reflect many societal choices—for example, regarding the size of government—that are unrelated to cyclical considerations. The effect of conventional automatic stabilizers on debt is also only self-correcting if output fluctuations are temporary, which may not be the case. There is therefore a case for improving them, for instance, by increasing the role of temporary and targeted fiscal measures contingent on the state of the economic cycle, rather than simply on the level of output. On discretionary fiscal policy, while the evidence in the last few years is more positive, a number of precrisis political-economy concerns regarding the timeliness and temporariness of discretionary fiscal measures may remain valid, particularly when facing “normal” cyclical fluctuations. Going forward, the emerging literature on the effectiveness of various fiscal measures can provide some guidance on the sets of discretionary policies that are most appropriate for different kinds of recessions.

Design of fiscal adjustment

92. The optimal pace of adjustment depends on the state of the economy, the condition of public finances and the extent of market pressures. The merit of universal frontloading has been questioned by developments in the last few years. Given the nonlinearities associated with excessive austerity or profligacy, the case for proceeding with fiscal adjustment at a moderate pace within a medium-term adjustment plan to enhance credibility has been strengthened for countries that are not under market pressure. Frontloading is more justifiable in countries under market pressure, though even for these countries there is a “speed limit” beyond which consolidation efforts can be self-defeating.

93. Regarding the composition of the adjustment, some degree of pragmatism is needed. The importance of taking equity considerations into account—certainly not a new paradigm—has been confirmed by the need for policymakers to reverse measures that were not perceived as fair. As to the proper balance between revenue increases and spending cuts, it is still too soon to draw conclusions from recent developments. It continues to stand to reason that countries with a relatively high revenue-to-GDP ratio would have to adjust primarily on the spending side, even if the short term multiplier of spending cuts may be higher, because of medium-term growth considerations. Countries where spending and revenue ratios are lower have space to act more on the revenue side. In any case, at least in the current circumstances, it is unlikely that fiscal adjustment would not involve some short term output loss, regardless of the composition of the adjustment.

Budgetary institutions, fiscal transparency, and fiscal rules

94. More attention is needed on how to reconcile MTBFs and fiscal rules with the need for flexibility to respond to cyclical fluctuations. Both can be formulated in structurally adjusted terms, which can help avoid fiscal pro-cyclicality. It is more difficult to accommodate discretionary actions within MTBFs, as the purpose of the latter is indeed to give some certainty to future fiscal policy actions. Yet, defining the conditions under which MTBF could be revised (e.g., large deviations of output from initial projections), could help, particularly if combined with institutional arrangements to ensure that this increased flexibility is not abused (e.g., fiscal councils).

95. Improving fiscal transparency will contribute to a better understanding of underlying fiscal positions and related risks. Further efforts are needed to improve the timeliness and institutional coverage of fiscal reporting and adopt accrual-based reporting (in addition to cash-based reporting); prepare alternative macro-fiscal scenarios to ensure that fiscal policy settings are robust to macroeconomic shocks; and publish fiscal risk statements to raise awareness of contingent liabilities.

96. Both the enforcement fiscal rules and coordination of policy across levels of government need to be improved. Institutional reforms are focusing on making subnational budget constraints more binding through tighter fiscal rules and stricter enforcement. While this is appropriate, it is also critical that these constraints are well designed to reduce procyclicality.

ISSUES FOR DISCUSSION

- Do Directors agree that the crisis has revealed a need to reconsider what constitutes “safe” sovereign debt levels?
- Do Directors share the view that conventional concerns about large central bank purchases of government debt are less compelling when negative sovereign-bank feedback loops emerge and bad equilibrium outcomes can materialize in sovereign bond markets, as long as central bank intervention is a complement not a substitute for fiscal adjustment?
- Do Directors agree that while fiscal policy played an important role for short-term stabilization during the crisis, there are areas for improvement in the structure of automatic stabilizers and the implementation of discretionary fiscal policy measures?
- Do Directors agree that there is stronger evidence than before the crisis that fiscal policy can have important short-term effects on economic activity, in settings where monetary policy is constrained by the zero lower bound, the financial sector is weak, and the economy is in a slump?
- Do Directors agree that monetary policy, rather than discretionary fiscal measures, remains the most appropriate tool for macroeconomic management in normal circumstances?
- Do Directors agree that a pragmatic, country-specific approach is needed in designing fiscal adjustment packages and that, depending on the initial level of revenue and spending, the composition of the adjustment could rely more or less on spending cuts? Do Directors agree that greater importance needs to be given to equity considerations in designing adjustment packages?
- Do Directors agree that the effectiveness of fiscal policy as a countercyclical tool and the success of fiscal consolidation efforts critically depend on the quality of fiscal institutions and fiscal reporting? Do Directors support the measures proposed by staff to enhance budgetary institutions, fiscal transparency and fiscal rules?

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