

Fiscal Monitor

**Addressing Fiscal Challenges
to Reduce Economic Risks**



SEP **11**

World Economic and Financial Surveys

FISCAL MONITOR
September 2011

**Addressing Fiscal Challenges
to Reduce Economic Risks**



International Monetary Fund

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Production: IMF Multimedia Services Division

Composition: Scientific Publishing Services

Cataloging-in-Publication Data

Fiscal monitor—Washington, D.C. : International Monetary Fund, 2009–
v. ; cm. — (World economic and financial surveys, 0258-7440)

Twice a year.

Some issues also have thematic titles.

1. Finance, Public—Periodicals. 2. Finance, Public—Forecasting—Periodicals. 3. Fiscal policy—Periodicals. 4. Fiscal policy—Forecasting—Periodicals. 5. Financial crises—Periodicals. 6. Global Financial Crisis, 2008–2009—Periodicals. I. International Monetary Fund. II. Series: World economic and financial surveys.

HJ101.F57

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Preface

The projections included in this *Fiscal Monitor* are based on the same database used for the September 2011 *World Economic Outlook* (WEO) and *Global Financial Stability Report* (GFSR) (and are referred to as “IMF staff projections”). The fiscal projections refer to the general government unless otherwise indicated. Short-term fiscal projections are based on officially announced budgets, adjusted for differences between the national authorities and the IMF staff regarding macroeconomic assumptions. The medium-term fiscal projections incorporate policy measures that are judged by the IMF staff as likely to be implemented. For countries supported by an IMF arrangement, the medium-term projections are those under the arrangement. In cases in which the IMF staff has insufficient information to assess the authorities’ budget intentions and prospects for policy implementation, an unchanged cyclically adjusted primary balance is assumed, unless indicated otherwise. Country-specific assumptions are detailed in the Methodological and Statistical Appendix, which precedes the Statistical Tables.

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the supervision of Carlo Cottarelli, Director of the Department, and Philip Gerson, Senior Advisor. This issue is coordinated by Paolo Mauro. Principal contributors include Nina Budina, Fuad Hasanov, Laura Jaramillo Mayor, and Anke Weber. Nathalie Carcenac, Petra Dacheva, and

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The analysis is based on projections and policy considerations provided by the IMF’s area departments—namely, the African Department, Asia and Pacific Department, European Department, Middle East and Central Asia Department, and Western Hemisphere Department—and has benefited from comments and suggestions by staff from other IMF departments, especially the Monetary and Capital Markets Department, the Research Department, the Statistics Department, and the Strategy and Policy Review Department. Both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

This version of the *Fiscal Monitor* is available in full on the IMF’s website, www.imf.org.

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www.imf.org/external/pubs/ft/fm/2011/02/fmindex.htm

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Executive Summary

Despite progress in addressing key fiscal weaknesses in many countries, the global fiscal environment remains subject to a high degree of risk. Within the euro area, many countries have made good progress in reducing high deficits and specifying medium-term plans and have committed to enhancing fiscal institutions. Nevertheless, borrowing spreads have risen significantly in larger economies, including Italy and Spain, showing that market sentiment can change abruptly. In Japan and the United States, progress in defining and implementing fiscal adjustment plans has been more limited, but interest rates remain at historically low levels. In the United States, although a last-minute agreement to lift the debt ceiling was reached, the political impasse that preceded the deal illustrates the significant challenges to implementing fiscal adjustment going forward, reflected in a downgrade by one rating agency. Among emerging economies, where the needed medium-term fiscal adjustment is generally lower, the fiscal stance is nevertheless insufficiently tight in some cases in view of inflationary pressures and rapid growth, fueled in part by strong capital inflows.

Overall, significant policy challenges remain in advanced, emerging, and low-income economies and must be faced in an environment in which downside risks to growth have increased. The appropriate pace of adjustment in the short run will depend, for each country, on the intensity of the market pressure it confronts, the magnitude of the risks to growth it faces, and the credibility of its medium-term program. In this respect, strengthening medium-term plans and maintaining clear communication are critical to ensuring credibility and avoiding the possibility that the perception of fiscal risks becomes self-fulfilling, with rising interest rates and liquidity pressures eroding fundamentals. This threat cannot be ignored, and action to address it cannot be delayed.

For the euro area, the challenge is to sustain fiscal consolidation, minimize its growth fallout, and address concerns about the adequacy of

crisis resolution mechanisms. Countries under severe market pressure have no option but to implement their deficit reduction plans in full and without delay. Countries with more fiscal space could choose a more back-loaded profile should the macroeconomic environment deteriorate substantially. Some of the adverse impact of fiscal adjustment on economic growth can be alleviated through reforms that shift part of the burden of taxation from labor to consumption (so-called fiscal devaluations) and through privatization. Faster growth can help accelerate fiscal consolidation, and structural reforms to boost potential growth should also therefore be part of any adjustment strategy. With respect to the crisis resolution framework, the measures announced on July 21 to increase the flexibility of the European Financial Stability Facility are welcome. Countries need to act quickly to implement them and to continue to signal clearly their willingness to take additional steps as necessary to support confidence in the euro area.

The speed and severity with which financial pressures spread in the euro area should serve as a cautionary tale to Japan and the United States. Low interest rates in Japan and the United States arise in part from structural factors that are unlikely to change rapidly, including large domestic and institutional investor bases. However, low rates also reflect the significant goodwill that the governments of Japan and the United States have earned with investors, even though many of their conventional fiscal indicators—deficits, debt ratios, and projected age-related spending growth (in the United States)—are no better than in many European countries that currently face significant market pressure. The credibility of Japan and the United States could suddenly weaken if sufficiently detailed and ambitious plans to reduce deficits and debts are not forthcoming.

- In the United States, any credible strategy will need to include entitlement reforms and higher revenues; widening tax bases by phasing out tax expenditures would be a good place

to start (see the April 2011 *Fiscal Monitor*).

Defining a viable medium-term plan would allow for a more moderate pace of adjustment in 2012 than currently expected, to be offset by compensating tightening later, thus providing short-term support to the economy.

- In Japan, disaster relief and reconstruction are key short-term priorities, but this strengthens the case for a more detailed medium-term plan with objectives commensurate with the challenges the country faces. The authorities are introducing important measures with the goal of bringing the debt ratio down by the end of this decade. However, a faster adjustment that would begin reducing the debt ratio by the middle of this decade, including through further tax reforms, would be appropriate.

Emerging economies likewise face the risk of an eventual reversal of fortune. Some are taking advantage of good times to improve fiscal positions, but in several others, signs of overheating are arising. There is also a risk that elements of the positive macroeconomic environment—including capital inflows and high commodity prices for exporters—could prove temporary. Moreover, there is considerable cross-country variation in fiscal positions among emerging economies, with some facing debt ratios and gross financing needs that are close to advanced economy averages. A Fiscal Indicators Index that looks at a range of factors that have been associated with market stress shows

that fiscal conditions in emerging economies are on average weakest in Europe and strongest in Asia. For all these reasons, many emerging economies need to make faster progress in strengthening fiscal fundamentals before cyclical factors or spillovers from advanced economies—which have been limited to date—turn against them. Should downside risks materialize, those emerging economies with low debt and deficits could slow the pace of consolidation to support domestic consumption.

Low-income countries made good use of fiscal buffers during the crisis, but now face the challenge of rebuilding them while addressing spending needs. High food and fuel prices have created substantial spending pressures in many low-income countries. Many of them have so far managed to address social needs without damaging their fiscal positions, but a sustainable response will require better targeting of measures and a willingness to unwind them should global prices decline. More generally, long-standing fiscal challenges in low-income countries persist, with one-third of these countries in debt distress or under high debt sustainability risk. Measures to raise potential growth will be key to addressing these conditions, with increased investment to enhance infrastructure needed in many. Improved investment processes—such as competitive and open bidding—can help maximize the productivity of capital spending.

1. Introduction

Global fiscal risks remain very high, stemming from several unresolved, interrelated challenges:

- *Sustainability and market sentiment in the euro area.* Despite significant fiscal adjustment in most advanced European economies and the mid-July 2011 agreement by leaders of the euro area countries to improve the tools available to fight crises, borrowing costs remain high in several euro members, reflecting market participants' concerns about the sustainability of fiscal policies and public debts. Such concerns—which had their origin in weak fiscal fundamentals but subsequently intensified owing to doubts about the credibility of the euro area crisis resolution mechanisms—jeopardize the stability of the area, with major potential spillovers for other sovereign debt markets.
- *Medium-term fiscal adjustment in the United States and Japan.* Fiscal deficits remain at near-record levels in the two largest advanced economies, and their debt ratios continue to rise. These two countries benefit from large stores of goodwill from investors, but these favorable conditions could shift if needed policy changes are not forthcoming.
- *Using good times wisely in emerging economies.* There are risks of complacency, with the key question being whether fiscal balances should not be strengthened more rapidly, given output gaps that have essentially closed in many emerging economies, rising inflation, and strong revenues, particularly for commodity exporters.
- *Debt overhang from the crisis and long-term challenges.* For both advanced and emerging economies, the debt burden created by the crisis needs to be reduced, over the longer term, against the rising tide of health care and pension spending. The challenges confronting many economies in this regard are essentially without precedent.
- *High food and fuel prices in low-income countries.* Many low-income countries made appropriate use of countercyclical policies to address the

impact of the global crisis. Now, they need to rebuild fiscal buffers while responding to pressures from high food and fuel prices and, over the medium term, to increase investment to foster more rapid growth.

This *Monitor* reviews these topics in the following sections. The analysis is informed by in-depth appendixes on four topics: (i) “fiscal devaluation”; (ii) privatization; (iii) the importance of monitoring both gross and net government debt; and (iv) the contribution of stock-flow adjustments to government debt dynamics.

2. Reassuring Markets about Fiscal Sustainability in the Euro Area

After a brief respite following the announcement of new initiatives in mid-July, market concerns about fiscal sustainability in the euro area have reignited. Worsening market sentiment has spread beyond the smaller economies to which it had more recently been confined and poses risks that, if realized, could end up in vicious debt spirals.

Yet fiscal adjustment in the euro area is proceeding broadly as expected, and medium-term plans have been further clarified in some countries. The cyclically adjusted deficit is projected to fall by about 1¼ percent of GDP this year and a little under 1 percent of GDP next year, striking a balance between strengthening budgetary positions and supporting the recovery. The figure for this year is comparable to projections in the April 2011 *Fiscal Monitor*, while that for next year involves ½ percent of GDP more adjustment than previously projected (Table 1).

- *Germany's* headline fiscal balance has declined faster than expected at the time of the April *Monitor*, owing to recovering economic activity until recently and continued strong performance of the labor market. In *France*, where a front-loaded adjustment is generally tilted toward expenditure containment, the government has announced a reform of capital

Table 1
Fiscal Balances, 2008–12

	2008	2009	2010	Projections		Difference from April 2011 Fiscal Monitor		
				2011	2012	2010	2011	2012
Overall balance (Percent of GDP)								
World	-1.9	-6.7	-5.5	-4.6	-3.8	0.1	0.1	-0.3
Advanced economies	-3.6	-8.8	-7.5	-6.7	-5.4	0.1	0.4	-0.2
United States	-6.5	-12.8	-10.3	-9.6	-7.9	0.3	1.1	-0.4
Euro area	-2.1	-6.4	-6.1	-4.2	-3.2	-0.1	0.2	0.5
France	-3.3	-7.6	-7.1	-5.9	-4.6	-0.1	-0.1	0.3
Germany	0.1	-3.1	-3.3	-1.7	-1.1	0.0	0.7	0.4
Italy	-2.7	-5.3	-4.5	-4.0	-2.4	0.0	0.3	1.1
Spain	-4.1	-11.1	-9.2	-6.1	-5.2	0.0	0.1	0.5
Japan	-4.2	-10.3	-9.2	-10.3	-9.1	0.3	-0.3	-0.7
United Kingdom	-4.9	-10.3	-10.2	-8.5	-7.0	0.2	0.1	-0.1
Canada	0.1	-4.9	-5.6	-4.3	-3.2	-0.1	0.3	-0.4
Others	1.9	-1.0	0.0	0.4	1.1	-0.2	-0.5	-0.6
Emerging economies	-0.5	-4.8	-3.7	-2.6	-2.3	0.1	0.0	-0.1
Asia	-2.2	-4.7	-3.9	-3.3	-2.7	0.3	0.1	0.0
China	-0.4	-3.1	-2.3	-1.6	-0.8	0.3	0.0	0.1
India	-7.2	-9.7	-8.8	-8.0	-7.6	0.5	0.3	0.0
ASEAN-5	-0.8	-3.7	-2.9	-2.8	-2.6	-0.1	0.0	-0.2
Europe	0.6	-6.2	-4.5	-2.0	-2.2	-0.1	0.3	0.1
Russia	4.9	-6.3	-3.5	-1.1	-2.1	0.0	0.5	-0.4
Latin America	-0.7	-3.6	-2.9	-2.3	-2.2	-0.1	-0.1	0.0
Brazil	-1.4	-3.1	-2.9	-2.5	-2.8	0.0	-0.1	-0.2
Mexico	-1.1	-4.7	-4.3	-3.2	-2.8	-0.2	-1.4	-0.4
Middle East and North Africa	0.0	-2.7	-3.0	-5.6	-4.8	-0.9	-0.8	-0.6
Low-income economies	-1.3	-4.2	-3.0	-3.1	-2.9	-0.1	-0.5	-0.6
Oil producers	5.9	-3.1	-0.8	0.8	0.4	-0.2	-1.3	-1.9
G-20 economies	-2.6	-7.5	-6.1	-5.4	-4.4	0.2	0.3	-0.2
Advanced	-4.2	-9.5	-8.1	-7.4	-6.0	0.1	0.5	-0.2
Emerging	-0.3	-4.8	-3.5	-2.6	-2.3	0.1	0.0	-0.1
Cyclically adjusted balance (Percent of potential GDP)								
Advanced economies	-3.3	-5.5	-5.5	-4.8	-3.8	0.2	0.7	0.4
United States ¹	-4.5	-6.7	-7.0	-6.4	-5.0	0.5	1.7	0.7
Euro area	-2.9	-4.7	-4.4	-3.2	-2.3	-0.2	0.1	0.6
France	-3.0	-5.3	-5.2	-4.4	-3.4	0.1	0.0	0.4
Germany	-1.1	-1.1	-2.5	-1.5	-0.9	-0.1	0.6	0.6
Italy	-2.4	-3.3	-2.9	-2.5	-1.0	-0.1	0.2	1.2
Spain	-5.3	-9.7	-7.5	-4.6	-4.1	0.0	0.1	0.5
Japan	-3.7	-7.1	-7.4	-8.1	-7.6	0.1	0.3	-0.2
United Kingdom	-5.9	-8.5	-8.0	-6.3	-4.7	0.2	0.3	0.5
Canada	-0.5	-2.5	-4.0	-3.0	-1.9	0.0	0.6	0.3
Others	0.4	-1.5	-1.0	-0.9	-0.2	-0.2	-0.6	-0.5
Emerging economies	-2.2	-4.4	-3.8	-3.1	-2.6	0.2	0.1	0.1
Asia	-3.0	-5.1	-4.2	-3.5	-2.9	0.3	0.1	0.0
China	-0.9	-3.4	-2.6	-1.8	-0.9	0.2	0.0	0.2
India	-9.4	-10.6	-9.2	-8.3	-8.0	0.9	0.5	-0.3
ASEAN-5	-1.4	-2.9	-2.5	-2.7	-2.6	-0.5	-0.2	-0.4
Europe	-0.2	-4.1	-3.3	-2.0	-2.0	-0.1	0.2	0.2
Russia	3.7	-3.4	-1.8	-0.3	-1.8	0.0	0.4	-0.5
Latin America	-1.6	-2.7	-3.1	-2.7	-2.4	0.0	-0.2	0.3
Brazil	-2.1	-2.0	-3.1	-2.6	-2.7	-0.1	-0.1	-0.1
Mexico	-1.7	-4.3	-4.3	-3.4	-3.1	-0.1	-1.3	-0.3
G-20 economies	-2.9	-5.1	-5.0	-4.3	-3.5	0.2	0.6	0.3
Advanced	-3.4	-5.5	-5.7	-5.2	-4.0	0.2	0.9	0.5
Emerging	-2.2	-4.6	-3.8	-3.0	-2.6	0.2	0.1	0.1
Memorandum items:								
Overall balance (Percent of GDP)								
Advanced economies ¹	-3.3	-7.9	-7.5	-6.6	-5.3	0.5	0.1	-0.2
United States ¹	-5.7	-10.4	-10.2	-9.5	-7.8	0.6	0.0	-0.4

Sources: IMF staff estimates and projections.

Note: All country averages are weighted by GDP at PPP using 2009 weights. Projections are based on staff assessment of current policies.

¹ Excluding financial sector support recorded above the line.

taxation aimed at boosting competitiveness. Adjustment efforts for 2011–12 are broadly on track following additional austerity measures announced on August 24. (See Table 2, which compares countries' original fiscal targets for 2011 and 2012, announced at the G-20 Toronto Summit in June 2010, with current IMF staff projections for the same years.) Nevertheless, further measures will be needed for France to achieve its deficit target of 3 percent of GDP by 2013. The authorities have indicated that if such measures are required, they would likely speed up the already-planned reduction in tax expenditures.

- Adjustment is under way and has recently been accelerated in countries whose sovereign spreads have risen considerably. In *Italy*, fiscal developments in 2011 have been broadly in line with the targets embedded in the budget, which envisages a decline in the deficit by ½ percent of GDP compared with last year. Rising spreads prompted swift parliamentary approval in July and September of significant austerity measures aimed at balancing the budget by 2013. Although primarily due to staff's somewhat less favorable economic growth assumptions Italy's deficit would still be about 1 percent of GDP in 2013, this would nevertheless be the second-lowest deficit among the Group of Seven (G-7), and the country's debt-to-GDP ratio would stabilize in 2012 and start declining the following year. In *Spain*, strong deficit reduction is projected this year and next. The government has recently approved measures to reduce pharmaceutical expenditures and to move forward corporate tax collections, with an impact estimated at almost ½ percent of GDP in 2011.
- Consolidation is also proceeding rapidly in the three countries with adjustment programs supported by IMF and EU financing, *Greece*, *Ireland*, and *Portugal* (Statistical Table 1). The July agreement on the financing of the Greek program—including a combination of official funds and private sector involvement—is an important step forward. The more

favorable financing terms provided by euro member states will also help improve the fiscal sustainability profiles of these countries. In view of continued market concerns, however, steadfast implementation of these programs remains essential.

Altogether, the average euro area deficit is projected to decline below 1½ percent of GDP by 2016, 5 percentage points of GDP less than its level at the peak of the crisis. From a longer-term perspective, several European countries have undertaken measures to improve the sustainability of their pension systems through measures including increases in the retirement age for some groups of workers. The estimated (annual flow) impact of these reforms ranges between ½ and 1½ percent of GDP for France, Ireland, Italy, and Spain by 2030.

In addition, potentially important institutional reforms are under way in many European economies. These include initiatives aimed at improving budget processes in France, Greece, Ireland, Italy, and Portugal, and a draft EU directive addressing weaknesses in national budgetary institutions and procedures that have hampered enforcement of the Stability and Growth Pact (see the June 2011 *Fiscal Monitor Update*). In Spain, the government has announced the establishment of an expenditure rule to limit spending growth going forward, to be applied first to the central government and municipalities. Specific expenditure rules are also being discussed with regional governments, which have committed to proposing them to their parliaments by January 2012. A landmark pension reform was approved in July, and a balanced-budget constitutional amendment was approved by parliament in September. In Italy, a draft balanced-budget amendment to the constitution was approved by the government and is to be discussed by parliament. Reforms enhancing the medium-term orientation of fiscal policy are currently planned in Greece (a medium-term expenditure framework to underpin the 2012 budget), Ireland (the 2012 budget package will include medium-term expenditure

Table 2

Fiscal Balances in 2011–12: Medium-Term Plans and IMF Staff Projections*(Percent of each projection's GDP)*

	2011			2012		
	Original medium-term plans	IMF staff projections	Difference	Original medium-term plans	IMF staff projections	Difference
Australia	-2.9	-3.9	-1.0	-1.0	-1.9	-0.9
Canada ^{1,2}	-2.7	-4.0	-1.3	-1.5	-2.9	-1.4
France	-6.0	-5.9	0.1	-4.6	-4.6	0.0
Germany	-3.5	-1.7	1.8	-2.8	-1.1	1.7
Greece	-7.3	-8.0	-0.7	-6.2	-6.9	-0.7
India ¹	-6.8	-8.5	-1.7	-6.1	-7.8	-1.7
Ireland	-10.0	-10.3	-0.3	-7.2	-8.6	-1.4
Italy	-4.0	-4.0	-0.1	-2.9	-2.4	0.5
Japan ³	-8.0	-10.3	-2.3	-7.6	-9.1	-1.6
Korea ⁴	0.5	1.7	1.2	1.4	2.1	0.7
Latvia ⁵	-5.3	-4.2	1.1	-2.3	-2.3	0.1
Lithuania	-5.8	-5.3	0.5	-3.0	-4.5	-1.5
Mexico ⁶	-2.3	-2.5	-0.2	-2.0	-2.2	-0.2
Portugal	-4.6	-5.9	-1.3	-3.0	-4.5	-1.5
Russia ¹	-3.7	-1.3	2.4	-3.1	-2.3	0.8
South Africa ¹	-5.3	-4.2	1.1	-4.3	-3.8	0.5
Spain	-6.0	-6.1	-0.1	-4.6	-5.2	-0.6
Turkey	-4.4	-0.9	3.5	-3.5	-1.0	2.5
United Kingdom ¹	-7.5	-8.2	-0.7	-5.5	-6.8	-1.3
United States ¹	-9.2	-9.3	-0.1	-5.6	-7.9	-2.3

Sources: Country authorities' data; and IMF staff projections.

Note: The table refers to the original medium-term adjustment plans announced during the first nine months of 2010 and described in the working paper "A Status Update on Fiscal Exit Strategies," December 2010. It includes only the countries with adjustment plans. The rationale for the table is to track whether countries are meeting the original targets they had set for themselves in mid-2010, including at the Toronto G-20 meeting. For several countries (see below) the concept of fiscal balance targeted by the authorities in their medium-term plans and the corresponding IMF staff projections reported in this table differ from the general government, calendar year concept used in Table 1, and the Statistical Appendix Tables.

¹ Refer to fiscal year projections: April 2011–March 2012 in Canada, India, South Africa, and the United Kingdom; October 2010–September 2011 in the United States. Data for the United Kingdom cover public sector finance, and those for Russia and the United States cover the federal government.

² Original medium-term plans for Canada are based on the federal government plans plus staff projections for the rest of the general government.

³ Authorities' projections converted from fiscal to calendar year, and excluding the social security fund.

⁴ Refers to central government only, based on the *Government Finance Statistics Manual* (1986).

⁵ Excludes bank restructuring costs.

⁶ Corresponds to the traditional balance.

ceilings, informed by the ongoing comprehensive review of expenditure), Portugal (publishing a fiscal strategy, integrating state-owned enterprises, public-private partnerships, and social security decisions within the budgetary framework), and Latvia (a medium-term framework law is being refined). Moreover, an independent Fiscal Advisory Council has just been established in Ireland and is under consideration in Portugal, and fiscal responsibility laws/new budgetary frameworks have been adopted or are being refined in Latvia and Portugal.

Far from being reassured by these developments, however, financial markets have evidenced growing

concerns about several euro area countries, as reflected in a rise in borrowing costs. There is an increasing dichotomy within the euro area between countries where interest rates have continued to decline in line with those of countries outside the euro area and those where they have instead increased substantially. Market concerns have spilled over to Spain and Italy in recent months, after temporarily delinking from Greece, Ireland, and Portugal (Figures 1 and 2).¹ Taken together, these five countries represent more than one-third

¹ See the September 2011 *Global Financial Stability Report* for a further discussion of market spillovers.

of euro area output, signaling that the crisis has broadened and deepened substantially. Borrowing costs in Italy and Spain reached euro era highs in early August 2011, leading the European Central Bank (ECB) to intervene in support of their sovereign bonds. In the near term, the budgetary implications of the increase in interest rates in Italy and Spain since the April *Monitor* (about 100–150 basis points prior to recent ECB intervention) are substantial, but manageable—less than 0.2 percent of GDP if they were to persist through the end of the year, owing to the relatively long maturity of their debt.² This suggests that steps can be taken in these countries to gradually restore market confidence before the debt dynamics become excessively adverse.³ For example, Italy can sustain spreads in the order of 300–500 basis points for a few years while reversing its debt ratio dynamics if its primary surplus can be raised as currently projected.

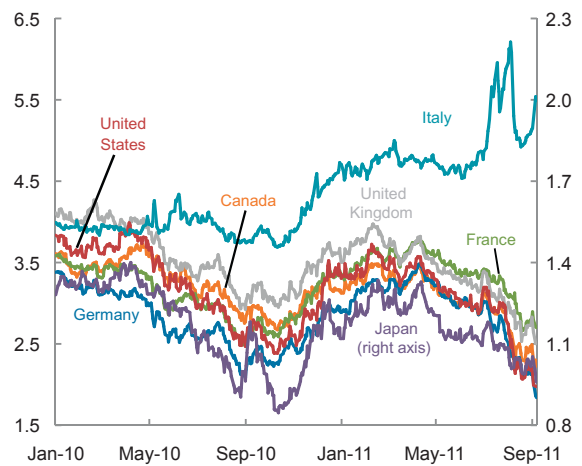
Restoring confidence will require a combination of fiscal adjustment, progrowth measures and an adequate crisis management framework for the euro area. High public debt, chronic slow growth, or a combination of the two are common characteristics of those countries facing elevated borrowing costs (Figure 3).⁴ National authorities thus need to commit to—and begin to credibly and visibly implement—medium-term fiscal adjustment plans and progrowth structural reforms. This will help avoid an erosion of confidence in the implementation of required measures that could lead to persistently higher borrowing costs, which would make the adjustment more difficult. Similarly,

² More generally, the current debt maturity in Italy implies that a 1 percentage point increase in interest rates causes an increase in interest payments of 0.2 percent of GDP within one year of the shock, and 0.5 percent of GDP within three years.

³ The baseline projections reported in the tables in the Statistical Appendix currently assume spreads vis-à-vis Germany of about 240 basis points for the next few years for both Italy and Spain.

⁴ There is, of course, a link between the two, as higher debt ratios tend to raise interest rates and depress investment and growth (see the November 2010 *Fiscal Monitor*).

Figure 1
G-7 Sovereign Bond Yields
(Percent)



Source: Datastream.

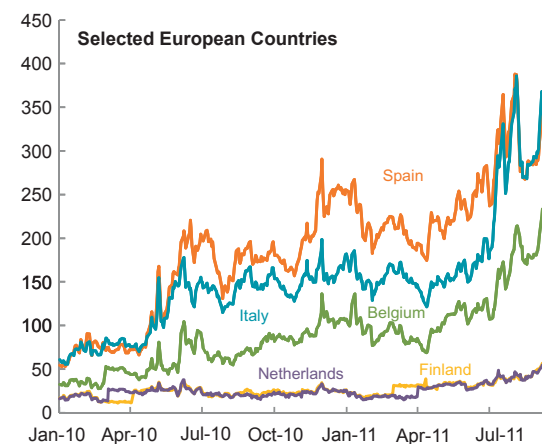
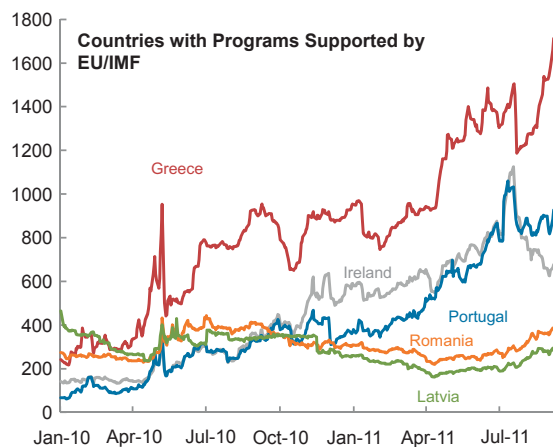
Note: Secondary markets 10-year sovereign bond yields.

early action at the level of the euro area to put in place an improved crisis management framework would help avoid a protracted period of high interest rates.

Regarding the pace of fiscal adjustment, conditions differ across euro area countries. Fiscal consolidation in the countries enjoying strong credibility—for example, Germany—is proceeding at an appropriate pace. However, in the event that the growth outlook continues to worsen significantly, these countries could slow the pace of adjustment, with compensating adjustment later. They should in any case allow the automatic stabilizers to operate fully. Countries subject to market pressures, however, do not have the same luxury. The pace of adjustment envisaged for 2012–13 in these countries appears adequate at the moment, but strict implementation of measures will be needed. For Spain, where government growth forecasts seem somewhat on the optimistic side, fiscal plans would need to be adjusted if shortfalls were to materialize, to ensure that consolidation targets are attained.

It is also critical to undertake measures aimed at strengthening economic growth and competitiveness

Figure 2

Sovereign Bond Yield Spreads over German Bunds*(Basis points)*

Sources: Bloomberg L.P.; Datastream.

Note: 10-year sovereign bond yields.

over the medium term.⁵ While broad reforms are needed in goods, services, and financial markets, there may also be scope for deficit-neutral fiscal reforms that would boost competitiveness and growth. For example, the EU/IMF-supported program in Portugal aims to reduce payroll taxes and offset the associated revenue loss with an increase in the value-added tax (VAT). Because exports are exempt from the VAT, the net effect is to reduce the price of exports (as a result of lower labor costs) and increase that of imports, thereby mimicking

⁵ Of course, measures to boost potential growth do not directly offset the contractionary effect of fiscal tightening on aggregate demand. However, over the medium term, stronger potential growth reduces the need to introduce tightening measures.

the effects of currency depreciation. Appendix 1 examines the theory and evidence behind “fiscal devaluations” and finds that they can have a positive impact on the current account balance. While the impact is likely to be relatively small under ordinary conditions, a fiscal devaluation can speed up the process of adjustment from an initial situation characterized by real exchange rate overvaluation and widespread unemployment, in the presence of nominal rigidities.

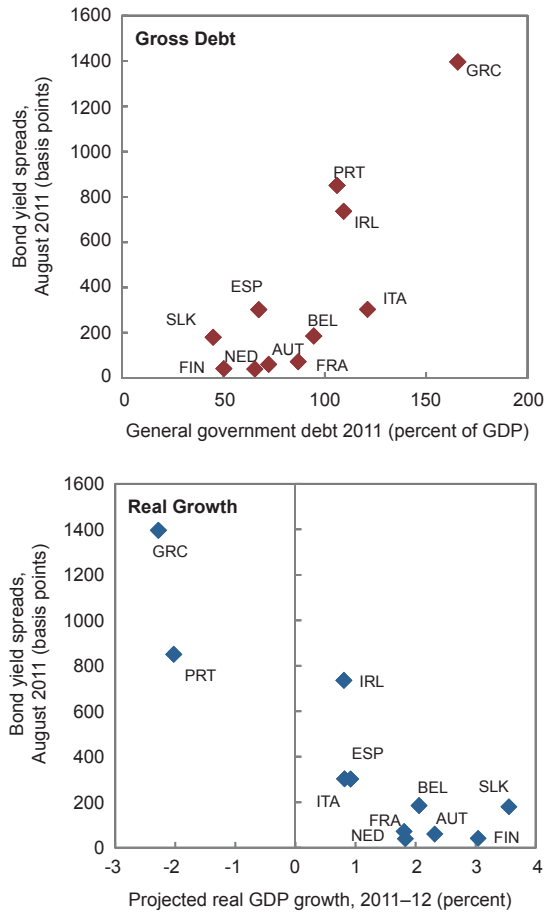
Privatization can also help bring down public debt without a negative impact on aggregate demand. For countries with large public sector asset holdings, there is increasing interest in the potential for privatization to help reduce gross debt.⁶ For example, the EU/IMF-supported program in Greece envisions privatization revenues equivalent to 6½ percent of annual GDP over two years (cumulative) and more than 20 percent over the next five years as a key element of the strategy to bring down the country’s very high general government debt ratio. Appendix 2 examines the experience with large privatization programs in both advanced and emerging economies. It finds that Greece’s goals are ambitious, but not unprecedented, particularly in the first two years. Steadfast implementation will be required to attain the intended objectives, however, especially in the medium term. Moreover, the current global environment, with relatively low growth in the advanced economies and high stock market volatility, will add to Greece’s difficulties, relative to past experiences.

There is a critical need for a consistent package of institutional reforms at the level of the euro area to provide confidence about the scope and effectiveness of crisis resolution mechanisms. The sudden spread of pressures to Italy and Spain cannot be attributed to fiscal deficits—which are

⁶ If there is a productivity gain from operating in private hands rather than in the public sector, privatization would also result in an increase in the government’s net worth. Consistent with that, the net present value of privatization revenues would be somewhat larger than the stream of foregone transfers to the government from a (profitable) public enterprise.

Figure 3

Sovereign Bond Yield Spreads, General Government Gross Debt, and Projected Real GDP Growth



Sources: Bloomberg L.P.; Consensus Economics; and IMF staff estimates and projections.
 Note: Euro area countries, subject to data availability. Bond yield spreads, measured vis-à-vis German Bunds, are an average of August 2011. Average consensus real GDP growth forecasts for 2011-12.

lower than anticipated earlier—but instead reflected mounting concern among investors about the two-way relationship between sovereign and financial risks, and about prospects for policymakers to craft a convincing and durable crisis resolution framework in the euro area. Without significant progress, there is a risk that market worries could become self-fulfilling, with consequences that could prove difficult to contain.

The July 21 agreement by the leaders of the euro area introduced additional flexibility in the mandate of the European Financial Stability Facility (EFSF)

that will provide leaders with a tool to address emerging vulnerabilities before they escalate into fully blown crises. Three challenges remain. First, swift implementation of these reforms is now essential. However, financial market concerns about the adequacy of EFSF resources in the event of a further widening of the crisis persist. This reinforces the importance of quickly adopting the summit’s decisions at the national level while continuing to signal clearly that euro area members will take additional steps as necessary to support confidence in the euro area. Second, progress needs to continue on programs with economies in the periphery that strike the right balance between fiscal consolidation and structural reform, on one hand, and external support, on the other.

Third, agreement between the European Parliament and the Council on reforms to improve the effectiveness of the EU’s fiscal governance framework needs to proceed more swiftly. In June, the European Parliament requested strengthening of the Commission’s initial proposals (endorsed by the Council), including greater automaticity of sanctions, the introduction of a new fine for fraudulent statistics, and codification of the European semester—which establishes an ex ante peer review of member states’ plans before the finalization of national budgets—in legal texts. At the July euro area summit, the heads of state and government agreed to finalize the legislative package quickly and reaffirmed their commitment to introducing or strengthening rules-based fiscal frameworks at the national level by 2012, one year ahead of the draft Directive’s deadline. Implementation of the recommendations emerging from the recently introduced European semester would complement other policy coordination to strengthen fiscal discipline.

3. The Dog That Didn’t Bark (So Far): Low Interest Rates in the United States and Japan

Borrowing costs remain extremely low for the United States and Japan, even though their fiscal

indicators are generally no stronger than those of several countries currently under market pressure. Interest rates for these two economies have remained low throughout the crisis and its aftermath and have declined further during 2011, even after the downgrading of U.S. debt in early August by one rating agency (Figure 1). These low rates—which stem from weaknesses in the expected recovery, expectations of low short-term interest rates, and flight to safety in unsettled global financial markets—are reflected in low borrowing costs and, ultimately, provide sizable benefits to fiscal policy sustainability. The relatively benign treatment by market participants of sovereign bonds issued by Japan and the United States, however, may not fully reflect fiscal fundamentals: current general government debt and deficits, and projected increases in debt over the next five years, are at least as high for the United States and Japan as they are for several euro area economies under market pressure or the euro area in general (Figure 4). In addition, projected long-term increases in pension and health care spending in the United States are larger than in many euro area economies. Japan and the United States face the largest gross financing requirements among all advanced economies this year and are projected to do so in 2012 and 2013 as well, reflecting their large deficits and debt stocks as well as their still relatively short debt maturity profiles (Table 3), notwithstanding some success in lengthening maturities in recent years (Figure 5).

Fiscal adjustment in the United States and Japan is lagging that in other advanced economies. Some adjustment is expected in the *United States* this year, with a decline in the cyclically adjusted deficit of about ½ percent of GDP. The overall deficit in 2011 is 1 percent of GDP smaller than projected in the April *Monitor*, owing to both stronger revenue growth and lower-than-expected outlays. The cyclically adjusted deficit is currently projected to decline by almost 1½ percent of GDP in 2012—largely due to expiring stimulus and lower security-related spending. This would represent a sizable withdrawal at a time when downside risks to growth remain significant. However, these projections do not incorporate the full impact of President

Obama's proposed American Jobs Act (AJA), presented to Congress in September.⁷ In *Japan*, the overall deficit is now projected to be the largest among the Group of Twenty (G-20) and bigger than expected in April. The revision primarily reflects the worse-than-forecast growth effect of the earthquake and tsunami. Clearly, the natural disaster has had a substantial impact on public finances, on both the revenue and spending sides. This said, Japan's fiscal woes predate the earthquake and tsunami, as Japan has for years run one of the largest primary deficits among advanced economies, in addition to having the largest gross debt ratio. (Given the Japanese government's large asset holdings, however, its net debt is substantially lower; see Appendix 3.)⁸ In cyclically adjusted terms, the projected deficit's expansion by ¾ percent of GDP in 2011 (compared with the previous year) would be largely reversed in 2012.

Low interest rates in the United States and Japan partly reflect structural factors, including some that do not seem likely to change abruptly in the near term:

- *A substantial share of domestic debt holdings.* In Japan, close to 95 percent of public debt is held domestically.⁹ The share is lower for the U.S. federal government, but rises to 70 percent for the general government. Moreover, the share of debt held domestically increases further for the United States if holdings by foreign central banks are excluded (Figure 6). This is significant, because private nonresidents may be more willing to shift their investments out of a country than are domestic investors, and foreign central banks may follow different investment practices than do other market

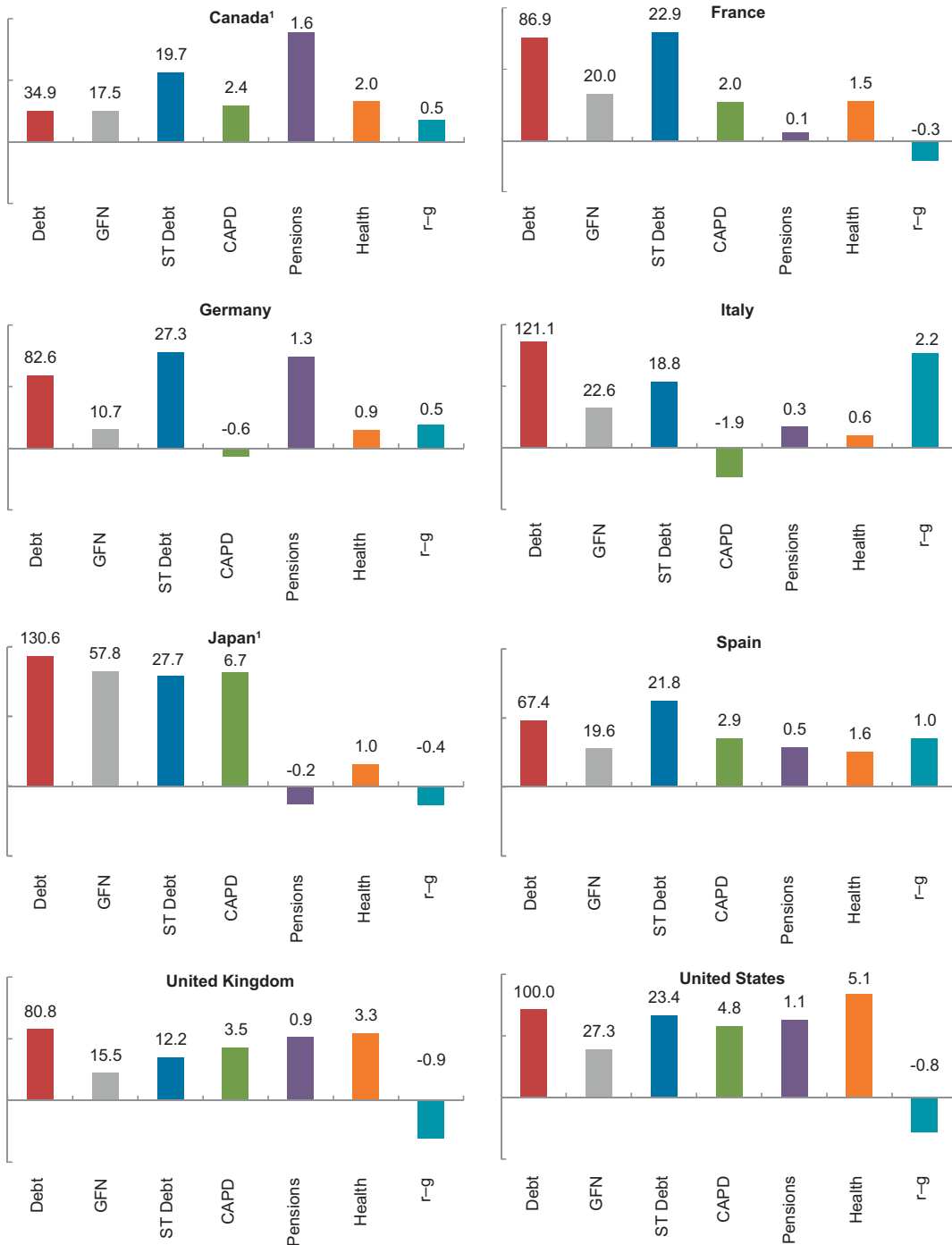
⁷ If fully adopted by Congress, the AJA would significantly reduce short-term fiscal tightening while being fully offset in the medium term. About 40 percent of the stimulus resources proposed in the AJA are already incorporated in the IMF staff's baseline projections.

⁸ Appendix 3 notes that both net and gross debt are relevant indicators for assessing fiscal positions.

⁹ Japan's current account surplus renders it less dependent on foreign financing.

Figure 4

Fiscal Fundamentals in the G-7 Economies plus Spain, 2011



Sources: BIS; Bloomberg L.P.; and IMF staff estimates and projections.

Note: The indicators reported are the seven with the best signaling power from Baldacci, McHugh, and Petrova (2011) (see also Box 5). *Debt* refers to gross general government debt in percent of GDP; *GFN* is gross financing needs in percent of GDP; *ST Debt* is short-term debt securities at remaining maturity as a percentage of total debt securities, as of end-2010, as reported by BIS (except for Canada and Japan; see note 1); *CAPD* is cyclically adjusted primary deficit in percent of potential GDP; *Pensions* is the change in long-term public pensions spending from 2010 to 2030 in percent of GDP; *Health* is the change in long-term public health spending from 2010 to 2030 in percent of GDP; and *r-g* is the average interest rate–growth differential from 2012 to 2016 in percent. As each indicator is expressed in different units, the size-of-the-bars differential is standardized.

¹Debt refers to net debt.

Table 3
Selected Advanced Economies: Gross Financing Needs, 2011–13
 (Percent of GDP)

	2011			2012			2013		
	Maturing debt	Budget deficit	Total financing need	Maturing debt ¹	Budget deficit	Total financing need	Maturing debt ¹	Budget deficit	Total financing need
Japan	47.5	10.3	57.8	49.5	9.1	58.6	45.8	7.8	53.6
United States	17.6	9.6	27.3	22.4	7.9	30.4	22.9	6.2	29.1
Greece ²	15.7	8.0	23.7	9.6	6.9	16.5	9.7	5.2	14.9
Italy	18.5	4.0	22.6	21.1	2.4	23.5	17.7	1.1	18.9
Portugal	16.1	5.9	22.0	17.9	4.5	22.3	18.0	3.0	21.0
Belgium	18.0	3.5	21.6	18.9	3.4	22.2	18.5	3.3	21.8
France	14.1	5.9	20.0	16.2	4.6	20.8	16.2	4.0	20.2
Spain	13.4	6.1	19.6	15.4	5.2	20.6	15.0	4.4	19.4
Ireland ³	8.7	10.3	19.0	5.3	8.6	13.9	8.1	6.8	14.9
Canada	13.2	4.3	17.5	15.4	3.2	18.6	15.4	1.9	17.3
Netherlands	12.5	3.8	16.3	13.2	2.8	16.0	14.2	2.3	16.4
United Kingdom	7.0	8.5	15.5	7.6	7.0	14.7	8.2	5.1	13.3
Finland	9.8	1.0	10.8	8.7	-0.3	8.3	8.2	-0.3	8.0
Germany	9.1	1.7	10.7	9.4	1.1	10.5	7.4	0.8	8.1
Australia	2.0	3.9	5.9	3.2	1.9	5.1	3.8	0.5	4.3
Sweden	5.4	-0.8	4.5	4.9	-1.3	3.6	2.2	-1.7	0.5
Weighted average	18.7	7.5	26.2	21.6	6.1	27.7	21.0	4.8	25.8

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

Note: Data on maturing debt refer to government securities.

¹ Assumes that short-term debt outstanding in 2011 and 2012 will be refinanced with new short-term debt that will mature in 2012 and 2013, respectively. Countries that are projected to have budget deficits in 2011 or 2012 are assumed to issue new debt based on the maturity structure of debt outstanding at the end of 2010.

² Greece's maturing debt assumes 90 percent participation in the debt exchange.

³ Ireland's maturing debt includes €3.08 billion each year related to the redemption of promissory notes issued in 2010 to support the financial sector.

participants (see Chapter 2 of the September 2011 *Global Financial Stability Report* [GFSR]).

- *Significant local central bank debt purchases.* The U.S. Federal Reserve has purchased 7½ percent of GDP in Treasury securities (cumulative, under its quantitative easing programs), an amount equivalent to 12 percent of publicly held Treasury securities. Government securities purchases under the Bank of Japan's Asset Purchase Program have so far amounted to 1 percent of GDP. (If transactions undertaken as part of traditional monetary policy operations are included, the share of bond purchases undertaken by the Bank of Japan rises to 17 percent of GDP.) Large purchases by local central banks also took place elsewhere (gilt purchases by the Bank of England under the Asset Purchasing Facility amounted to 11½ percent of GDP, and the purchases by the ECB amount to a large share of securities issued

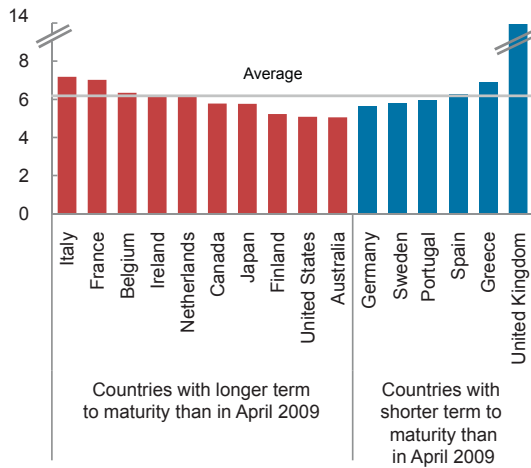
by the countries under pressure). Such purchases mean that not all debt issued by these countries has yet been subjected to a market test.

- *Strong demand by a relatively stable investor base.* Institutional investors—including insurance companies, mutual funds, and pension funds—hold 24 percent of government securities in Japan and 12 percent of Treasury securities in the United States. A further 22 percent of U.S. Treasuries and an estimated 2 percent of Japanese government bonds are held by foreign official entities. In addition, more than one-third of U.S. Treasuries issued by the federal government are held by other government agencies, including the Social Security Fund, and 20 percent of Japanese government bonds are held by Japan Post Bank.¹⁰

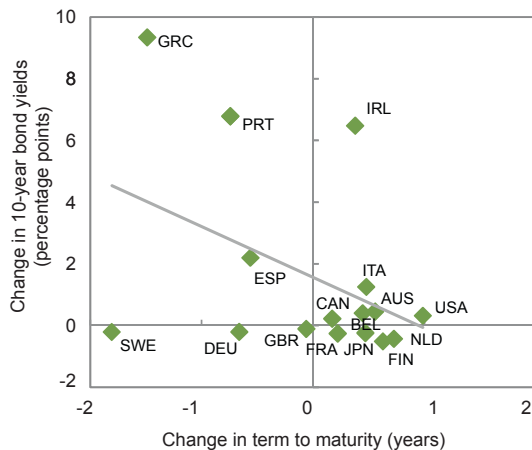
¹⁰ Japan Post Bank is 100 percent held by J. P. Holdings, which in turn is 100 percent held by the government.

Figure 5

Advanced Economies: Average Bond Maturity
Average Term to Maturity, September 2011 (Years)



Change in Bond Yields and Average Term to Maturity, September 2011 versus April 2009



Sources: Bloomberg L.P.; Datastream; and IMF staff estimates.
Note: Average term to maturity is based on government securities.

- *Lower banking sector risks.* Banking risks, which as the recent crisis has shown can dramatically affect fiscal developments, are perceived to be lower in the United States and Japan than in Europe, although in the United States

Its holdings of debt are included in the consolidated general government debt reported in the *Fiscal Monitor* (see Box A3.2). By contrast, the U.S. Social Security Fund is within the general government, and its holdings of Treasury securities are not included in the consolidated general government debt data reported in the *Monitor*.

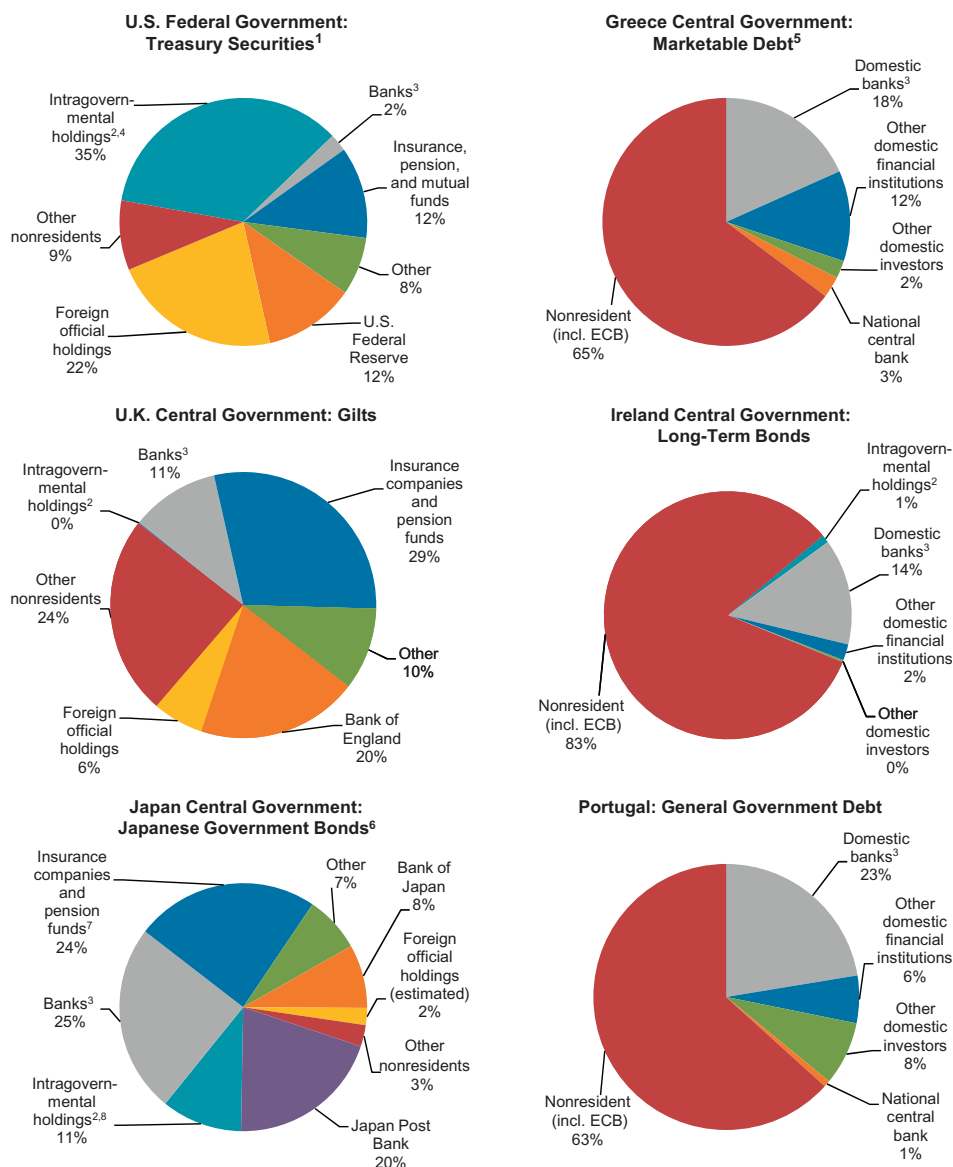
additional contingent liabilities (exceeding 35 percent of GDP) stem from the large government-sponsored enterprises (Box 1).

The widening crisis in the euro area should nevertheless serve as a cautionary tale for the United States and Japan, as well as other countries with high debts and deficits. Recent developments in Spain and Italy demonstrate how swiftly and severely market confidence can weaken and how even large advanced economies are exposed to changes in market sentiment. (Indeed, Box 2 shows that the budgetary impact of moderately large shocks to interest rates and growth would be sizable, especially in high-public-debt countries such as Greece, Italy, Japan, and the United States.) Low borrowing costs in Japan and the United States have arguably created a false sense of security, but should be viewed instead as providing a window of opportunity for policies to address fiscal vulnerabilities. In the absence of a new round of quantitative easing, higher interest rates could be required to attract new buyers of sovereign debt. (The impact of this could be even larger if central banks are required to begin selling some of their debt holdings to contain the growth of domestic liquidity.) Moreover, in Japan, as more workers retire and liquidate their holdings of government bonds (e.g., through their pension funds), the share of nonresident holdings of government debt may increase significantly. Perhaps most importantly, Japan and the United States have also benefited from large stores of credibility—in other words, the implicit belief among investors that both countries will implement policies to ensure the sustainability of their debt. Such credibility might weaken suddenly if market participants became less convinced that such policies were forthcoming.

Thus in both the United States and Japan the immediate priority is to ensure continued confidence that steps will be taken to resolve these countries' unsustainable debt dynamics.

- In the United States, the recent approval of measures to cut the deficit in the context of increasing the debt ceiling is a positive first step, but substantial further work will

Figure 6
Holders of Government Debt
(Percent of total outstanding)



Sources: Country authorities; Japan Post Bank; Currency Composition of Official Foreign Exchange Reserves (COFER) database; and IMF staff estimates.

Note: Data as of 2011:Q2 for Greece, Ireland, and the United States, 2011:Q1 for Japan and the United Kingdom, and 2010:Q4 for Portugal.

¹Includes marketable and nonmarketable debt.

²Holdings by general government institutions.

³For the United States, refers to depository institutions; for Greece, Portugal, and the United Kingdom, refers to monetary financial institutions excluding the central bank; for Ireland, refers to monetary financial institutions and national central bank; and for Japan, includes depository institutions, securities investment trusts, and securities companies and excludes Japan Post Bank.

⁴Includes Government Account Series securities held by government trust funds, revolving funds, and special funds, and Federal Financing Bank securities.

⁵Includes bonds, T-bills, and other short-term notes.

⁶Includes Fiscal Investment and Loan Program (FILP) bonds and does not include T-bills.

⁷Includes Japan Post Insurance and excludes public pensions.

⁸Includes public pensions.

Box 1

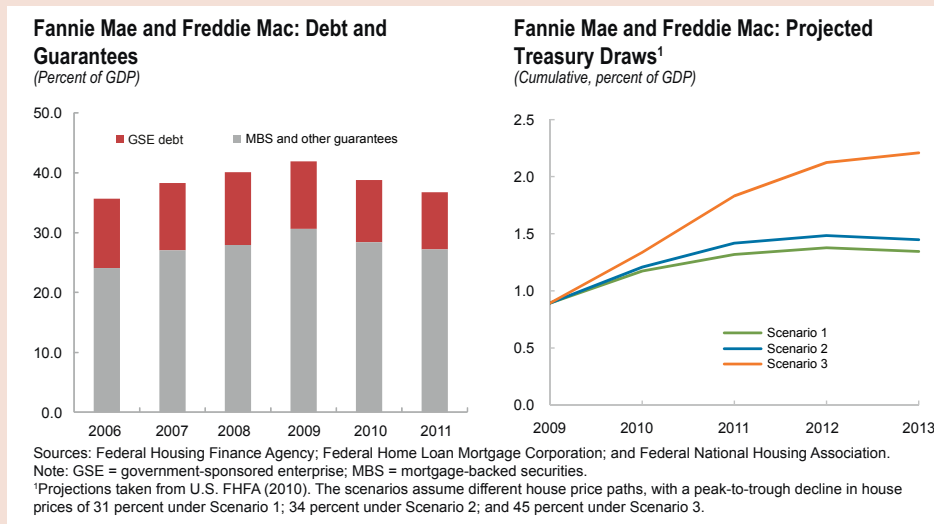
United States: Government-Sponsored Enterprises and Contingent Liabilities

The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) are large government-sponsored enterprises (GSEs) that were chartered by the U.S. Congress to provide a stable source of funding for residential mortgages. They purchase home loans from originators and package those loans into mortgage-backed securities (MBSs). Those securities are then sold to investors, along with a guarantee against losses from defaults on the underlying mortgages, or held as portfolio investments financed by issuing debt.

Until recently, the obligations of Fannie Mae and Freddie Mac had no federal government backing and their operations were not reflected in the federal budget. However, there was a perception of an implicit government guarantee because of the GSEs' size and federal charter. That guarantee was made explicit in 2008 when Fannie Mae and Freddie Mac were placed under conservatorship. Under the terms of that arrangement, the Treasury provides sufficient capital to keep their net worth at zero in exchange for senior preferred stock and warrants. At the same time, the institutions are obliged to gradually wind down their portfolio holdings of mortgages to reduce losses to taxpayers. Moreover, the U.S. administration's recent recommendations about housing finance reform focus on winding down the GSEs by raising their insurance guarantee fees, reducing their investment portfolios, and lowering the ceiling for conforming loans (see the April 2011 *GFSR*).

Contingent liabilities are large. The U.S. Office of Management and Budget (OMB) treats Fannie Mae and Freddie Mac as nongovernment entities for budgetary purposes. As such, debt securities or MBSs issued by the GSEs are not incorporated into estimates of federal debt.¹ However, these are contingent liabilities for the government amounting to over 35 percent of GDP (of which liabilities amounting to 8¼ percent of GDP are held outright by the Treasury and the Federal Reserve), although clearly not all of these would result in fiscal outlays, as the GSEs have matching assets.

But fiscal outlays have been small so far, amounting to 0.9 percent of GDP net of dividend payments. Nevertheless, according to the Federal Housing Finance Agency, additional capital needs could reach 1¼ percent of GDP under a negative house price scenario. Still, uncertainty remains as the GSEs are undercapitalized.



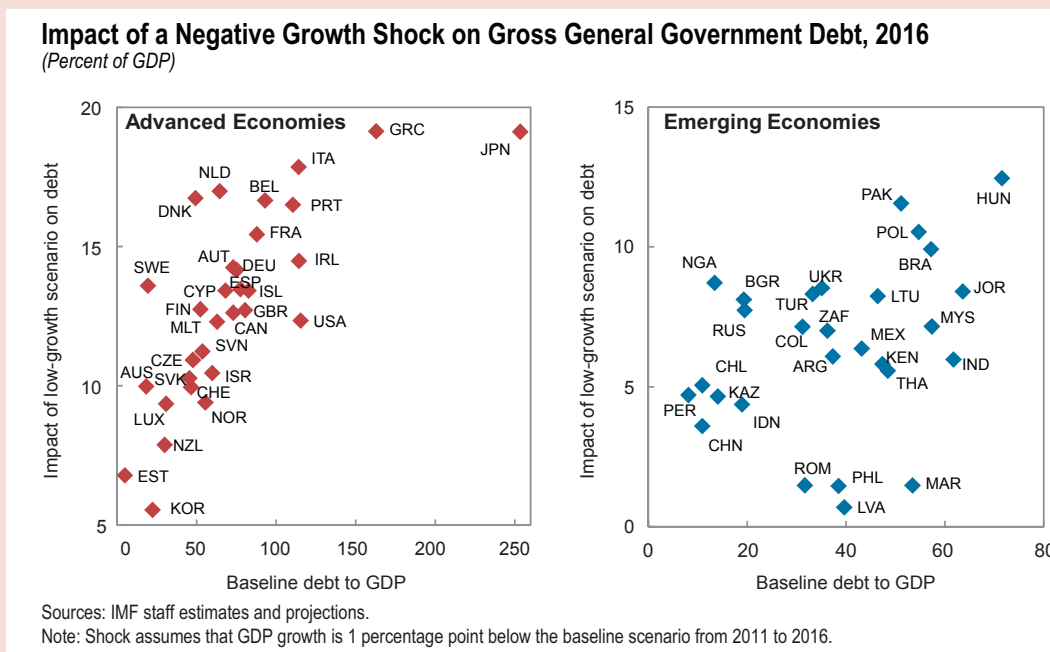
¹ For budgetary purposes, the OMB records only cash transfers between the Treasury and the two GSEs, such as equity purchases or dividend payments.

Box 2

Risks to the Baseline

The projections in this *Fiscal Monitor* are based on certain macroeconomic assumptions. This box discusses the sensitivity of the baseline projections to growth and interest rates.

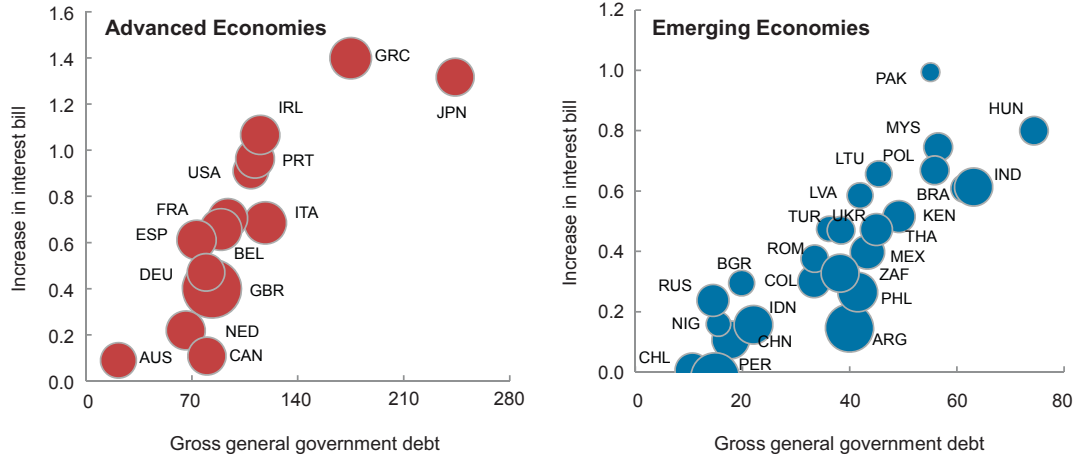
Risks to the global growth outlook remain squarely on the downside (*World Economic Outlook*, September 2011), with significant fiscal implications. Under a low-growth scenario, in which annual growth is 1 percentage point below the baseline scenario, average debt in the advanced economies would jump by 13½ percent of GDP by 2016 (see figure below). Greece, Japan, and Italy would experience the highest increases (close to 20 percent of GDP) because of their high initial debt stock. Several European countries, including Belgium, Denmark, France, the Netherlands, and Portugal, are also vulnerable to growth shocks due to large automatic stabilizers. In emerging economies, a low-growth scenario would lead to a relatively moderate increase of medium-term debt with respect to the baseline: 6 percent of GDP on average. However, countries with the highest stock of initial debt (such as Brazil, Hungary, and Poland) could see their debt rise by about 10 percent of GDP.



An increase in interest rates—brought about, for example, by a shift in global liquidity conditions—would lead to higher interest payments on new debt, with an especially strong impact on countries with high rollover needs. Given the relatively long maturity of debt in advanced countries, the effect would be felt only gradually. If the interest rate on new debt issuances were 100 basis points higher than in the baseline, after one year the interest burden would rise by ¼ percent of GDP, on average, in the advanced economies; the increase would be ½ percent of GDP after three years and ¾ percent of GDP after five years. In the case of emerging economies, the impact over five years would be ½ percent of GDP on average, owing to lower overall refinancing needs as a share of GDP than in the advanced economies. However, countries with higher debt and shorter maturity structures would be relatively vulnerable (figure on next page).

Box 2 (concluded)

Interest Rate Shock (Percent of GDP)



Sources: Bloomberg L.P.; country authorities; and IMF staff estimates and projections.

Note: Cumulative increase in interest bill from the second half of 2011 to 2016. Bubbles represent average years to maturity as of September 2011. Shock assumes that the interest rate on new issuances is 100 basis points higher than in the baseline.

need to follow.¹¹ Specifically, the bipartisan congressional committee needs to agree on additional adjustment measures, and the authorities will need to implement these and further measures to stabilize the debt ratio by mid-decade and gradually reduce it afterward. Any credible strategy needs to include entitlement reforms that will address the growth of spending on pensions and especially

¹¹ The legislation—the Budget Control Act of 2011—establishes caps on discretionary spending through 2021 with an estimated cumulative impact of some US\$900 billion and a Congressional Joint Select Committee on deficit reduction to propose further deficit reductions, with the stated goal of achieving at least US\$1.5 trillion in additional budgetary savings over 10 years. It establishes automatic procedures for reducing spending by as much as US\$1.2 trillion if legislation originating with the new joint select committee does not achieve such savings. The act also allows for certain amounts of additional spending to reduce improper benefit payments, makes changes to the Pell Grant and student loan programs, requires that the House and the Senate vote on a joint resolution proposing a balanced-budget amendment to the Constitution, and reinstates and modifies certain budget process rules.

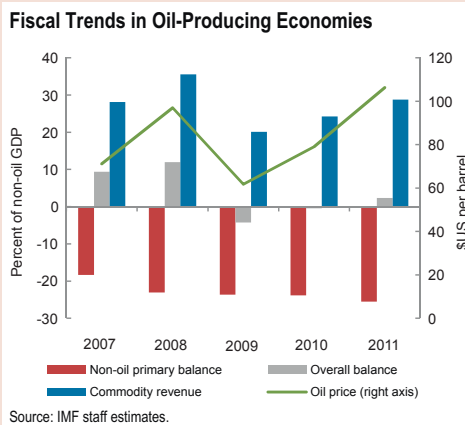
health care (see the April 2011 *Monitor*). Measures to contain the growth of other mandatory spending would also be desirable. Nevertheless, given the magnitude of adjustment that will be required, revenue ratios will also need to rise. Widening tax bases by phasing out tax expenditures would be a good way to start. The adoption of an appropriate medium-term fiscal adjustment strategy would allow for a more gradual pace of consolidation in the short run (with offsetting additional consolidation later) and the adoption of measures targeted to labor and housing markets, state and local governments, and infrastructure spending. Even with a less ambitious medium-term strategy in place, the pace of fiscal consolidation should reflect the need to sustain the weak recovery, with a fiscal withdrawal of 1–1½ percent of GDP, and include the extension of unemployment benefits and payroll tax relief.¹² In either case, the automatic stabilizers should be allowed to

¹² These policy recommendations have been proposed as part of the AJA.

Box 3

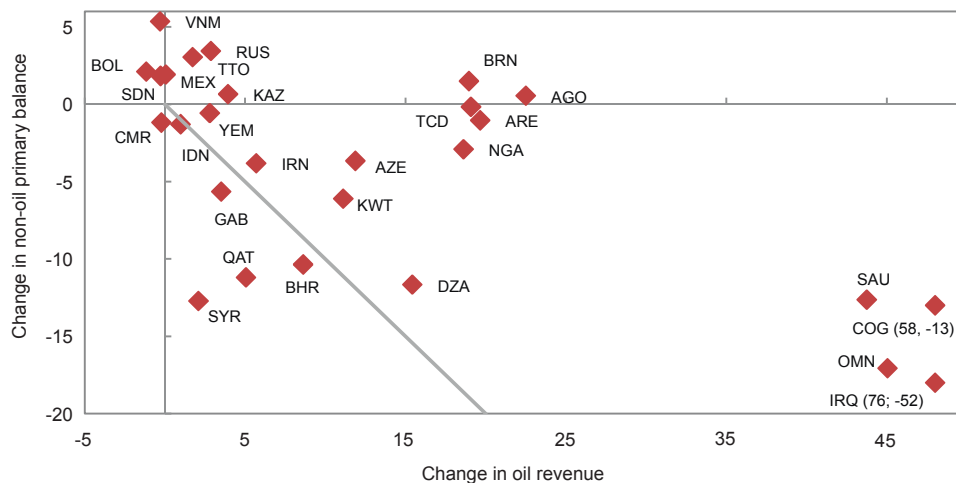
Fiscal Developments in Oil-Producing Economies

For oil-producing economies generally, higher oil prices are resulting in sizable oil-related revenue gains. These amounted to 4½ percent of non-oil GDP in 2011, on average, from 2010 and 8¾ percent from 2009, for a sample of 28 oil-exporting economies for which oil-related revenues represent a significant share of total revenues. Combined with a slight worsening in non-oil primary deficit ratios, this has yielded an improvement in the overall balance by 6½ percent of non-oil GDP in 2011 from 2009 (see first figure). However, projected overall surpluses are below their 2008 level, suggesting that some countries may now have somewhat smaller fiscal buffers to deal with potential price declines than at that time.



The extent to which oil revenue gains have been devoted to building buffers rather than to finance increases in non-oil deficits has varied across countries. But in many cases budgets have been revised to allow for higher spending, including to address social needs. This tendency has been stronger in economies where fiscal institutions are relatively weak. Within the oil-producing group, larger non-oil primary deficit expansions are envisaged in 2011 compared with 2009, for the most part, in economies with greater oil-related revenue gains. Examples include Kuwait, Oman, and Saudi Arabia; in some cases (e.g., Bahrain, Qatar, and Syria), the expansions are equal to or larger than the associated increase in oil revenues. By contrast, some economies (e.g., Kazakhstan, as well as Russia—notwithstanding a recent supplementary budget) are either improving upon or maintaining their 2009 non-oil primary balances, despite sizable increases in oil-related revenues (see second figure).

Oil-Producing Economies: Change in Non-oil Primary Balance and Change in Oil Revenues over 2009–11
(Percent of non-oil GDP)



Source: IMF staff estimates.

operate fully. Furthermore, the institutional framework could be enhanced to support fiscal consolidation, including by clearly specifying a medium-term fiscal framework formally endorsed by Congress and making use of the real GDP growth forecasts of private sector and other outside institutions as a cross-check for the budget's underlying assumptions.

- In Japan, relief and reconstruction to address the social costs of the natural disaster are the key short-term priorities, but the associated deficit increase only strengthens the case for laying out a specific, detailed set of measures whose medium-term impact is commensurate with the major fiscal challenges the country confronts. A tax and social security reform plan, featuring a consumption tax hike to 10 percent from 5 percent by the mid-2010s, is expected to be put forward for parliamentary consideration later this fiscal year. These important steps would reduce the primary deficit to a still-large 4³/₄ percent of GDP in 2016 in the IMF staff's projections and would start to bring the debt ratio to a downward path from 2021. However, faster adjustment, including via a larger increase in the consumption tax, would be preferable, in order to bring the ratio down by the middle of this decade.

4. Too Good to Be True? Fiscal Developments in Emerging Economies

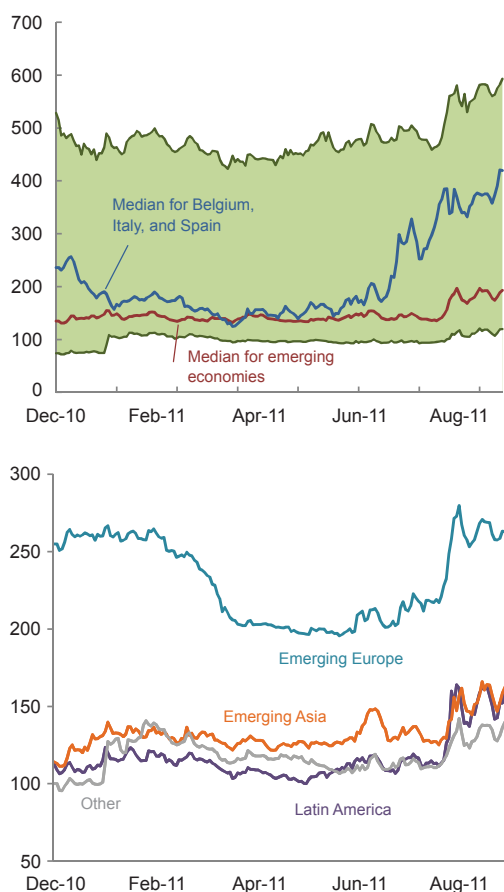
Some fiscal adjustment is under way in emerging economies this year, especially in Asia and Europe, and this is projected to continue in 2012. Cyclically adjusted deficits are projected to fall by ³/₄ percent of GDP this year in emerging Asia, driven by declines of close to 1 percent in *China* and *India*. The average cyclically adjusted deficit in emerging Europe is projected to decline by 1¹/₄ percent of GDP this year, in line with the pace expected in the April 2011 *Monitor* (Table 1).

The cyclically adjusted balance is expected to improve by ¹/₂ percent of GDP in Latin America, with strengthening in *Brazil*, *Mexico*, and *Peru*. Overall, the cyclically adjusted deficit is projected to decline by ³/₄ percent of GDP in emerging economies this year and ¹/₂ percent of GDP next year. No cyclically adjusted projections are available for the *Middle East and North Africa*, but headline deficits are expected to increase significantly this year because of slower growth and much higher social spending in response to the crisis in the region. A retrenchment on the order of ³/₄ percent of GDP is expected in 2012 (see Box 3 for information on oil producers more generally). Is this pace of fiscal tightening in emerging economies sufficient?

Financing costs in many emerging economies remain low, thanks in part to strong capital inflows, but this may not persist. Spillovers from Europe's debt crisis into emerging markets have so far been limited (Figure 7): while the median credit default swap (CDS) spread for Belgium, Italy, and Spain has risen notably since June as market concerns about the euro area widened, that for emerging markets has seen only a moderate increase. Nonetheless, much of the decline in spreads in emerging Europe since late 2010 has been reversed, and levels continue to be higher than those in peer countries, reflecting ongoing market concerns regarding fiscal adjustment needs. Spreads in Latin America are also higher than they were a year ago. These developments are consistent with evidence suggesting that when global risk aversion rises, emerging economies with high deficits and government debt are penalized for them (Box 4). Accordingly, countries should make progress in reducing fiscal vulnerabilities now to avoid the risk of an eventual backlash in the form of a sharper increase in interest rates, or even a reversal of capital inflows, from continued high global risk aversion.

Although fundamentals in emerging economies are improving and are generally better than in advanced economies, differences between the two groups of countries may be less pronounced than many believe. In several emerging economies, cyclically adjusted fiscal balances are weaker than before

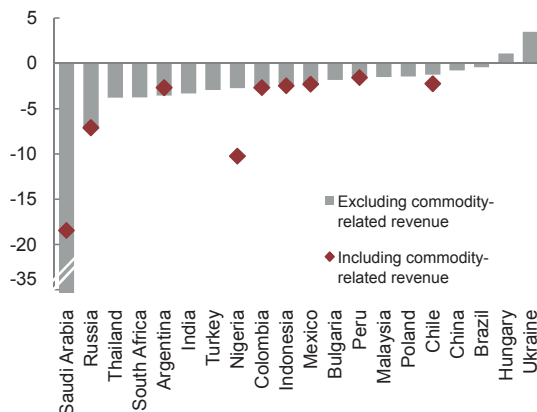
Figure 7
Emerging Economies: Median 5-Year CDS Spreads
(Basis points)



Sources: Markit; and IMF staff estimates.
 Note: The shaded area represents the middle 80 percent of the distribution of CDS spreads in emerging economies; in other words, the shaded area excludes countries with the 10 percent highest and 10 percent lowest CDS spreads.

the crisis (Figure 8), despite the fact that high commodity prices and strong capital inflows—the impact of which is not universally accounted for in cyclical corrections—are boosting revenues in many of them. In addition, while the difference in headline deficits between advanced and emerging economies is dramatic—about 4 percent of GDP on average in 2011—it is far less so when the different cyclical positions of these groups of countries are taken into account: in cyclically adjusted terms, the gap between deficits in advanced and emerging economies stands at just 1¾ percent of GDP. With fiscal adjustment set to continue in the advanced economies for an extended period, and as output gaps in the advanced economies

Figure 8
Emerging Economies: Differences in Cyclically Adjusted Primary Balances, 2011, Compared with the Precrisis Period
(Percent of potential GDP)



Sources: IMF staff estimates and projections.
 Note: Precrisis deficits refer to 2004–07, subject to data availability. For Nigeria and Saudi Arabia, data reflect change in primary balance as percentage of non-oil GDP. For countries with significant commodity revenues (marked with red diamonds), changes in cyclically adjusted primary balances are shown both including and excluding these revenues.

gradually close, the gap in both underlying and headline fiscal positions between the two country groups is set to narrow considerably going forward. Finally, while gross financing requirements in emerging economies are typically well below those of advanced economies, some emerging economies with relatively high gross debt levels, notably Brazil and Pakistan, are expected to face financing needs that are comparable to the advanced economy average (Table 4).

A good summary of overall fiscal conditions can be provided through a Fiscal Indicators Index (FII) which draws on a variety of indicators that have been found to be associated with market stress. The index provides a more holistic assessment of overall fiscal conditions than would be possible with any individual indicator. Just as importantly, by being limited to those variables that have demonstrated their relevance statistically, the index helps prevent the analysis of fiscal developments from being led astray by indicators that, although widely cited, have shown themselves to have little predictive power (Box 5).

The FII has worsened in several emerging economies since the mid-2000s and on an aggregate

Box 4

Determinants of Domestic Bond Yields in Emerging Economies

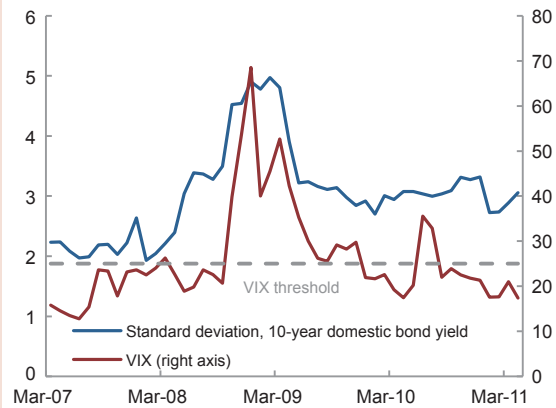
While many studies have looked into the determinants of yields on externally issued sovereign bonds of emerging economies, analysis of domestically issued bonds has hitherto been limited, despite their growing relevance.¹ New research (Jaramillo and Weber, 2011) finds that the extent to which fiscal variables affect domestic bond yields in emerging economies depends on the level of global risk aversion, proxied by the VIX.² During tranquil times in global markets, fiscal variables do not seem to be a significant determinant of domestic bond yields in emerging economies. However, when market participants are on edge, they pay greater attention to country-specific fiscal variables—presumably because they are alert to the possibility that fiscal troubles may cause a country to experience repayment difficulties.

Based on a data set of monthly observations for 26 emerging economies between 2007 and 2011—including market expectations for fiscal deficits and debt—the estimation allows the explanatory variables to have differing regression slopes, depending on whether the VIX is above or below a particular threshold, which is chosen to maximize the fit of the model.³

Determinants of 10-Year Domestic Bond Yields in Emerging Economies	Risk aversion (VIX)	
	High	Low
Expected gross debt <i>t</i> +1 (percent of GDP)	0.06*** (0.02)	0.02 (0.01)
Expected overall balance <i>t</i> +1 (percent of GDP)	-0.31*** (0.09)	-0.04 (0.11)
Expected inflation <i>t</i> +1 (percent)	0.19 (0.19)	0.38*** (0.05)
Expected real GDP growth <i>t</i> +1 (percent)	0.10 (0.08)	-0.35** (0.12)
Domestic Treasury bill rate (percent)	0.60*** (0.10)	0.37*** (0.12)
U.S. 10-year bond yield (percent)	0.23 (0.29)	0.42* (0.20)
Number of observations	177	333
R ²	0.58	0.53
Number of countries	14	15

Note: Robust standard errors in parentheses.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

VIX and Standard Deviation of 10-Year Domestic Bond Yields



Analysis of historical data reveals that domestic bond yields have shown greater cross-country dispersion during times of high risk aversion than in times of low risk aversion, even without significant changes in countries' fiscal positions. Indeed, at times of low global risk aversion, domestic bond yields are mostly influenced by inflation and real GDP growth expectations. The coefficient on the latter is negative, reflecting lower credit risk, as stronger growth would improve fiscal balances. However, during times characterized by high global risk aversion, expectations regarding fiscal deficits and government debt play a significant role in determining domestic bond yields: every additional percentage point in the expected debt-to-GDP ratio raises domestic bond yields by 6 basis points, and every percentage-point expected worsening in the overall fiscal balance-to-GDP ratio raises yields by 30 basis points.

In view of the ebb and flow of global conditions, these findings underscore the need to remain fiscally prudent in good times, as the favorable conditions facing emerging economies could shift unexpectedly.

¹ This box is based on Jaramillo and Weber (2011).

² The Chicago Board Options Exchange Volatility Index (VIX) is a measure of the market's expectation of stock market volatility over the next 30-day period. It is a weighted blend of prices for a range of options on the S&P 500 index.

³ Based on the methodology developed by Hansen (1999).

Table 4
Selected Emerging Economies: Gross Financing Needs, 2011–12
(Percent of GDP)

	2011			2012		
	Maturing debt	Budget deficit	Total financing need	Maturing debt	Budget deficit	Total financing need
Pakistan	20.3	6.5	26.7	21.1	5.3	26.5
Brazil	16.8	2.5	19.2	16.6	2.8	19.4
Philippines	11.5	2.9	14.4	9.9	2.5	12.4
Poland	8.4	5.5	13.9	8.3	3.8	12.0
Romania	9.2	4.4	13.6	9.3	2.8	12.1
Mexico	8.7	3.2	12.0	7.6	2.8	10.3
Hungary	13.7	-2.0	11.6	11.7	3.6	15.3
India	3.2	8.0	11.2	0.5	7.6	8.1
Turkey	9.5	0.9	10.4	7.4	1.0	8.4
Lithuania	4.9	5.3	10.2	7.7	4.5	12.2
Thailand	6.5	2.6	9.1	4.8	2.9	7.7
Latvia	3.7	4.5	8.2	4.5	2.3	6.8
Argentina ¹	6.0	2.0	8.0	4.4	1.9	6.3
Malaysia	2.9	5.1	8.0	2.9	4.9	7.8
Ukraine	5.1	2.8	7.9	5.0	2.0	7.0
China ¹	6.1	1.6	7.7	4.4	0.8	5.2
Colombia	3.9	3.0	6.9	3.4	1.5	4.9
South Africa	0.9	4.3	5.2	0.9	3.9	4.8
Bulgaria	2.4	2.5	4.9	2.5	2.2	4.7
Indonesia	1.2	1.8	3.0	1.6	1.3	3.0
Russia	1.1	1.1	2.2	0.8	2.1	2.9
Chile	2.4	-1.4	1.0	1.8	-1.6	0.3
Peru	1.5	-0.6	0.9	1.4	-0.9	0.5
Weighted average	6.4	3.0	9.3	5.1	2.6	7.7

Sources: IMF staff estimates and projections.

¹ For details, see "Data and Conventions" in the Methodological and Statistical Appendix.

basis currently stands at levels comparable to those observed in the late 1990s. Weakening fiscal positions and rising short-term debt ratios, largely as a result of the crisis, explain most of the increase in the index since 2007, more than offsetting improvements in asset and liability management conditions (Figure 9). The level of the index varies significantly across regions (Figure 10). In emerging Europe, for example, the FII is highest, owing in part to growing concerns about the long-term fiscal outlook, especially as setbacks in pension reform have surfaced. By contrast, the impact of the crisis on fiscal conditions in Latin America has been contained somewhat, as fiscal balances have rebounded—boosted by strong commodity prices and buoyant economic growth—and the use of short-term funding has been reduced. Conditions

in emerging Asia have weakened since the onset of the crisis, but remain more favorable overall than in other emerging regions.

Although conditions in emerging economies generally remain healthier than in advanced economies, risks in some emerging economies may be on the rise. Thus, continued fiscal adjustment remains appropriate and in some cases would need to be accelerated. Inflationary pressures and widening current account deficits in several key emerging economies (e.g., Argentina, India, and Turkey) suggest that they are operating at close to full capacity and that fiscal tightening would be appropriate (Figure 11). (See also the September 2011 *World Economic Outlook* [WEO] for details on cyclical conditions in emerging economies.) In

Box 5

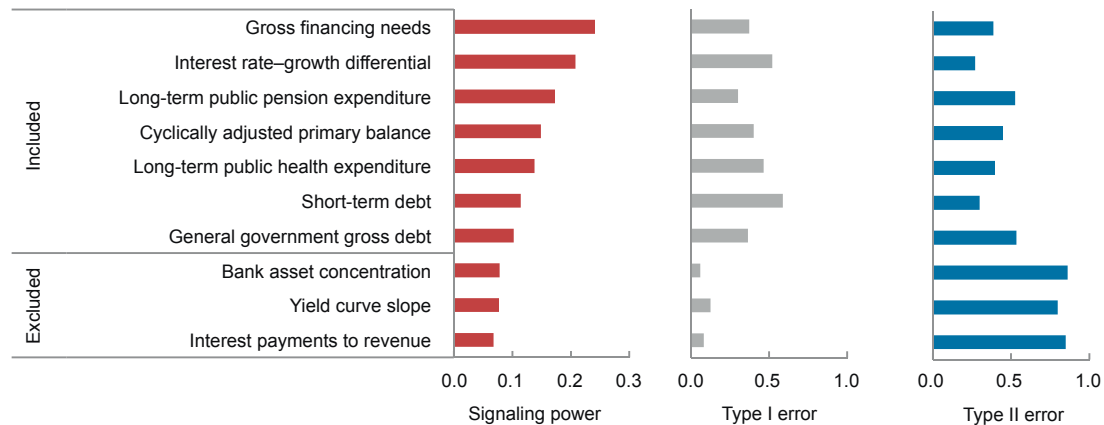
The Fiscal Indicators Index

Rather than relying on a single indicator to identify fiscal sustainability concerns in advanced and emerging economies, the fiscal indicators index proposed by Baldacci and others (2011) combines information from a parsimonious set of variables, taking into account their ability to provide early warning signals about extreme government funding difficulties (i.e., public debt default or restructuring, the need to access large-scale official or IMF support, hyperinflation, or spikes in sovereign bond spreads). Specifically, the index compiles variables that exceed a certain threshold (calculated with a univariate procedure that minimizes the error of misidentifying a fiscal crisis), weighted by their signaling power. The index ranges from 0 to 1, with higher numbers indicating greater cause for concern.

The Fiscal Indicators Index relies on 12 indicators with reasonable signaling power (based on a consistent conceptual framework outlined in Baldacci, McHugh, and Petrova, 2011): the interest rate–growth differential, cyclically adjusted primary balance, gross debt, gross financing needs, short-term debt, foreign-currency-denominated debt, debt held by nonresidents, average debt maturity, short-term external debt, fertility rate, dependency ratio, and long-term public pension and health spending. Early-warning systems typically produce nonnegligible errors. However, the index contains measures that do a relatively good job in detecting fiscal vulnerability. In particular, the analysis finds comparatively strong signaling power in the cyclically adjusted primary balance, the interest rate–growth differential, gross financing needs, and long-term age-related spending. These measures clearly outperform many others, such as interest payments to revenues and the slope of the yield curve, both of which fail to identify fiscal stress episodes in more than 90 percent of the cases.

Signaling Power of Selected Fiscal Indicators

(Average for all countries in sample)



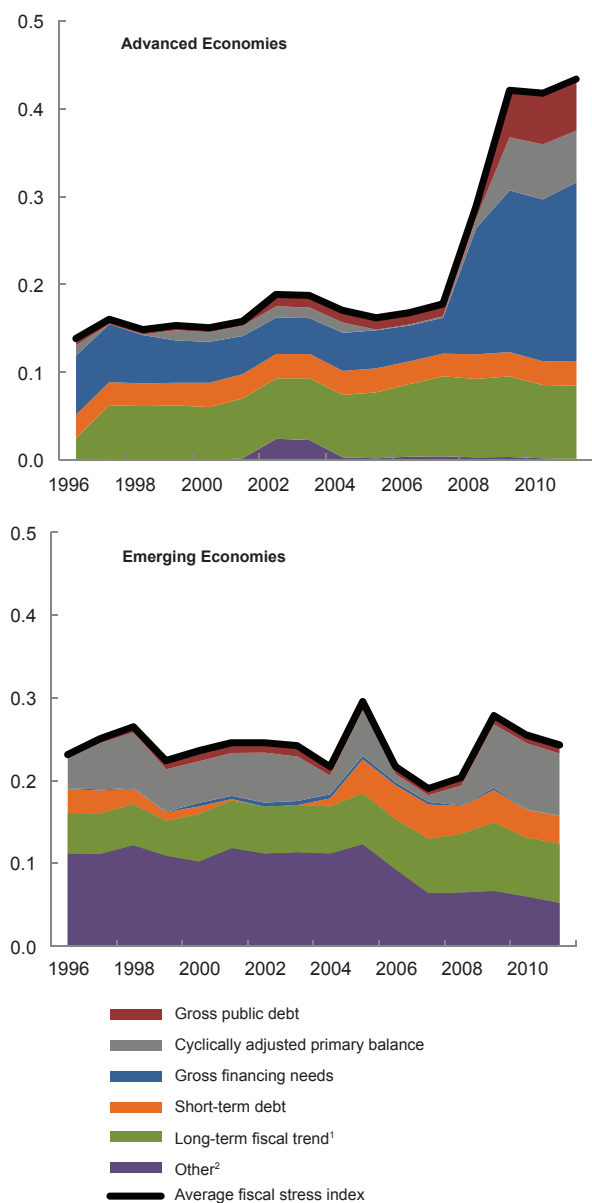
Source: IMF staff estimates.

Note: *Type I error* is the frequency with which each indicator falsely signals a crisis; *Type II error* is the frequency with which each indicator fails to signal a crisis. *Signaling power* is defined as 1 minus the sum of Type I and Type II errors, showing the frequency with which each indicator correctly identifies a crisis. *Included/excluded* refers to whether an indicator is part of the Fiscal Indicators Index. The sample consists of 29 advanced economies and 52 emerging economies.

addition to helping to contain overheating, this would also allow for rebalancing of macroeconomic policies, taking some of the pressure off monetary policy. Moreover, it would allow countries to begin

restoring policy buffers, which could be deployed again to accommodate a countercyclical response to future adverse shocks (including the possibility of spillovers from a further deterioration of

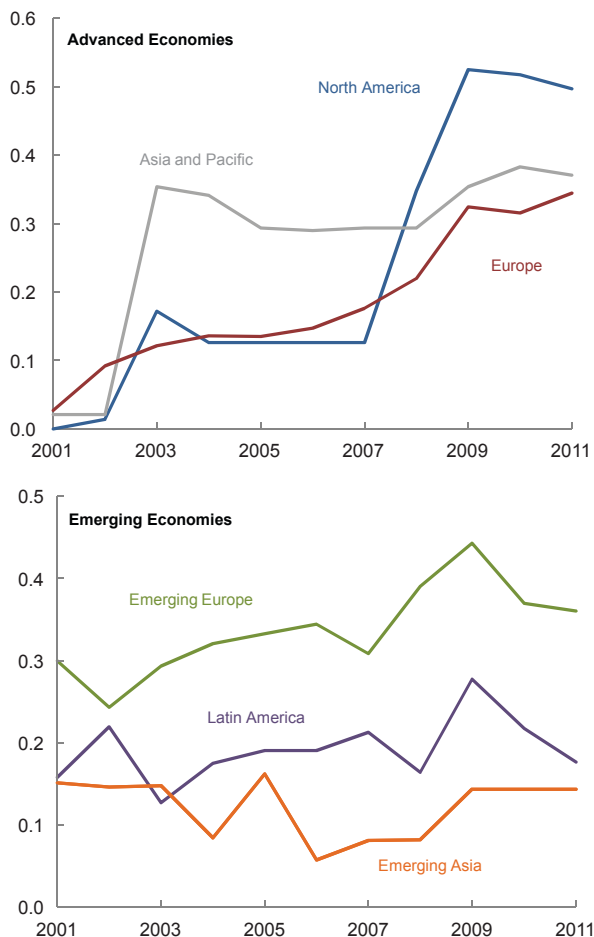
Figure 9
Components of the Fiscal Indicators Index, 1996–2011
 (Scale, 0–1)



Sources: Baldacci and others (2011); and IMF staff calculations.
 Note: 2009 PPP-GDP weights used to calculate weighted averages. Larger values of the FII suggest higher fiscal risk.
¹ Includes fertility rate, dependency ratio, and pension and health spending.
² Includes interest rate–growth differential, average debt maturity, and debt held by nonresidents (for advanced economies) and foreign-currency-denominated debt and short-term external debt to reserves (for emerging economies).

the situation in advanced economies). However, should downside risks to growth materialize, fiscal consolidation could slow in countries

Figure 10
Fiscal Indicators Index by Region, 2001–11
 (Scale, 0–1)



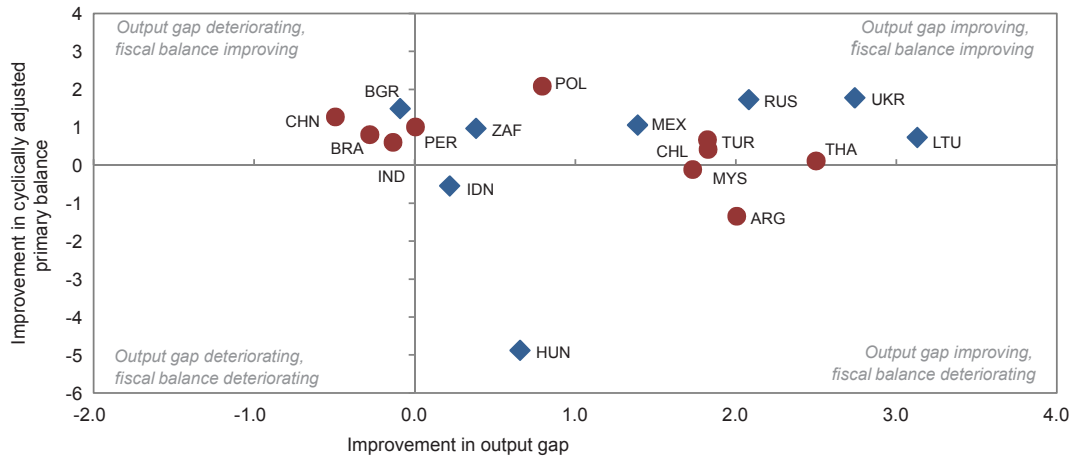
Sources: Baldacci and others (2011); and IMF staff calculations.
 Note: 2009 PPP-GDP weights used to calculate weighted averages. Larger values of the FII suggest higher fiscal risk.

with low debt and deficits to provide support to domestic consumption. The needed tightening of policies in some countries is complicated by the fact that high commodity prices have led to significant social pressures in many emerging and low-income economies. Meeting the challenge of rebuilding fiscal space while addressing social needs will require greater targeting of subsidies and other measures, as well as enhancing revenue mobilization.

Beyond the differences across emerging economies in cyclical conditions, substantial variation remains in the extent of medium-term challenges. Among

Figure 11

Emerging Economies: Change in Cyclically Adjusted Primary Balance and in Output Gap, 2011 (Percent of potential GDP)



Sources: IMF staff projections.

Note: The output gap is defined as the difference between actual and potential GDP. If the output gap is deteriorating, there is greater spare capacity in the economy. Circles denote countries with output level above potential in 2011.

the G-20 emerging economies, for example, gross general government debt levels are relatively high in some cases; combined with relatively large shares of short-term debt, this can result in significant gross financing needs, which are largest in Brazil (Figure 12). Medium-term fiscal adjustment needs also vary significantly and are largest in India, where the cyclically adjusted primary deficit is highest. Long-term pressures are sizable in Russia, where the debt position is otherwise relatively comfortable. Thus, while adjustment strategies will vary among these economies, it is clear that favorable cyclical positions should be used to meet medium-term challenges specific to each country.

5. The Legacy of the Crisis: How Long Will It Take to Lower Public Debt?

In spite of sizable fiscal adjustment in the years ahead, public debt is projected to remain high over the medium term, particularly for advanced economies. Gross general government debt in the advanced economies is projected to top 100 percent of GDP this year, rising nearly 30 percentage points of GDP above its precrisis level (Figure 13). While a few advanced economies will achieve

modest declines in their debt ratios this year, most are projected to see debt ratios continue to rise, in some cases substantially (Figure 14). Indeed, gross general government debt ratios in the United Kingdom and the United States are projected to increase by more than 5 percent of GDP this year, while the ratio in Japan is set to rise by more than twice that amount. General government gross debt is projected to reach 109 percent of GDP in 2015, on average, for the advanced economies, and almost 117 percent of GDP for the G-20 advanced economies. As noted in previous issues of the *Monitor*, the bulk of the increase recorded since end-2007 stems from the drop in revenues, but the estimated contribution of the fiscal stimulus to the debt buildup is now somewhat larger than estimated in October 2010, because of additional stimulus in Japan and the United States (Box 6).

Debt ratios in emerging economies remain, on average, significantly lower than in advanced economies, although with some significant exceptions. Indeed, countries including Brazil, Hungary, and India each have debt ratios that exceed 60 percent of GDP. Separately, revised data from the Chinese authorities indicate that gross general government debt in that country was 34 percent of GDP at end-2010—twice the level previously reported.

Figure 12

Comparing Fiscal Fundamentals across Emerging Economies, 2011

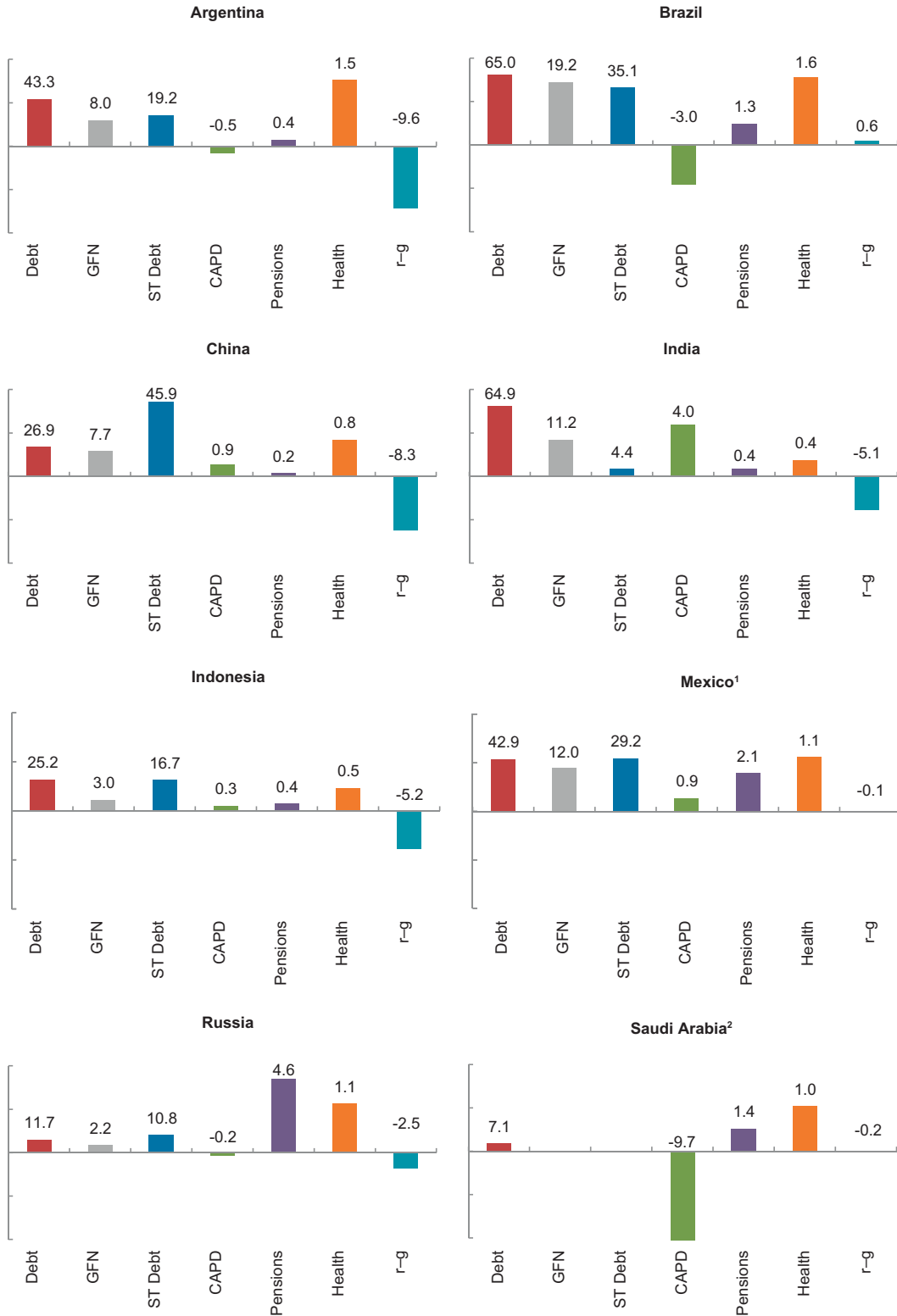
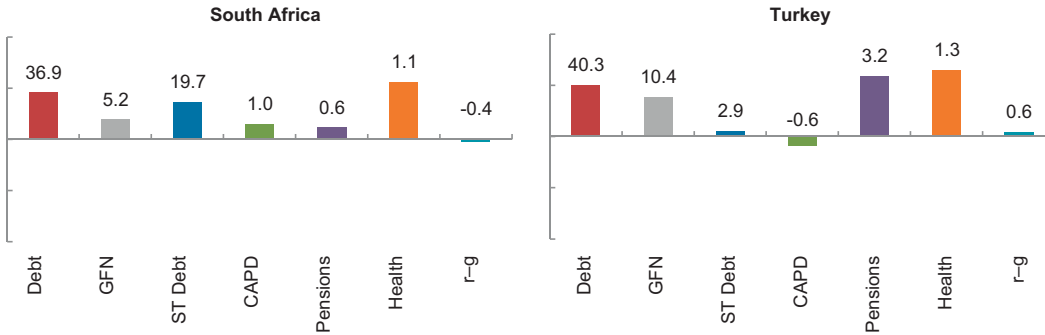


Figure 12

Comparing Fiscal Fundamentals across Emerging Economies, 2011 (continued)



Sources: Bank for International Settlements; Bloomberg L.P.; and IMF staff estimates and projections.

Note: *Debt* refers to gross general government debt in percent of GDP; *GFN* is gross financing needs in percent of GDP; *ST Debt* is short-term debt securities at remaining maturity as a percentage of total debt securities, as of end-2010; *CAPD* is cyclically adjusted primary deficit in percent of potential GDP; *Pensions* is the change in long-term public pensions spending from 2010 to 2030 in percent of GDP; *Health* is the change in long-term public health spending from 2010 to 2030 in percent of GDP; and *r-g* is the average interest rate-growth differential from 2012 to 2016 in percent. As each indicator is expressed in different units, the size-of-the-bars differential is standardized.

¹For details, see "Data and Conventions" in the Methodological and Statistical Appendix.

²GFN and ST Debt data are not available. A Hodrick-Prescott filter is used to estimate potential output, and CAPB is estimated assuming growth elasticities of 1 and 0 for revenues and expenditure, respectively.

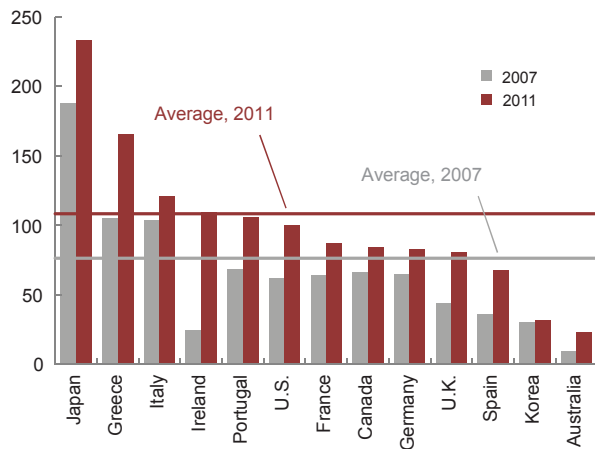
As no historical series has been released on debt for which local governments have direct repayment obligations, it is not possible to trace the evolution of the country's debt over time. However, the new figures indicate that China's debt stock, previously believed to be one of the lowest among emerging economies, is in fact close to the group average. The degree to which the new debt figures may constrain the scope for countercyclical policies in China going

forward is difficult to assess. In addition, according to the Chinese authorities the increase in debt reflects better information about borrowing by public sector entities at the local level. This underscores the need for improvements to public financial management mechanisms to ensure that fiscal data are as transparent and comprehensive as possible.

Low interest rates and recovering growth have partially offset the impact of primary deficits on debt ratios in several advanced economies, but below-the-line transactions are boosting debt ratios in a few (Figure 15). In most cases, still-large primary deficits are the major factor driving debt increases, but in Greece, Ireland, and Portugal, large interest-growth rate differentials are also making a significant contribution. By contrast, historically low interest rates and recovering growth are moderating forces in most other advanced economies. In a few cases, sizable stock-flow adjustments are also pushing up debt ratios.¹³ In 2011, these primarily

Figure 13

Selected Advanced Economies: General Government Gross Debt (Percent of GDP)



Sources: IMF staff estimates and projections.

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

¹³ Stock-flow adjustment are defined as the residual in the customary identity linking changes in the debt ratio to the deficit (in continuous time for simplicity): $\dot{d} = pd + (r-g)d + sf$, where \dot{d} is the change in the public debt-to-GDP ratio, pd is the primary deficit as a share of GDP, g is the GDP growth rate, r is the interest rate on public debt, and sf is the stock-flow adjustment as a share of GDP.

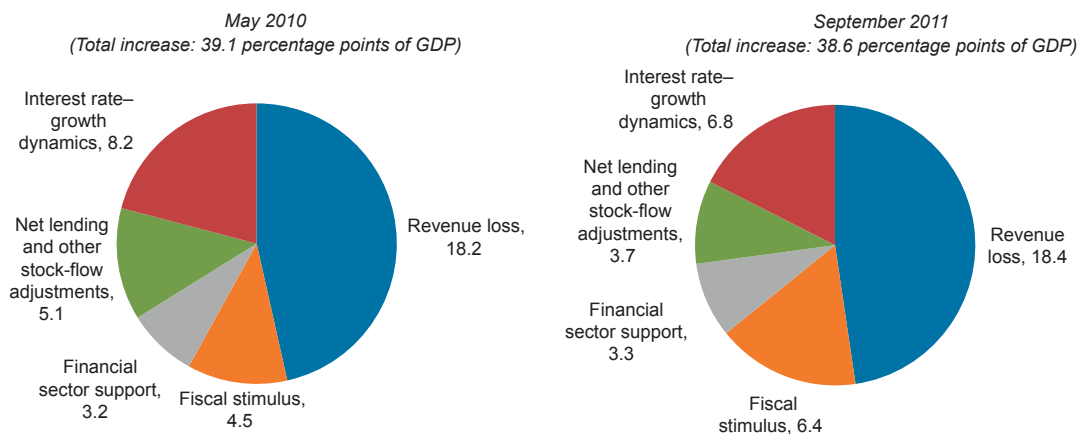
Box 6

Factors Underlying the Debt Increase Precrisis versus End-2015

Compared with estimates in the May 2010 *Fiscal Monitor*, the projected increase in the debt stock between end-2007 and end-2015 is marginally smaller, and the contribution of fiscal stimulus to the debt buildup is somewhat larger. The improved debt outlook relative to a year ago reflects a slightly better economic recovery than projected in May 2010. This has consequently reduced the contribution of the interest rate–growth differential. The sharp drop in output related to the crisis remains the primary factor behind the higher debt ratio: two-thirds of the projected debt surge is explained by revenue weaknesses associated with the recession and the direct effect on the debt ratio of the fall in GDP (see figure). At the same time, the additional fiscal stimulus packages in the United States and Japan have pushed up the contribution of the stimulus (which was originally estimated to represent little more than one-tenth of the total debt increase). The level of net direct costs from financial sector support is broadly unchanged, with new outlays in the United Kingdom and the impact on public debt of the asset transfer to the Asset Management Agency in Germany offsetting lower net outlays in the United States. Finally, the contribution arising from lending operations in some countries—Canada, Korea, the United States—involving student loans, loans for consumer purchases of vehicles, and support to small and medium-sized enterprises has declined.

G-20 Advanced Economies: Increase in General Government Debt, 2008–15

(Percentage points of GDP)



Sources: IMF staff estimates and projections.

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

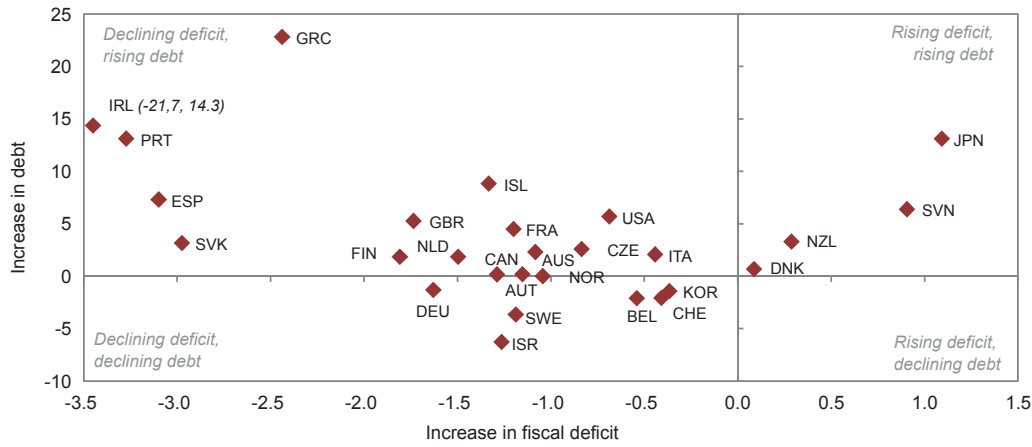
reflect government operations in support of the financial system for Greece, Ireland, and Spain (Box 7), the incorporation of some state-owned enterprises into the general government in Portugal, and the acquisition of assets by the social security fund in Korea.

Stock-flow adjustments have become more important in accounting for the evolution of the debt since the onset of the financial crisis. To a large extent, this reflects sizable financial sector

support operations that have been recorded below the line in several countries, in accordance with accounting standards. For countries with foreign-currency-denominated debts, valuation effects through currency depreciation also play a role. However, the increased role of stock-flow adjustments could also in part be related to greater use of stratagems designed to enable an increase in government liabilities without driving up the reported deficit (see the April 2011 *Monitor*).

Figure 14

Advanced Economies: Change in Overall Balance and General Government Gross Debt, 2010–11
(Percent of GDP)



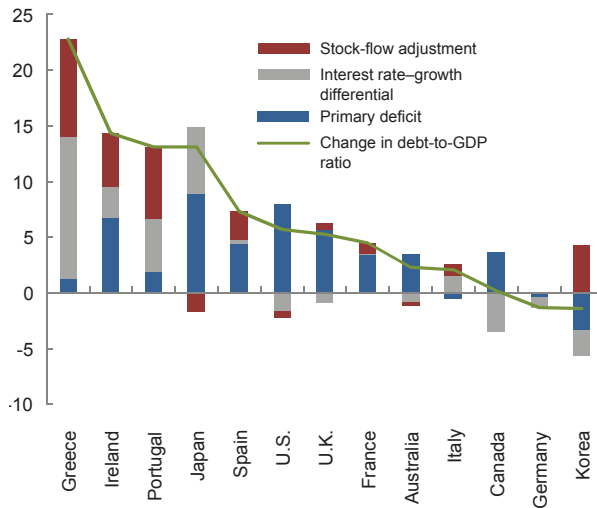
Sources: IMF staff projections.
Note: Changes in debt and deficits refer to 2011 vis-à-vis 2010.

A decomposition of debt changes over the last three decades illustrates that stock-flow adjustments were a significant source of debt increases, but played only a minor role in explaining debt decreases. This asymmetry is surprising, as any number of factors—privatization and the impact of exchange rate appreciation on the value of foreign

currency liabilities, to name two—could lead to downward stock-flow adjustments to the debt. It is consistent with the view that governments may succumb to the temptation to engage in off-budget transactions to hide the impact of transactions that would increase the debt, but are quite willing to have debt-reducing measures pass through the budget. Reputational and other costs associated with missing publicly announced deficit targets could be one factor motivating this behavior. Moreover, Appendix 4 finds that the contribution of stock-flow adjustments to increases in debt is smaller in countries where fiscal transparency is above average. This may not be coincidental, as a lack of fiscal transparency may make it easier for governments to engage in deceptive fiscal stratagems.

Figure 15

Advanced Economies: Decomposition of 2011 Debt Accumulation
(Percent of GDP)



Sources: IMF staff estimates and projections.

It is difficult to overstate the challenge confronting many advanced economies and some emerging market economies, as the adjustment required to restore their debt ratios to more moderate levels is daunting. Illustrative simulations conducted using the now-standard *Fiscal Monitor* methodology report the improvement in the cyclically adjusted primary balance that must be achieved by 2020 (and then maintained for a further decade) to reduce the general government debt ratio to

Box 7

Financial Sector Support and Recovery to Date

New financial sector support measures have been very limited since the April 2011 *Monitor* except for Ireland, where domestic banks have received a capital injection of 11 percent of GDP. Other notable measures include those in Spain, where the FROB (the state bank support vehicle) has agreed to inject ¼ percent of GDP into Banco CAM and to extend a credit facility for a total of ¼ percent of GDP, and Greece, where the Agricultural Bank was recapitalized with a net fiscal cost of ¼ percent of GDP. In addition, official figures have recently been released regarding the impact of previously enacted measures; for example, in Germany, the impact of the asset transfer from Hypo Real estate to FMS Wertmanagement (the Asset Management Agency) on public debt is estimated at 8½ percent of GDP. Moreover, additional support is planned in Spain, where the supervisor has notified 12 banks that they must increase their capital by an overall amount equivalent to about 1½ percent of GDP, with equity injections by the FROB as a backstop.

For a sample of advanced economies where support has been significant, the cumulative net direct cost since the beginning of the crisis amounts to about 5 percent of GDP (see table). By end-June 2011, the cumulative recovery of outlays stood at 1¾ percent of GDP. The recovery rate (as a share of direct support) was 27 percent on average, but reached almost two-thirds in the case of the Netherlands thanks to recent repayments. Recovery has also been relatively fast in the United States.

Heightened risks in the financial sector, especially in some small advanced European economies, could result in a calling of government-guaranteed bonds issued by financial institutions. Although decreasing slightly for most advanced economies, the stock of bonds issued by financial institutions with government guarantees remains

Selected Advanced Economies: Financial Sector Support
(Percentage of 2011 GDP unless otherwise indicated)¹

	Direct support	Recovery	Net direct support
Belgium	5.7	0.3	5.4
Ireland ²	40.6	2.6	38.0
Germany ³	13.2	0.8	12.4
Greece	5.8	0.4	5.4
Netherlands	14.0	8.8	5.1
Spain ⁴	3.0	0.9	2.1
United Kingdom	6.7	1.1	5.7
United States	5.1	2.0	3.1
Average	6.8	1.8	4.9
In \$US billions	1,722	452	1,270

Sources: Country authorities; and IMF staff estimates.

Note: Fiscal outlays of the central government, except for Germany and Belgium, for which financial sector support by subnational governments is also included.

¹ Cumulative since the beginning of the crisis—latest available data, ranging between end-December 2010 and end-July 2011.

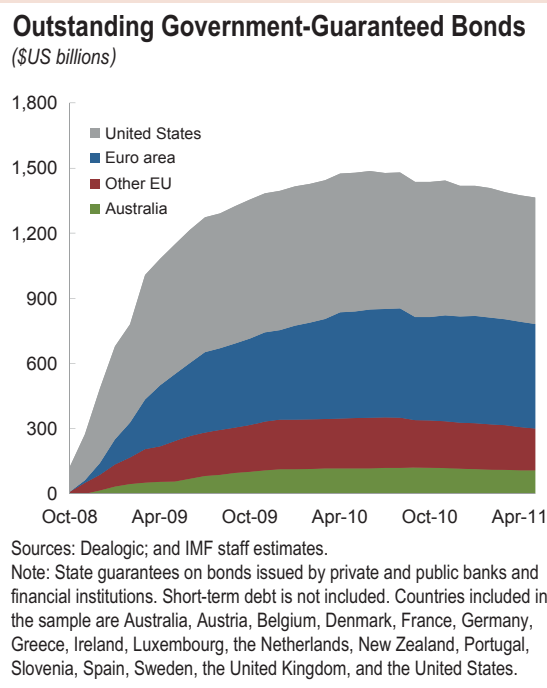
² Direct support does not include asset purchases by the National Asset Management Agency (NAMA), as these are not financed directly through the general government but with government-guaranteed bonds.

³ Direct support includes the estimated impact on public debt of asset transfers to newly created government sector entities (11¼ percent of GDP), taking into account operations from the central and subnational governments.

⁴ Direct support includes total capital injections by the FROB until end-July as well as projected capital injections for Banco CAM (¼ percent of GDP).

Box 7 (concluded)

high, standing at over US\$1.3 trillion (6¼ percent of GDP on average) at end-May (see figure). Moreover, given continued funding pressures, some existing guarantee schemes for credit institutions have been extended until end-December 2011 (Greece, Ireland, Lithuania, Poland, Portugal, and Spain) and the size of the schemes increased (Greece and Portugal). Based on the default probabilities implied by the credit rating of the issuer, on average, 7½ percent of these guarantees could be called, resulting in a fiscal impact ranging from less than ½ percent to 12 percent of GDP. A larger portion could be called if issuers' credit quality were to deteriorate. Although the effect of these explicit contingent liabilities is sizeable for only a few countries, fiscal outlays could increase significantly if risks to financial conditions were to materialize (September 2011 GFSR).



60 percent of GDP in advanced economies and to 40 percent of GDP in emerging economies by 2030 (Tables 5a and 5b).¹⁴ While there is wide variation across countries, adjustment needs average about 8 percent of GDP over the next decade for advanced economies and equal 13½ percent of GDP in Japan. While the average adjustment need in emerging economies is a more manageable 2¾ percent of GDP, in the case of India and Poland,

¹⁴Note that these illustrative simulations are based on simplifying assumptions and may well differ from adjustment scenarios and policy recommendations provided by the IMF in individual countries.

the illustrative adjustment needs are close to the advanced economy average. Adjustment needs in both advanced and emerging economies are even greater when the projected growth of health and pension spending over the next two decades is taken into account. To be sure, the appropriate long-term debt target and pace of adjustment depend on individual country circumstances, and the results of this exercise are therefore purely illustrative. A higher medium-term debt objective (which could come at the cost of slower potential growth and less flexibility to respond to future shocks) or a more front-loaded adjustment path than assumed here, for example, would result in a

Table 5a

Advanced Economies: General Government Debt and Primary Balance*(Percent of GDP)*

	2010			Illustrative Fiscal Adjustment Strategy to Achieve Debt Target in 2030		
	Gross debt	Primary balance	CAPB	CAPB in 2020–30	Required adjustment between 2010 and 2020	Required adjustment and age-related spending, 2010–30
Australia	20.5	-4.7	-4.6	0.5	5.0	8.4
Austria	72.2	-2.5	-1.6	1.8	3.4	7.7
Belgium	96.7	-0.9	0.3	3.1	2.8	8.4
Canada	84.0	-4.9	-3.4	0.8	4.3	7.8
Czech Republic	38.5	-3.5	-2.5	0.9	3.4	4.0
Denmark	43.7	-2.4	-1.1	1.0	2.0	4.0
Estonia	6.6	0.4	4.3	0.4	-3.9	-3.5
Finland	48.4	-3.2	-0.7	0.4	1.1	6.8
France	82.4	-4.9	-3.1	3.1	6.3	7.9
Germany	84.0	-1.2	-0.4	2.0	2.3	4.6
Greece	142.8	-4.9	-5.7	9.8	15.5	19.0
Hong Kong SAR	33.2	4.3	-1.4	-0.9	0.4	...
Iceland	92.4	-2.5	-3.3	2.8	6.1	11.3
Ireland	94.9	-28.9	-6.4	5.6	12.0	13.5
Israel	77.4	-0.7	-0.6	1.0	1.6	...
Italy	119.0	-0.3	1.2	4.3	3.1	4.1
Japan	220.0	-8.1	-6.6	7.0	13.6	14.3
Korea	33.4	2.8	3.0	-0.6	-3.6	1.3
Netherlands	63.7	-3.9	-3.1	1.3	4.4	9.7
New Zealand	32.0	-4.6	-3.3	0.4	3.7	8.7
Norway	55.4	8.4	8.7	8.2	-0.4	4.3
Portugal	92.9	-6.3	-5.3	4.3	9.6	13.8
Slovak Republic	41.8	-6.8	-5.8	0.9	6.6	8.5
Slovenia	37.3	-4.1	-2.8	1.1	4.0	7.9
Spain	60.1	-7.8	-6.3	2.0	8.3	10.4
Sweden	39.7	-1.1	0.6	0.2	-0.5	-0.1
Switzerland	54.5	1.0	0.9	0.2	-0.7	...
United Kingdom	75.5	-7.7	-5.8	3.4	9.1	13.3
United States	94.4	-8.4	-5.4	5.4	10.8	17.0
<i>Average</i>	98.1	-5.7	-3.8	4.0	7.8	11.7
<i>G-20 advanced</i>	104.4	-6.2	-4.1	4.3	8.4	12.5

Sources: IMF staff estimates and projections.

Note: Averages are weighted by GDP at PPP. The table reports gross debt; cyclically adjusted primary balance (CAPB) is reported in percent of nominal GDP (in contrast to the conventional definition in percent of potential GDP). General government data are used where available. In the illustrative fiscal adjustment strategy, the CAPB is assumed to improve in line with *Fiscal Monitor* projections in 2011–12 and gradually from 2013 until 2020; thereafter, it is maintained constant until 2030. The fifth column shows the CAPB adjustment needed between 2010 and 2020 to bring down the debt ratio to 60 percent in 2030 (shaded entries, "higher debt") or to stabilize debt at the end-2012 level by 2030 if the country debt-to-GDP ratio is less than 60 percent (no shading, "lower debt"). The analysis is illustrative and makes some simplifying assumptions: in particular, up to 2015, an interest rate–growth differential of 0 percentage points is assumed, broadly in line with WEO assumptions, and 1 percentage point afterward, regardless of country-specific circumstances. The last column adds the projected increase in health care and pension spending between 2010 and 2030 (see Statistical Table 9), which will require offsetting measures. Illustrative scenarios for Australia, Canada, Japan, and New Zealand are based on their net debt ratios (see Statistical Table 8 for net debt data); for Japan, a net debt target of 80 percent of GDP is assumed, which corresponds to a target of 200 percent of GDP for gross debt. For Norway, maintenance of primary surpluses at the projected 2012 level is assumed (primary balance includes oil revenue, whereas elsewhere in this document the non-oil balance is shown). For the United States, the CAPB excludes financial sector support recorded above the line. For countries not reporting CAPB or output gap, a Hodrick-Prescott filter is used to estimate potential output, and the CAPB is estimated assuming growth elasticities of 1 and 0 for revenues and expenditures, respectively. For details, see "Data and Conventions" in the Methodological and Statistical Appendix.

Table 5b

Emerging Economies: General Government Debt and Primary Balance
(Percent of GDP)

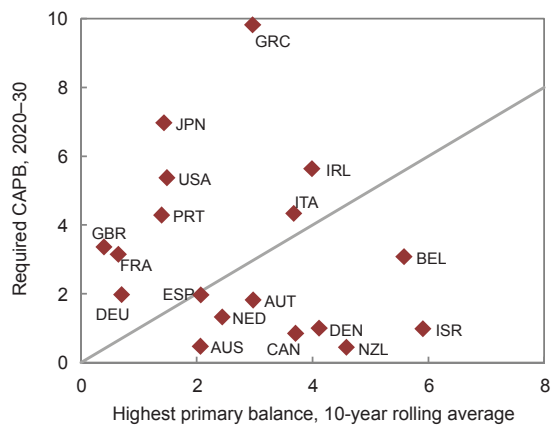
	2010			Illustrative Fiscal Adjustment Strategy to Achieve Debt Target in 2030		
	Gross debt	Primary balance	CAPB	CAPB in 2020–30	Required adjustment between 2010 and 2020	Required adjustment and age-related spending, 2010–30
Argentina	49.1	1.7	1.9	0.3	-1.6	0.3
Brazil	66.8	2.4	2.2	1.4	-0.8	2.0
Bulgaria	17.4	-3.7	-0.7	0.3	1.0	1.9
Chile	9.2	-0.3	-2.0	-0.3	1.8	...
China	33.8	-1.8	-2.1	0.3	2.4	3.4
Colombia	36.0	-1.4	-1.0	0.3	1.3	...
Hungary	80.2	-0.5	1.0	2.8	1.9	3.2
India	67.3	-4.3	-4.6	3.0	7.6	8.4
Indonesia	27.4	0.2	0.2	0.2	0.0	0.8
Jordan	66.8	-3.3	-3.4	3.4	6.7	...
Kazakhstan	10.7	1.8	0.4	-0.3	-0.7	...
Kenya	50.4	-3.7	-3.2	1.6	4.8	...
Latvia	39.9	-6.4	-2.6	0.0	2.5	4.4
Lithuania	38.7	-5.5	-3.6	1.3	4.9	8.1
Malaysia	54.2	-3.6	-3.7	2.5	6.2	8.6
Mexico	42.9	-1.9	-2.0	0.7	2.7	5.9
Morocco	51.1	-1.2	1.7	2.0	0.3	...
Nigeria	17.3	-7.4	-7.3	-0.8	6.5	...
Pakistan	56.8	-1.6	-1.6	2.0	3.6	4.2
Peru	24.5	0.7	0.0	-0.2	-0.2	...
Philippines	44.7	-0.1	-0.3	0.5	0.8	1.7
Poland	55.0	-5.2	-5.0	1.9	6.9	7.3
Romania	31.7	-5.1	-3.9	0.5	4.3	7.6
Russia	11.7	-3.2	-1.6	0.4	1.9	7.6
South Africa	34.8	-2.5	-2.0	0.6	2.6	4.3
Thailand	44.1	-1.9	-1.5	1.0	2.5	...
Turkey	42.2	0.8	0.0	0.0	0.0	4.5
Ukraine	40.1	-4.1	-1.6	0.3	1.9	9.1
<i>Average</i>	41.6	-1.9	-1.9	0.9	2.8	4.8
<i>G-20 emerging</i>	41.6	-1.7	-1.8	0.9	2.6	4.6

Sources: IMF staff estimates and projections.

Note: Averages are weighted by GDP at PPP. Cyclically adjusted primary balance (CAPB) is reported in percent of nominal GDP. In the illustrative fiscal adjustment strategy, the CAPB is assumed to improve in line with *Fiscal Monitor* projections in 2011–12 and gradually from 2013 until 2020; thereafter, the CAPB is maintained constant until 2030. The fifth column shows the CAPB adjustment needed between 2010 and 2020 to bring down the debt ratio to 40 percent in 2030 (shaded entries, "higher debt") or to stabilize debt at the end-2012 level by 2030 if the country's debt-to-GDP ratio is less than 40 percent (no shading, "lower debt"). The analysis is illustrative and makes some simplifying assumptions: in particular, up to 2015, an interest rate–growth differential of 0 percentage points is assumed, broadly in line with WEO assumptions, and 1 percentage point afterward, regardless of country-specific circumstances. For large commodity-producing countries, even larger fiscal balances might be called for in the medium term than shown in the illustrative scenario, given the high volatility of revenues and the exhaustibility of natural resources. The last column adds the projected increase in health care and pension spending between 2010 and 2030 (see Statistical Table 9), which will require offsetting measures. For countries not reporting CAPB or output gap, a Hodrick-Prescott filter is used to estimate potential output, and the CAPB is estimated assuming growth elasticities of 1 and 0 for revenues and expenditures, respectively. For details, see "Data and Conventions" in the Methodological and Statistical Appendix.

Figure 16

Cyclically Adjusted Primary Balance That Needs to Be Maintained in 2020–30 to Achieve Debt Target by 2030
(Percent of GDP)



Source: IMF staff estimates.

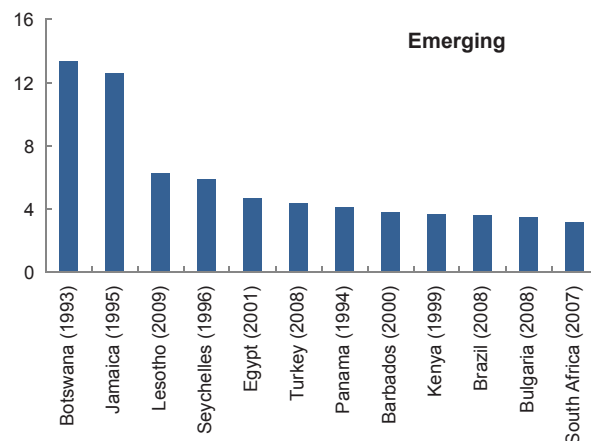
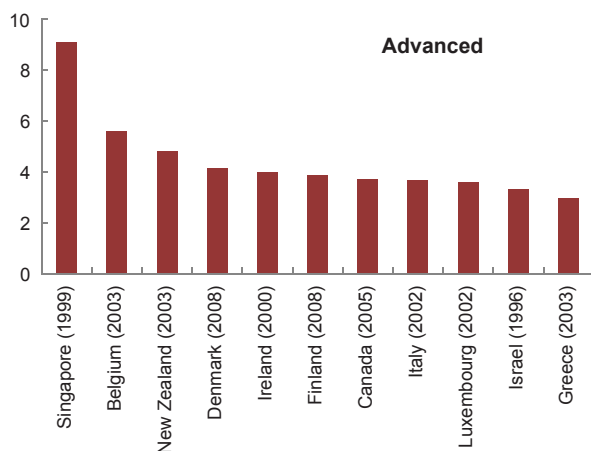
Note: For each country, this figure reports, on the vertical axis, the cyclically adjusted primary balance that needs to be attained by 2020 and maintained until 2030 to achieve the illustrative debt target by 2030, and on the horizontal axis, the largest primary surplus that the country has ever attained, on average, in any 10-year period since 1970 (subject to data availability). The figure includes all advanced economies with required adjustments larger than 2 percent of GDP between 2010 and 2020 for which more than 15 years of data are available.

smaller adjustment need. These illustrative scenarios do, however, provide some indication of the scale of adjustment that will be required if these traditional debt benchmarks are to be achieved.

Beyond the large size of needed adjustment, for several advanced economies the required primary surplus is well above levels they have sustained in the past. In particular, among the advanced economies that will need to run primary surpluses exceeding 4 percent of GDP under the illustrative scenario, only Italy (whose limited fiscal stimulus during the crisis means that its illustrative adjustment need is relatively small) and Ireland (which ran a sizable primary surplus during the boom years) have ever run average primary surpluses over a 10-year period that are close to the target in the illustrative scenario (Figure 16). Of course, the fact that a country has never maintained a particular primary surplus for an extended period does not mean that it is incapable of doing so—in many cases, it may simply have never been required to do so. Indeed, several other advanced and emerging economies have maintained

Figure 17

Largest Average Primary Surplus over a 10-Year Period
(Percent of GDP)



Source: IMF staff estimates.

Note: Year in parentheses indicates end of period. Based on data as of April 2009.

sizable primary surpluses for a decade or more (Figure 17). Nevertheless, it does underscore that an extended period of extraordinary fiscal virtue will be required over the coming decades to restore debt ratios to more normal levels, including in countries where until recently a more immoderate response to budgetary temptation may have been closer to the norm. Should this not happen, high public debt will expose countries to the vagaries of financial market sentiment, and probably negatively affect potential growth.¹⁵

¹⁵ Reinhart and Rogoff (2010); Kumar and Woo (2010).

Table 6
Assessment of Fiscal Sustainability Risks, 2011

	Advanced	Emerging
Short- and medium-term fiscal indicators	→	→
Long-term fiscal challenges	→	→
Liability structure	→	→
Macroeconomic uncertainty	↑	↗
Policy implementation	↑	↗
Financial sector risks	↑	↑

Source: IMF staff estimates.

Note: → and ↑ indicate on average unchanged and higher levels of risk, respectively; ↗ indicates moderate increases in levels of risk.

6. Confronting Trade-Offs: Accommodating Spending Pressures in Low-Income Countries

The progress in restoring fiscal buffers drawn on during the 2009 crisis in low-income economies has slowed, and many of these countries confront difficult trade-offs. Following some strengthening in 2010, headline deficits in low-income countries are projected to remain stable this year and next. However, some low-income countries were already facing sizable fiscal challenges before the crisis hit, and many are still dealing with spending pressures related to high food and fuel prices. Enhanced revenue mobilization (IMF, 2011d), better targeting of social spending, and improved spending efficiency more generally will be critical to meeting these challenges.

Thus far, most commodity importers have been able to insulate their budgets from the impact of higher food and fuel prices, but they may find it hard to do so for long. Discretionary changes in fiscal policy to cope with high commodity prices—such as increases in price subsidies and transfers—have had a significant fiscal impact (Box 8). However, given fiscal space constraints in the typical low-income country, these measures may

prove difficult to sustain over time. Accordingly, it will be imperative for commodity importers to move toward better-targeted support measures going forward and to unwind them should global prices decline.

More generally, long-standing challenges in low-income countries remain, with one-third of these countries in debt distress or under high debt sustainability risk. Measures to boost potential growth are key to meeting these challenges, with increased investment to enhance infrastructure a critical need in many low-income countries. Ironically, the high debt and low levels of public infrastructure that plague many low-income countries are in part the legacy of previous large public investment projects that have had minimal impact on growth. However, analysis suggests that the low returns on public investment in many low- and middle-income economies derive primarily from shortcomings in the investment process. Once these are controlled for, the estimated returns on public investment in these economies increase significantly (Box 9). Measures to increase the productivity of public capital—notably, improved investment processes such as competitive and open bidding—are thus a critical element in the strategy to enhance fiscal prospects in developing economies.

Box 8

Global Fuel and Food Price Shocks and Fiscal Performance in Low-Income Countries

Low-income countries have absorbed the increase in international oil and food prices without major stress on government finances. Oil and food prices have increased by 44 and 32 percent, respectively, since June 2010, and many low-income countries have taken measures—with associated fiscal costs—to alleviate the impact on the population. Nevertheless, the overall fiscal balance of low-income countries for 2011 is projected to remain stable in median terms.

To date, about half the low-income countries are reported to have adopted fiscal measures to cushion the blow of higher fuel and food prices on the population. In a sample survey of IMF desk economists for 71 low-income countries, 28 countries were found to have used such measures to deal with the increase in fuel prices and 15 to deal with the increase in food prices. Moreover, 16 countries implemented or scaled up general transfer programs to alleviate the impact on poor households.

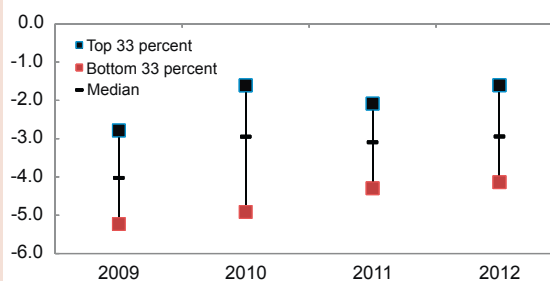
In the countries reported to have implemented measures in response to higher fuel prices, the median impact on the budget during 2010–11 was estimated at 1¼ percent of GDP, compared with less than ½ percent of GDP for measures reported in response to higher food prices. In sub-Saharan Africa, 6 countries were reported to have adopted fuel-price-mitigating measures, with a median fiscal impact of 1.6 percent of GDP, while in Asia, where food-price-mitigating measures were more common, the median impact in the affected countries was 1.1 percent of GDP. Latin American and Caribbean countries also implemented measures, mainly through general subsidies and fuel-price-mitigating measures.

During the latest surge in food and fuel prices, fuel tax reductions were reported in 18 countries and food tax reductions in 10 countries, with fiscal costs between 0.1 and 1.6 percent of GDP. Reductions in tariffs (primarily on fuel) and VAT rates (mostly on foodstuffs) were the most common mechanisms used. In addition, many other countries kept in place the tax cuts introduced during the 2007–08 run-up in food and fuel prices. Price subsidies were reported to have been used in more than one-third of low-income countries, almost always in the form of untargeted subsidies (though in some cases applied to products consumed mainly by the poor). Because price subsidies have been used mainly for fuel, and particularly by oil exporters, they have tended to be more costly, ranging from 0.1 to 2.4 percent of GDP.

A wide range of other measures have also been used, for a cumulative median cost in the countries using them of ½ percent of GDP. Examples include food stamps (Mongolia), transportation subsidies (Central African Republic), school feeding programs (Burundi), subsidies for heating (Georgia and Moldova), increases in social funds (Yemen), fertilizing subsidies (Bolivia), and higher transfers to public companies to subsidize the energy price paid by consumers (Senegal).

Although the fiscal response has been prudent, it is important that it remain consistent with fiscal sustainability, particularly considering that oil and food prices are projected to remain high. Plans to gradually unwind some of the measures may thus be necessary. In particular, the passing-through of oil and food prices to domestic economies should be allowed, and untargeted subsidies and broad-based tax cuts should be phased out. Subject to capacity constraints, any available fiscal space should then be allocated to targeted transfer programs to protect the poor.

Overall Fiscal Balance in Low-Income Countries
(Percent of GDP)



Sources: IMF staff estimates and projections.

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

Box 9

Adjusting Public Capital Stock for Investment Inefficiency

Not all public investment spending in developing countries translates into productive capital assets. This is due in part to weak investment processes, including the lack of transparent and open competition for awarding contracts, ineffectiveness of internal audits, and the absence of medium-term budget frameworks. A recent study by Gupta and others (2011) takes these weaknesses into account in constructing an “efficiency-adjusted” public capital series for 52 low- and middle-income countries from 1960 to 2008. The Perpetual Inventory Method is used to accumulate capital according to the following equation:

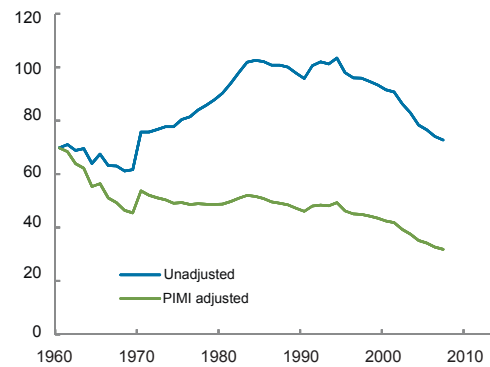
$$K'_{it} = K'_{it-1} - \delta_{it} * K'_{it-1} + q_i * I_{it-1},$$

where K'_{it} stands for the efficiency-adjusted public capital in country i , δ_{it} is the depreciation rate, and q_i is a time-invariant variable that captures the efficiency of public investment. This variable is proxied by the Public Investment Management Index (PIMI) constructed by Dabla-Norris and others (2010). In principle, this index can vary between 1 (when full efficiency is achieved for government spending) and 0 (when all public resources are totally wasted). PIMI—composed of 17 subindexes—evaluates countries on the basis of four stages of the public investment management process: project appraisal, selection, implementation, and evaluation. The results show that there is a significant gap between the adjusted and unadjusted public capital stocks. This holds true for both low- and middle-income countries.

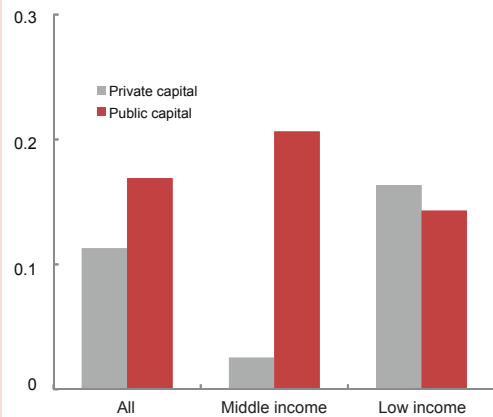
Further quantitative analysis shows that

- Adjusting public capital for public investment efficiency better explains the relationship between public capital and growth.
- Public capital is productive in both low- and middle-income countries. However, the marginal productivity of both private and public capital increases once public capital is adjusted for efficiency. The increase in private capital productivity is greater in low-income countries.
- Project implementation (which comprises competitive and open bidding and internal audits) is the most critical component of the investment process. This result is driven mostly by low-income countries in the sample, where project selection (which is related to medium-term frameworks) assumes secondary importance. For the middle-income countries, project appraisal (which comprises transparency of appraisal standards) and projection evaluation (which comprises external audits) are relatively more important. This suggests that the importance of investment stages for productivity of public capital varies with income levels. Therefore, new public investment must be accompanied by strengthening of investment processes to enhance the productivity of both public and private capital.

Public Capital Stock
(Percent of GDP)



Increase in Measured Productivity of Capital with Efficiency Adjustment of Public Investment



Source: IMF staff estimates.
Note: PIMI refers to the Public Investment Management Index by Dabla-Norris and others (2010).

7. Conclusion

Taking all of these developments together, and viewed from the perspective of the Fiscal Sustainability Risk Map presented in the April 2011 *Fiscal Monitor*, there is an increasing divergence between developments in fiscal deficits and perceptions of risk by market participants. The potential for fiscal conflagrations resulting from a loss of market confidence has clearly escalated this summer, notably in some European countries. Yet on the basis of recent developments in fiscal deficits and baseline fiscal projections more generally, risks would seem to have remained largely unchanged, on balance, in both advanced and emerging market economies relative to April (Table 6). Indeed, on the whole, although downside risks to the macroeconomic environment continue to predominate and may have increased in severity, fiscal adjustment and reforms are proceeding gradually but broadly as expected in both advanced and emerging market economies. In addition, the liability structures of advanced economies have been generally stable, and some emerging economies have somewhat improved their asset liability management, with a small reduction in short-term debt and foreign-currency-denominated debt.

Market participants seem to be focusing on factors that go beyond recent developments in fiscal data. Worsening perceptions of sovereign risks, which have contributed to a rise in financial sector risks (see the September 2011 GFSR),

seem to reflect four factors. First, worries about growth in the advanced economies—recently fueled by data releases pointing to a slowdown and by sharp declines in asset prices—have risen. Second, there is an increasing focus on the two-way relationship between sovereign and financial risk, as banks in some countries hold large amounts of government bonds, and government support to the banks could in turn be costly. Third, despite declining fiscal deficits in many countries, there are growing concerns about governments' ability to implement fiscal adjustment in the years ahead without succumbing to adjustment fatigue. Fourth, as noted earlier, the protracted delay on the part of euro area policymakers in developing a comprehensive and consistent crisis resolution framework played a significant role in allowing the crisis to spread from smaller economies to larger ones. Indeed, despite some progress, significant policy challenges will need to be faced not only in the euro area and the United States but in advanced, emerging, and low-income economies more broadly. A failure to respond to these challenges promptly and decisively, and to maintain clear and consistent communication, courts the risk that investor concerns will become self-fulfilling, with rising interest rates and liquidity pressures driving a worsening of fundamentals. The results could prove far more difficult and costly to contain than they might have been to prevent. These risks cannot be ignored, and action to address them cannot be delayed.

Appendix 1. “Fiscal Devaluation”: What Is It—and Does It Work?

The idea that tax reforms can mimic the effects of exchange rate devaluation is not new. For instance, the formation of the European Union prompted a recognition that moving from the taxation of goods on an origin basis (according to where they are produced) to a destination basis (according to where they are consumed) is essentially equivalent to an exchange rate devaluation, because imports are brought into tax, and exports are taken out. More generally, the potential for tax changes to affect both current and capital accounts has long been recognized.

What is new is the current focus on domestic tax changes as a potential response to difficulties in some euro area countries, in the specific form of a revenue-neutral shift from employers’ social contributions toward a value-added tax.¹ Such a reform has come to be known as a “fiscal devaluation,” though there are other tax reforms that could equally well be called the same. It has been urged, in particular, as a way for Greece and Portugal to improve their competitiveness. This appendix reviews both theory and evidence in asking two questions: How would this work, and how large might the effects be?

How Might It Work?

With a fixed nominal exchange rate and a fixed nominal wage, a fiscal devaluation is expected to reduce the foreign currency price of exports and raise the relative consumer price of importables, thereby improving competitiveness. With a fixed money wage—more precisely, a fixed money wage *net* of employers’ social contributions (SCRs)²—a reduction in the rate of those

¹ Calmfors (1998) long ago recognized the potential to undertake such a reform for countries adopting the euro.

² The focus on SCRs in this context reflects the view that the relevant rigidity comes from contracts specific in terms of payment after SCRs. If it was just the net wage received by the worker that was fixed, a cut in the

contributions reduces unit labor costs and thus lowers producer prices, including those of exported goods and services. The higher VAT rate—a destination-based tax—bears on domestic consumption, but not on exports,³ so it offsets the impact on domestic consumer prices of the reduction in domestic producer prices, and it increases the consumer price of imports. Foreign demand for exports increases and domestic demand for imports falls; consequently, the current account improves—as it would with a depreciation of the real exchange rate. All this is not to say, of course, that tax policy is the best way to address the structural problems underlying wage rigidities: it is not. The point is rather that it can perhaps provide some temporary mitigation and smooth the impact of the more fundamental reforms required.

The effectiveness of this strategy requires rigidity in both the exchange rate and the nominal wage. With a flexible exchange rate, the increased demand for exports and reduced demand for imports will cause an appreciation of the nominal exchange rate that undoes the competitiveness impact of the tax shift. Even if the exchange rate is fixed, a fiscal devaluation will have no real effect if—or when—domestic wages adjust: as workers find their real wage reduced by the increased VAT rate, they (or their trade unions) will aim to increase their nominal wages, moving the real producer wage back toward the prereform equilibrium (a process that any wage indexation, of course, would accelerate). In the meantime, a fiscal devaluation would be expected to reduce unemployment, but because of the adjustment just described, with no long-run impact on product or labor markets. Box A1.1 elaborates.

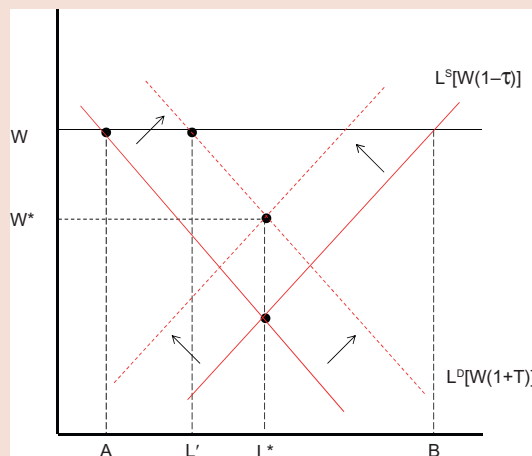
employee’s contribution or personal income tax would do just as well.

³ Destination-based taxes other than the VAT could also play a role. Excises, for instance, have precisely the same trade-neutrality property as the VAT, being charged on imports but remitted on exports. Recurrent taxes on residential property seen as widely underused in many countries—may have similar appeal. These other possibilities, important in practice, are not pursued here.

Box A1.1

Employment Effects of a Fiscal Devaluation

Denote by W the wage *after* the employer’s social contribution (at rate T), but before the VAT (at tax-inclusive rate τ): this is the wage that is assumed to be nominally rigid. The wage cost to the employer, on which labor demand depends, is thus $W(1 + T)$, while the net wage received by the employee, on which labor supply depends, is $W(1 - \tau)$.¹ With a flexible wage, the equilibrium in the figure below is at the wage W^* and employment level L^* , where $L^* = L^D [W^*(1 + T)] = L^S [W^*(1 - \tau)]$. But with the wage fixed at W , there is initially unemployment of AB .



Suppose now there is a fiscal devaluation: a reduction in T combined with an increase in τ , calibrated to ensure that the initially employed continue to pay the same total tax, which, denoting postreform values by a prime, requires that

$$\frac{1 + T}{1 - \tau} = \frac{1 + T'}{1 - \tau'}$$

With the nominal wage fixed at W , employment expands to L' , closer to the initial full employment level. In the longer run, however—and in the absence of a minimum wage or other obstacles—the wage adjusts to clear the labor market. This will be at precisely the same level of full employment as before the reform, with a higher-wage presocial contribution of

$$W^{*'} = W^* \left(\frac{1 + T}{1 + T'} \right) = W^* \left(\frac{1 - \tau}{1 - \tau'} \right),$$

ensuring equality of labor demand and supply at employment level L^* . The fiscal devaluation thus accelerates the elimination of unemployment, mitigating the effect of nominal rigidities, but with no impact on the long-run equilibrium: the wage after the employers’ contribution increases just enough to offset the impact on workers of the higher VAT rate, leaving the real product wage unchanged.

This is a very partial view and would apply even in a closed economy. The benefits are likely to be greater in an open economy—the “pure” devaluation aspect—to the extent that demand shifts towards domestic tradables.

¹ For simplicity, the analysis abstracts here from personal income taxation and employee’s social contributions. Allowing for these, τ would become $\tau = (1 - \tau^{\text{VAT}})(1 - \tau^{\text{PIT}})(1 - \tau^{\text{SCE}})$.

Table A1.1

Net Export Equations with Tax Structure Variables

	Revenue-to-GDP ¹		Tax Rates ²	
	(1) Non-euro	(2) Euro	(3) Non-euro	(4) Euro
Net exports, lagged one year	-0.310***	-0.065	-0.126	0.046
Revenue from social security contributions by employers, change	-0.654**	-2.242*		
Revenue from social security contributions by employers, lagged one year	-0.198	-0.420		
VAT revenue, change	-0.683**	-1.799***		
VAT revenue, lagged one year	-0.053	-0.209		
Average tax rate on labor, change			0.161	0.286**
Average tax rate on labor, lagged one year			0.028	0.007
VAT rate, change			-0.207	0.471***
VAT rate, lagged one year			0.197**	-0.013
Total tax revenue, change			-1.907***	-0.923*
Total tax revenue, lagged one year			-0.183**	-0.047
Number of observations	407	114	130	105
R ²	0.415	0.558		
F-test ³	0.07	0.014	0.442	0.002

Source: de Mooij and Keen (2011).

Note: Single-equation error correction model, controlled for the difference and lag of old-age dependency ratio, unemployment, GDP growth, government balance, country fixed effects, and time fixed effects.

¹ Estimation is by least-squares dummy variable method, including fixed and time effects with robust standard errors.

² Estimation is by one-step robust-system generalized method of moments, including fixed effects, treating lagged and tax rate variables as predetermined and with no external instruments, lag limits (2,3) and instruments collapsed; marginal labor tax wedge included as an instrument for non-euro countries. Sargan and Hansen tests on overidentification are passed at 95 percent confidence, as is the Arellano-Bond test for no serial correlation of second order.

³ F-test reports the *p*-value for the *F*-statistic on the null hypotheses that (i) the coefficients on changes in revenue from social security contributions by employers and changes in VAT revenues are zero, and (ii) the coefficients on changes in the average labor tax rate and changes in VAT rate are zero.

*significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level.

The fact that the effects of a fiscal devaluation may largely be temporary does not mean that they are irrelevant. This is particularly true when the economy, because of nominal downward rigidities in nominal wages, is initially in a disequilibrium position, with an overvalued real exchange rate and involuntary unemployment. In these conditions, a fiscal devaluation can speed up the adjustment in the labor market, which may otherwise take a long time to implement. The end result—the point at which the real exchange rate and the unemployment rate converge in the long run—may not be much affected by the fiscal devaluation (in this sense the effects would be temporary), but the speed of convergence can be much faster. This faster speed of adjustment is critical in countries where doubts may otherwise arise about the sustainability of the adjustment process under a pegged exchange rate.

The analogy between a “fiscal devaluation” in the sense above and nominal currency depreciation is imperfect. For instance, the proportionate impact on export prices of a nominal depreciation would be the same for all commodities, but that of a fiscal devaluation will be greater for more labor-intensive products. And if nontradables tend to be more labor intensive than tradables, this will mitigate the shift of resources into the latter.

Beyond the Basics

While the basic theory is elegant, important complexities arise in practice:

- A fiscal devaluation reduces the value to the consumer of nonlabor income, whether from transfers or capital income, affecting the labor

market and income distribution. The analysis in Box A1.1 ignores any impact of reform on incomes of those outside the labor market. To the extent, however, that out-of-work benefits to the unemployed are not uprated to reflect the increased VAT, most labor market models suggest a long-term fall in structural unemployment. Moreover, an increase in the real consumer wage in the long run, because of the shift in the tax burden from labor to nonlabor income, will boost labor supply incentives. But there will also be a reduction in the real value of pensions, for instance. To the extent that some benefits are uprated in recognition of adverse equity effects, this will dilute the revenue raised by the increase in the VAT rate and so allow only a smaller reduction in SCRs and hence a smaller gain in employment and labor supply.

- The precise effects on the labor market and income distribution will depend on how the reform is designed, with a case for focusing SCR cuts on lower wage levels. Increasing the VAT—whether by raising the standard rate or raising reduced rates—is generally slightly regressive. At the same time, the distributional effect of reducing SCRs will depend on whether or not the upper limit on such contributions that some countries impose is also reduced. More generally, there may be a case for focusing the SCRs cut at lower wage levels, as there is reason to suppose employment is more sensitive to tax considerations in the lower part of the wage distribution. Net tax relief for low-paid workers improves both equity and efficiency by improving incentives for labor market participation where distortions are largest.
- However, labor market distortions induced by SCRs may be smaller than the analysis above supposes if SCRs are perceived as having an actuarial link with benefits. Unlike personal income taxes, social contributions often carry some benefit entitlement. The link may be more apparent than real, but there is evidence that it is the perception that matters

for labor supply responses (Disney, 2004). Cutting this link may thus exacerbate labor market distortions. Moreover, the responsibility for social funds in many countries is shared between the government and organizations of employers and employees, raising further practical complexities.

- Conditions for the VAT to be trade-neutral are stringent. A uniform VAT applied at the same rate to all consumption items has no impact on relative consumer prices. Leaving aside possible income effects, it would thus have no effect on demand or hence on trade. But nonneutralities arise if—as is the case almost everywhere, especially in Europe—VAT rates differ sharply across commodities. Feldstein and Krugman (1990) argue, for instance, that tradables are generally taxed more heavily under the VAT than nontradables; a higher standard VAT rate then reduces the relative consumer price of nontradables, encouraging substitution out of tradables.⁴ It is unclear how realistic the presumption is, but in the EU, nine member states currently apply reduced rates to nontradable labor-intensive services. A fiscal devaluation would favor nontradables not only through the VAT effect but also through labor intensity considerations. In other cases, however, reduced rates apply to tradables, such as zero-rated food in the United Kingdom. The net direction of the impact of an increase in the VAT rate on net exports is then unclear. Nonetheless, these considerations suggest some case for focusing on raising the reduced rates. This, though, may call for compensating measures to protect low-income households, reducing the affordable reduction in the SCR.
- Compliance and timing issues also need consideration. A higher VAT rate may exacerbate tax evasion and avoidance, especially where the standard rate is already high: in Greece and Portugal the standard rate is already

⁴To the extent that nontradables tend to be labor-intensive services, this will amplify the effect though the lower SCR.

23 percent. This is another reason to focus any VAT increase on raising reduced VAT rates on specific products. On the other hand, the reduction in SCR rates would be expected to improve compliance, though on balance VAT noncompliance is likely the greater problem. If the higher VAT rate is announced in advance, consumers may bring forward consumption, with a temporary adverse impact on the current account. There is ample evidence of such effects.⁵

- The effects of a fiscal devaluation will be smaller if such a devaluation is undertaken by several countries—but the final effect could still be beneficial. As with a competitive nominal devaluation, the real impact on any country is reduced if the same reform is undertaken elsewhere. Fiscal devaluation can be seen in this light as a form of tax competition—the outcome of which is often mutually damaging. In the current context, however, a shift from SCR to the VAT may be a structural improvement, given evidence that the tax wedge on labor harms growth more than do taxes on consumption (Arnold, 2008).

What Is the Evidence?

Simulations suggest that fiscal devaluations have small but positive effects on the current account.⁶ For example:

- The Bank of Portugal (2011) uses a general equilibrium model (PESSOA) to simulate a shift from SCR to VAT equivalent to 1 percent of GDP. In the first year, this boosts total exports by 0.5 percent and improves the trade balance by 0.6 percent of GDP. After three years, the effect on the trade balance has disappeared. Yet there is a sustained modest increase in GDP and employment, caused by an expansion of labor

supply associated with a shift in the tax burden from labor to nonlabor incomes.

- The European Commission (EC) uses the QUEST model to simulate a similar shift in Portugal (In't Veld, 2011). Rescaling to a shift equivalent to 1 percent of GDP, net exports increase in the short run by 0.11 percent of GDP. The effect gradually disappears, and the long-term effect on net exports is negligible. In the long term, the reform boosts employment and GDP by almost 1 percent after five years. This assumes no compensation of social benefit recipients for the higher VAT; with compensation, the expansion of GDP and employment is 0.3 percent, although this increases to 0.6 percent if the elasticity of labor supply is doubled.
- The European Central Bank (ECB) (2011) applies its EAGLE model to simulate a fiscal devaluation in Portugal. Taking the version with a trade elasticity of 2.5, it reports an improvement in the trade balance in the second year of almost 0.2 percent of GDP (for a tax shift of 1 percent of GDP). The effect disappears after four years. The model also suggests more persistent gains in employment and GDP in the order of 0.3 percent, as in the other models.
- For France, the Ministry of Economy, Finance, and Industry (2007) finds that a 1.5-point increase in the VAT rate used to finance a general cut in social contributions raises employment by 30,000. That rises to 300,000 if focused on the lower paid.

These results, of course, are driven by the model specifications and calibrations. Is there any evidence that fiscal devaluations work in practice?⁷

⁷ Franco (2011) estimates a number of VAR equations with data from Portugal and then simulates the impact of an SCR reduction and an offsetting increase in the VAT. Scaled to a shift of 1 percent of GDP, the simulations suggest that this reform would result in a reduction of imports by 3.5 percent of GDP and a similar increase in exports. Net exports would thus expand by 7 percent of GDP—much more than in other simulation models.

⁵ See for example Keen and others (2011).

⁶ There are several notable fiscal devaluations (Denmark in 1988, Sweden in 1993, and Germany in 1997), but it is difficult to identify any causal relationship from them: Calmfors (1998) discusses.

New empirical evidence on the impact of fiscal devaluations suggests that the impact is consistent with simulation predictions (Table A1.1). Using an unbalanced panel of annual observations for 30 OECD countries between 1965 and 2009, de Mooij and Keen (2011) regress the change in net exports (in percent of GDP) against (changes in and first lag of) a series of controls⁸ and, the focus of interest, variables relating in turn to (a) the revenue from the SCR and the VAT and (b) rates of labor taxation and VAT. To allow for heterogeneity of response arising from fixed exchange rates, separate estimates are reported for observations within and outside the euro area.

There are signs that changes in both the SCR and—surprisingly—the VAT have significant trade effects, noticeably more so in the euro area. A decrease in SCR revenue is associated with a short-run increase in net exports, as expected. Moreover, the coefficients are much larger in the euro countries (column 2 of the table), and the hypothesis that both coefficients are zero is more decisively rejected. The results using tax revenue may however be subject to serious endogeneity issues: a consumption boom, for instance, might be associated with both higher VAT revenues and lower net exports, giving rise to a misleading negative correlation. In this respect, the results reported in columns (3) and (4), using rates rather than revenue (at the cost of a smaller sample size), may be preferred. Now the signs of significant tax effects are less convincing for non-euro countries, but both variables are strongly significant in the euro case. The labor tax variable now refers to the total tax wedge on wage income—not just social contributions—so the positive coefficient now found likely reflects a wider range of effects than those operating through employers' labor costs.

The results—while very preliminary—suggest that the trade effects of fiscal devaluation, while not trivial, should not be overestimated. Taking the results in column (2) of Table A1.1, for instance,

⁸ Including, for instance, unemployment and growth, the government balance, the old-age dependency ratio, and controls for unobserved time and country variation.

the effect of a revenue shift of one point of GDP from SCR to VAT is an increase in net exports of 0.443 (= 2.242 – 1.799) points of GDP. This would be permanent (the coefficient on the lagged dependent variable being insignificant), though the induced reduction in unemployment (one of the control variables) might be expected to dampen the effects over time. To perform a similar calculation from the rates equation, estimates of the base of each tax are needed. Taking Portugal, for example, a shift of the same magnitude might imply an increase in net exports—permanent, subject to the same caveat as above—of around 0.3 percent of GDP.⁹ These effects are similar to those from the simulation models: slightly larger than those of the EC and the ECB, and slightly smaller than those of the Bank of Portugal model.

These results are tentative and, as noted, econometric issues remain. Nonetheless, they reinforce the sense from both theory and simulations that fiscal devaluations can have significant effects—but large shifts are likely needed for effects to be substantial. Moreover, initial conditions may matter, in a way not captured by either simulation models or empirical estimates. As noted, in countries that combine a highly rigid labor market with a fixed exchange rate, reducing involuntary unemployment through a reduction in real wages (and boosting net exports through a real depreciation) may take a long time. A fiscal devaluation might generate especially larger benefits from the acceleration of adjustment—an effect that is not likely to be captured by the estimates above.

⁹ In Portugal, the base of the labor income taxation implied by the OECD data is around 33 percent of GDP, while the implied VAT base (the ratio of revenue to GDP divided by the standard rate) is 41 percent. So revenue neutrality requires that a reduction of one point of GDP in revenue from labor taxation, calling for a cut in the average labor tax rate of 3 percentage points, be combined with an increase of about 2.4 points in the standard rate of VAT. The point estimates then imply an increase in net exports of $-(0.286 \times 3) + (0.471 \times 2.4) = 0.27$ percent of GDP.

Appendix 2. Insights for Privatization Plans from Previous Large Episodes

This appendix analyzes past privatization episodes with a view to providing insights for current and future privatization plans.¹ While past privatizations were often motivated by prospects of enhancing efficiency, governments facing fiscal pressures privatized to raise revenues—though the government's net worth increases only if the firms being sold are more efficient, and thus more valuable, when they are operated by the private sector rather than being in public hands.

The analysis is based on proceeds from privatization transactions estimated by the World Bank for 116 developing countries² between 1988 and 2008, and by the Privatization Barometer (PB) for 25 EU (EU25) countries between 1977 and 2009.³ Although the heterogeneity of the sources causes some data discrepancies (notably, the PB

¹ Because of data constraints, this appendix does not delve into estimation of the value of assets owned by the public sector for countries that may be considering privatization programs. However, detailed information is available from documents related to some individual countries. See, for example, *Greece—Memorandum of Economic and Financial Policies*, Annex III, Privatization Plan, July 13, 2011, www.imf.org.

² The World Bank data are drawn from various sources: OECD data on privatization in Africa, European Bank for Reconstruction and Development data on privatization in Europe and Central Asia, the Privatization Barometer (<http://www.privatizationbarometer.net/database.php>) for other select European countries, Latin Finance and Privatization International, the Private Participation in Infrastructure database, various government websites, and the World Bank's own internal database. This increases the probability of data discrepancies, as different databases may have calculated the proceeds in different ways.

³ For eight countries covered by both data sources, the PB data are used. No comparable data are available for advanced economies outside the EU. In most cases the estimates are larger when drawn from the World Bank (gross receipts) rather than the PB (net receipts) data set. The PB and World Bank figures could differ from those produced by the national authorities.

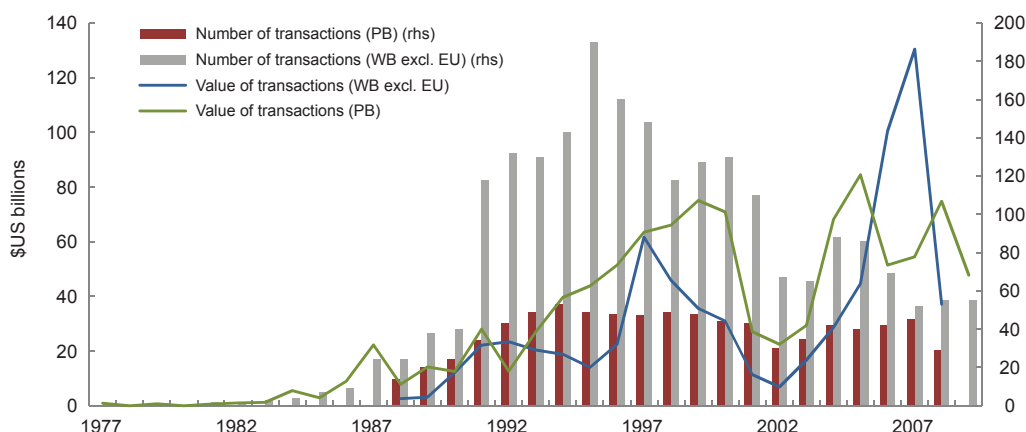
uses revenues net of privatization and restructuring costs, whereas for the most part the World Bank uses gross revenues), the data reveal some important overall trends: (i) privatization activity is not stable but evolves in waves, dropping off after 1997 but picking up, albeit modestly, in recent years; (ii) the average size of a transaction has increased over the years as countries have moved toward privatizing larger firms; (iii) in nominal terms, privatization proceeds are highly concentrated in a few large countries, but relative to GDP, proceeds are often more significant in small countries; (iv) the largest transactions are concentrated in the telecommunications and energy sectors, including utilities and the petroleum industry; (v) many but certainly not all large privatization episodes are related to the transition process of former socialist economies.

Overall Magnitude of Privatization Proceeds

Privatization has been widely adopted by governments around the world, with an estimated US\$2 trillion raised since 1977 (Megginson, 2010), of which US\$1 trillion stemmed from the EU25 and over US\$700 billion from non-European developing and emerging economies as covered by the World Bank (Figure A2.1). There have been two major peaks in transaction volumes in the past 20 years, one in the late 1990s (1997–2000) and one that began in the mid-2000s (starting in 2004). While the value of proceeds has been higher in the second peak period, the number of transactions has been significantly lower than during the first peak. Average annual transaction receipts increased from US\$0.9 billion to US\$1.7 billion between the two periods. Proceeds in emerging economies of Latin America rose sharply in the later part of the 1990s, with the largest share coming from Argentina, Brazil, and Mexico. In more recent years, emerging countries in Asia and Europe, mainly China and Russia, have become the driving forces in global privatization efforts (Figure A2.2).

To focus on episodes of privatization that yielded sizable revenues, a systematic search was conducted

Figure A2.1

Number and Value of Privatization Transactions

Sources: World Bank; and Privatization Barometer (see note 2 in text).

Note: PB = Privatization Barometer; WB = World Bank. Value data refer to scale on left axis; number data refer to scale on right axis. See text for scope of coverage of each data set.

for all nonoverlapping, country-specific 5-year windows with privatization proceeds of more than 5 percent of GDP.⁴ Over the past 20 years, out of the 141 countries included in the sample, 65 experienced at least one privatization episode with revenues of more than 5 percent of GDP. Eighteen countries had two nonoverlapping episodes, and Bulgaria had three.

Privatization episodes were especially pronounced in a few countries. Twelve countries experienced privatization episodes with receipts of more than 15 percent of GDP over five years. While proceeds from privatization have been sizable revenue sources as a share of GDP for several advanced economies, they have been even larger for transition, developing, and emerging economies (Table A2.1). More specifically, among advanced economies, the largest privatization proceeds within a 5-year window accrued to Portugal (15.7 percent of GDP, with an additional, adjacent window yielding another 7.9 percent of GDP). Eight other advanced economies collected proceeds in excess of 5 percent of GDP within five years. The largest proceeds within 5-year windows accrued to transition economies where most property was formerly owned by the government (Table A2.1) (see also Shafik, 1995). The

⁴ Data on revenues are scaled on a transaction-by-transaction basis using country-specific GDP for the year in which the respective transaction occurred.

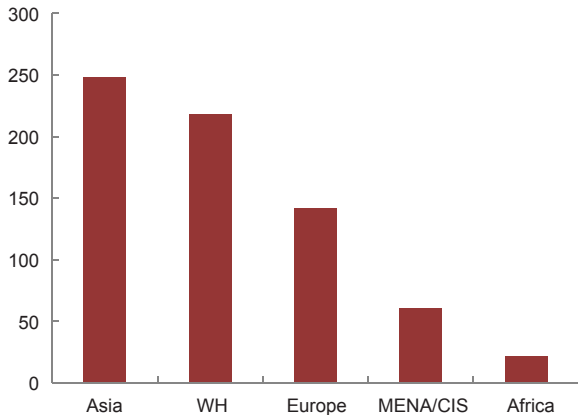
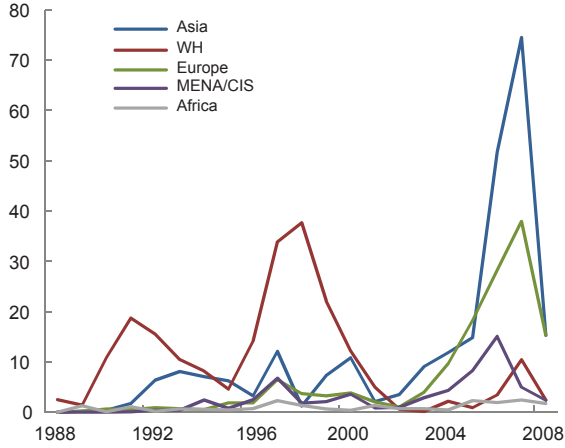
magnitude of proceeds for these countries underlines that privatizations have been an important element in the process of economic liberalization. The single largest episodes occurred in Kazakhstan and Latvia, each collecting more than 30 percent of privatization proceeds between 1994 and 1998.⁵ Among other economies, too, both developing and emerging, proceeds from privatization were sizable. In some cases they were related to a small number of large transactions (for example, Bolivia generated proceeds of 20 percent of GDP in a single transaction when granting 8-year exploitation rights for an iron ore deposit). In other cases they stemmed from many transactions (for example, Zambia accumulated proceeds of 23 percent of GDP over a 5-year period with close to 50 transactions, of which the largest accounted for less than 7 percent of GDP).

A Closer Look at Privatization Episodes in Advanced Europe

As data on privatization transactions are available at the sectoral and firm level for a large sample of European countries, additional information can be obtained for them regarding the sectors that have accounted for most revenues.

⁵ In Kazakhstan, 20 percent of GDP was generated by the privatization of one single asset in the oil industry.

Figure A2.2
Value of Privatization Transactions in Developing and Emerging Economies (Excluding–EU25 Countries), 1988–2008
 (\$US billions)

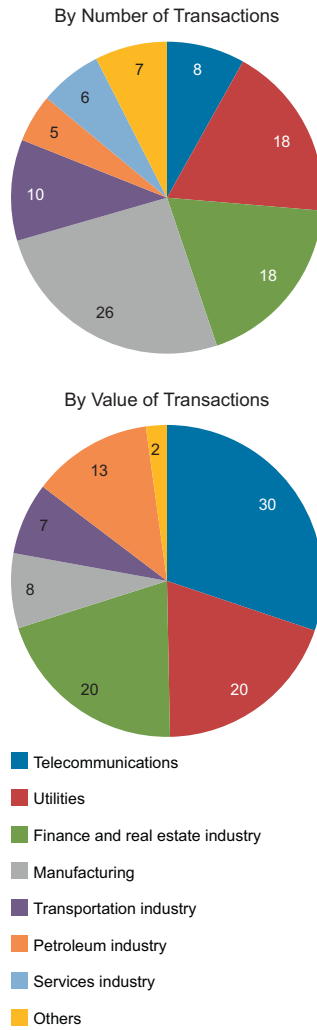


Sources: World Bank; and Privatization Barometer (see note 2 in text).
 Note: WH denotes Western Hemisphere; MENA/CIS denotes Middle East and North Africa/Commonwealth of Independent States.

Privatizations occurred in all sectors and industries. However, the bulk of revenues came from telecommunications, utilities, manufacturing, and the finance and real estate industry. Generally, assets in the manufacturing and industrial sectors and financial institutions were sold in the earlier stages of privatization, whereas privatization in telecommunications, energy, transport, and utilities typically occurred in later stages.

Many privatization efforts took place in relatively short time windows. Transactions included in the high-earning episodes generated about 45 percent of total privatization proceeds in the

Figure A2.3
EU25: Composition of Privatization Transactions by Industry, 1977–2009



Sources: Privatization Barometer; and IMF staff calculations.

EU25. In terms of volume, the highest number of transactions was in the manufacturing sector (26 percent), followed by the finance and real estate industry and utilities (at 18 percent each) (Figure A2.3). Most of the sales revenues, however, came from telecommunications sales, which generated the highest average transaction value and accounted for about one-third of proceeds since 1977.⁶

⁶The sectoral composition of the value of high-earning episodes in the EU25 is derived by first calculating the sector's contribution (in percent) to the value of proceeds for each country, and then taking a simple average of the percentage values across countries.

Table A2.1

Largest 5-Year Windows of Privatization Receipts

Country	Window I	Revenue (% of GDP)	Window II	Revenue (% of GDP)	Window III	Revenue (% of GDP)
<i>Advanced economies</i>						
Portugal	1996–2000	15.7	1991–1995	7.9		
Finland	1996–2000	9.4	2003–2007	5.7		
Italy	1997–2001	7.0				
United Kingdom	1987–1991	6.7				
Spain	1995–1999	6.2				
Greece	1998–2002	6.1				
Ireland	1995–1999	5.8				
Sweden	1997–2001	5.8	2005–2009	5.7		
France	2004–2008	5.1				
<i>Transition economies</i>						
Kazakhstan	1994–1998	35.6	2002–2006	5.1		
Latvia	1994–1998	33.2				
Slovakia	2000–2004	29.9				
Georgia	2004–2008	26.1				
Bulgaria	1997–2001	25.4	2002–2006	14.4	1992–1996	5.5
Serbia	2002–2006	23.4				
Hungary	1995–1999	14.4	2003–2007	6.9		
Armenia	1996–2000	14.2	2002–2006	7.3		
Czech Republic	2001–2005	13.5	1995–1999	6.7		
Macedonia, FYR	1997–2001	13.0	2003–2007	6.7		
Romania	2003–2007	12.5	1995–1999	5.1		
Malta	1998–2002	12.1	2005–2009	5.3		
Croatia	1999–2003	11.4				
Lithuania	1996–2000	10.5	2002–2006	6.4		
<i>Other economies</i>						
Zambia	1994–1998	23.0				
Bolivia	2004–2008	20.0	1995–1999	16.1		
Peru	1994–1998	17.4				
Argentina	1990–1994	16.6	1995–1999	7.9		
Cape Verde	1995–1999	15.5				
Malaysia	1991–1995	14.8				
Morocco	2000–2004	14.4	1995–1999	6.8		
Panama	1995–1999	13.7				
Egypt	2004–2008	12.3	1995–1999	5.4		
Belize	1988–1992	11.7	1998–2002	10.3		
Nicaragua	1990–1994	11.1	2000–2004	5.5		
Jordan	2000–2004	10.2				
Ghana	1993–1997	10.0				

Sources: 2011 Privatization Barometer; and IMF staff calculations.

Note: Transition economies at the time that the privatization episodes began.

Privatizations of utility and financial companies generated a combined total of 40 percent of the proceeds. (The largest single transaction in the EU25 was France's privatization of Gaz de France, generating US\$21 billion.) Sales in the petroleum industry were important, contributing 13 percent of revenues.

Conclusion

Proceeds from privatization have been substantial in all parts of the world. Sizable revenues have been collected by several advanced economies within a limited number of years, and even larger amounts

(as a share of national income) have accrued to transition, developing, and emerging economies. Of course, unless the act of privatization changes the value of the asset being sold, the sale involves only the exchange of one asset for another one of equal value, with no impact on the net worth of the public sector. Even in these circumstances, however, the swap of less liquid for more liquid assets (which could, in turn, be used to pay down the gross debt) can significantly reduce financial risks for the government. Implementation challenges include the need to ensure that the privatization process is transparent to avoid corruption and that the assets are sold at a fair price.

Appendix 3. The Importance of Monitoring Both Gross and Net Debt

In view of sizable variation in the level of sovereign assets across countries and over time, it is important to consider both gross and net debt when conducting analysis of fiscal policy and its sustainability (for definitions, see Box A3.1). Indeed, as routinely reported in the Statistical Appendix Tables to the *Fiscal Monitor*, some countries have very large asset holdings (e.g., Japan, Norway, and Saudi Arabia) and, as reported in

the main text, asset purchases or sales in several countries have recently been reflected in significant changes in gross debt (see also Appendix 2 for revenues from privatizations).

Even at the aggregate level, changes in gross and net debt have also differed during the economic crisis. For advanced economies on average, gross debt has increased to a greater extent than net debt during the last three years. Part of the debt increase has been offset by a buildup of financial assets—including from financial sector support operations. Over the next five years, the opposite is expected: net debt is projected to increase faster than gross

Box A3.1

Debt Measures

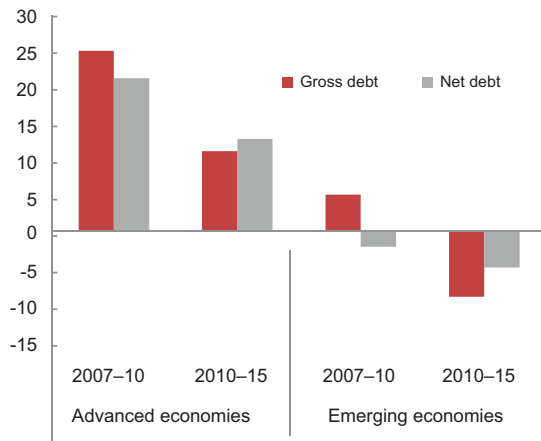
The analysis uses the following definitions:

- *Gross debt.* This captures all liabilities held in debt instruments (financial claims that require future payments of interest and/or principal by the debtor to the creditor). Under international statistical definitions, liabilities arising from equity and investment fund shares, financial derivatives, and employee stock options, as well as most contingent liabilities, are excluded from debt. The debt should be consolidated across government units so that any debt liability issued by one government unit but held by another government unit as a financial asset is netted out. One-off debt guarantees are not included in gross debt under the classification of 2001 *Government Finance Statistics Manual* (GFSM), unless the guarantee is called. Liabilities arising from promises to pay future pensions and other social security benefits are not included in debt (although on the asset side, holdings of pension funds may be reflected); it is recommended, however, that obligations for social security schemes be shown as a memorandum item. There is one exception to this: liabilities related to pension schemes for government or public sector employees are included in gross debt.
- *Net debt.* This measure of net debt, following international statistical definitions, includes only financial assets held in debt instruments (excluding equity and financial derivatives). This avoids complications related to equity such as the difficulties of projecting future earnings. However, for countries with large equity holdings, this could present a misleading picture of their fiscal sustainability.
- *Debt, net of liquid assets.* This subset of net debt includes only assets held in the most liquid instruments. In most countries, this would include currency and deposits on the asset side. In some cases other securities held for debt management purposes could also be included. Most countries would be able to report these data.
- *Net financial liabilities.* This measure is defined as financial liabilities minus financial assets. It is equivalent to net financial worth, but with an opposite sign for convenience in the fiscal sustainability analysis. Balance sheet data are generally available for advanced economies, but data availability is a more serious constraint for most low-income and emerging market economies.

GFSM 2001 and the *Public Sector Debt Statistics Guide* (IMF, forthcoming) provide guidance on international statistical definitions and concepts.

Figure A3.1

Change in General Government Debt (Percent of GDP)



Sources: IMF staff estimates and projections.

Note: Weighted averages by GDP at purchasing-power parity.

debt, reflecting a decline in financial assets. In emerging economies, while gross debt increased, net debt declined slightly in the last three years, implying that holdings of financial assets increased (Figure A3.1).

Fiscal sustainability is commonly assessed by reference to gross debt. Data on gross debt are readily available, thereby facilitating fiscal monitoring and cross-country analysis. Gross debt also provides a better measure of fiscal vulnerabilities related to short-term liquidity and borrowing needs. Moreover, using gross debt in the sustainability analysis does not ignore the contribution from assets that have positive yields, as these bolster the capacity to service debt.

But there is a conceptual case for also conducting the fiscal analysis on a net basis. Focusing only on gross debt will not present a full picture of fiscal sustainability: a given level of debt is likely to be more sustainable in a country with large assets than in a country with few assets. When a government holds financial assets that can be used to service its liabilities, it is logical to include these in a sustainability assessment. Moreover, taking account of both liabilities and assets better reflects the cumulative consequences of past budget

deficits and therefore facilitates a more complete reconciliation between stocks and flows in the fiscal accounts (see Appendix 4).

There are definitional differences across countries in the type of assets underpinning the net debt data. For some countries, the net debt data reported follow the *Government Finance Statistics Manual* (GFSM) 2001 definition accounting for all financial assets held in debt instruments. But more often, a narrower definition of net debt is applied taking account only of deposits on the asset side. Data constraints usually necessitate this more narrow focus, notably in emerging and low-income countries. Less commonly, for some countries the data reported actually reflect net financial liabilities taking account of all financial assets (including equity holdings) and liabilities.

The statistical international definitions of net debt and net financial worth provide a clear view on what assets to include. *Net debt* is calculated as gross debt minus financial assets corresponding to debt instruments (Box A3.1). Financial assets (and liabilities) that are not held in debt instruments—such as equity, investment fund shares, and financial derivatives—are excluded. *Net financial worth*, in contrast, is calculated as financial assets minus liabilities, including nondebt instruments such as equity and investment fund shares and financial derivatives. In some countries, data availability makes it necessary to focus on a subset of net debt, by including only very liquid assets such as government deposits.

Limiting the attention to assets and liabilities in debt instruments may be too restrictive for economic analysis. Intuitively, all financial assets that are liquid, marketable, valued appropriately, and available to meet future debt obligations should be taken into account. This would suggest that a wider focus on net financial worth may be appropriate for some countries. Liabilities and asset holdings are generally consolidated so that cross-holdings of instruments across different units are netted out. However, this is not always the case. For example, Japan does not fully consolidate intragovernment holdings (see Box A3.2).

Box A3.2

Fiscal Balance Sheet Concepts: An Illustration Using Japan's Data

The difference between gross debt and net debt is particularly large for Japan. This box explains the difference using publicly available data from the Japanese national accounts for fiscal year 2009 and the concepts discussed in Box A3.1.¹

At the end of FY2009, total financial liabilities for the general government amounted to 216 percent of GDP (on an unconsolidated basis). Gross debt, which is equal to total financial liabilities excluding nondebt liabilities (that is, shares and other equity) amounted to 210 percent of GDP. Japan also has substantial holdings of financial assets. Net financial liabilities, which are equal to financial liabilities minus financial assets, amounted to 107 percent of GDP. Net debt, which is calculated by subtracting from gross debt all assets in the form of debt instruments (that is, all assets except shares and other equities) was equal to 125 percent of GDP.

Some debt securities issued by the central government and the Fiscal Investment and Loan Program (FILP) are held as assets by the local governments and social security funds. Netting out cross-holdings of debt securities across the general government—which is the practice commonly followed in other countries—results in a consolidated general government gross debt equivalent to 192 percent of GDP. Consolidation has no impact on net debt, as the liabilities of one level of government have already been offset by the assets of another level in the course of calculating “unconsolidated” net debt. It is important to note that government debt securities that are held by public entities outside of the general government are not consolidated (and thus are included in the general government gross and net debt data).

¹ A complete consolidation exercise would require additional data. There may also be definitional issues related to the coverage of government, including the treatment of the Fiscal Investment and Loan Program, which are not addressed here.

Japan: Illustrative Calculation of General Government Balance Sheet Concepts
(Percent of GDP)

	Fiscal year 2009 (end-March 2010)				
	Central government	Local governments	Social security funds	Unconsolidated general government	Consolidated general government ¹
Liabilities	174.1	38.7	3.2	216.0	197.5
Loans	13.7	22.9	0.5	37.1	37.1
Securities other than shares	154.3	13.6	0.0	167.9	149.3
Shares and other equity	3.7	2.0	0.0	5.7	5.7
Others	2.4	0.2	2.7	5.4	5.4
Financial assets	50.9	15.5	42.4	108.8	90.3
Currency and deposits	5.9	4.8	6.1	16.8	16.8
Loans	10.4	1.8	1.0	13.2	13.2
Securities other than shares	2.6	0.4	22.7	25.6	7.1
Shares and other equities	9.5	8.4	5.1	22.9	22.9
Other financial assets	22.6	0.1	7.6	30.3	30.3
Net financial liabilities	123.2	23.2	-39.2	107.2	107.2
Gross debt (excluding equity) ²	...	...	...	210.4	191.8
Net debt (excluding equity) ³	...	...	...	124.5	124.5

Sources: Economic and Social Research Institute, Japanese Cabinet Office; and IMF staff estimates.

¹ Netting out central government securities and Fiscal Investment and Loan Program (FILP) bonds held by local governments and social security funds.

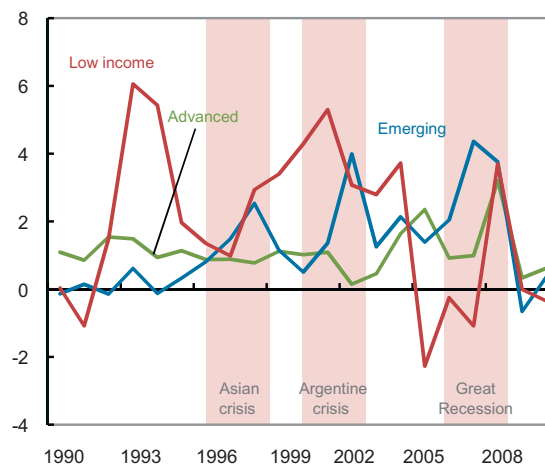
² Excluding liabilities held in shares and other equity.

³ Gross debt minus financial assets, excluding shares and other equity.

Appendix 4. Stock-Flow Adjustments and Their Determinants

Stock-flow adjustments are defined as the difference between the annual change in gross debt and the budget deficit.¹ Over the past three decades, on average, they have been positive in advanced, emerging, and low-income economies, with the latter exhibiting not only the largest stock-flow adjustments but also the greatest volatility in this residual entity (Figure A4.1, Table A4.1). Stock-flow adjustments arise for different reasons, including valuation effects through the impact of exchange rate changes on foreign-currency-denominated debt, time-of-recording effects (deficits are often measured in accrual terms while debt is a cash concept), and below-the-line operations such as privatization and transactions in financial assets. While some stock-flow adjustments are to be expected due to accounting issues, large and persistent stock-flow adjustments could be the result of inappropriate recording of budgetary operations and, if positive, could lead to ex post upward revisions of deficit levels (European Commission, 2003).

Figure A4.1
Stock-Flow Adjustments
(Percent of GDP)



Sources: Country authorities; and IMF staff estimates.

Note: Weighted averages (GDP at PPP) with moving weights.

In most countries, public debt stocks have increased more than their accumulated deficits over the past three decades. Out of the total sample of 34 advanced, 68 emerging, and 61 low-income economies, only 5 advanced, 11 emerging, and 22 low-income economies showed negative cumulative stock-flow adjustments between 1981 and 2010. This finding does not change

Table A4.1

Distribution of Stock-Flow Adjustments, 1980–2010

(Percent of GDP)

Country group	Sample	Mean	Standard deviation	Minimum	Maximum	Number of countries	Number of observations
All countries	All	2.8	11.4	-108.6	168.5	163	2,364
	Without outliers	2.6	6.5	-15.8	30.8	163	2,270
Advanced	All	2.3	4.9	-9.8	44.0	34	705
	Without outliers	2.0	3.6	-4.1	18.3	34	677
Emerging	All	2.9	9.1	-36.5	103.1	68	905
	Without outliers	2.5	5.7	-9.5	27.3	67	869
Low-Income	All	3.2	16.9	-108.6	168.5	61	754
	Without outliers	3.0	10.6	-32.5	42.9	61	724

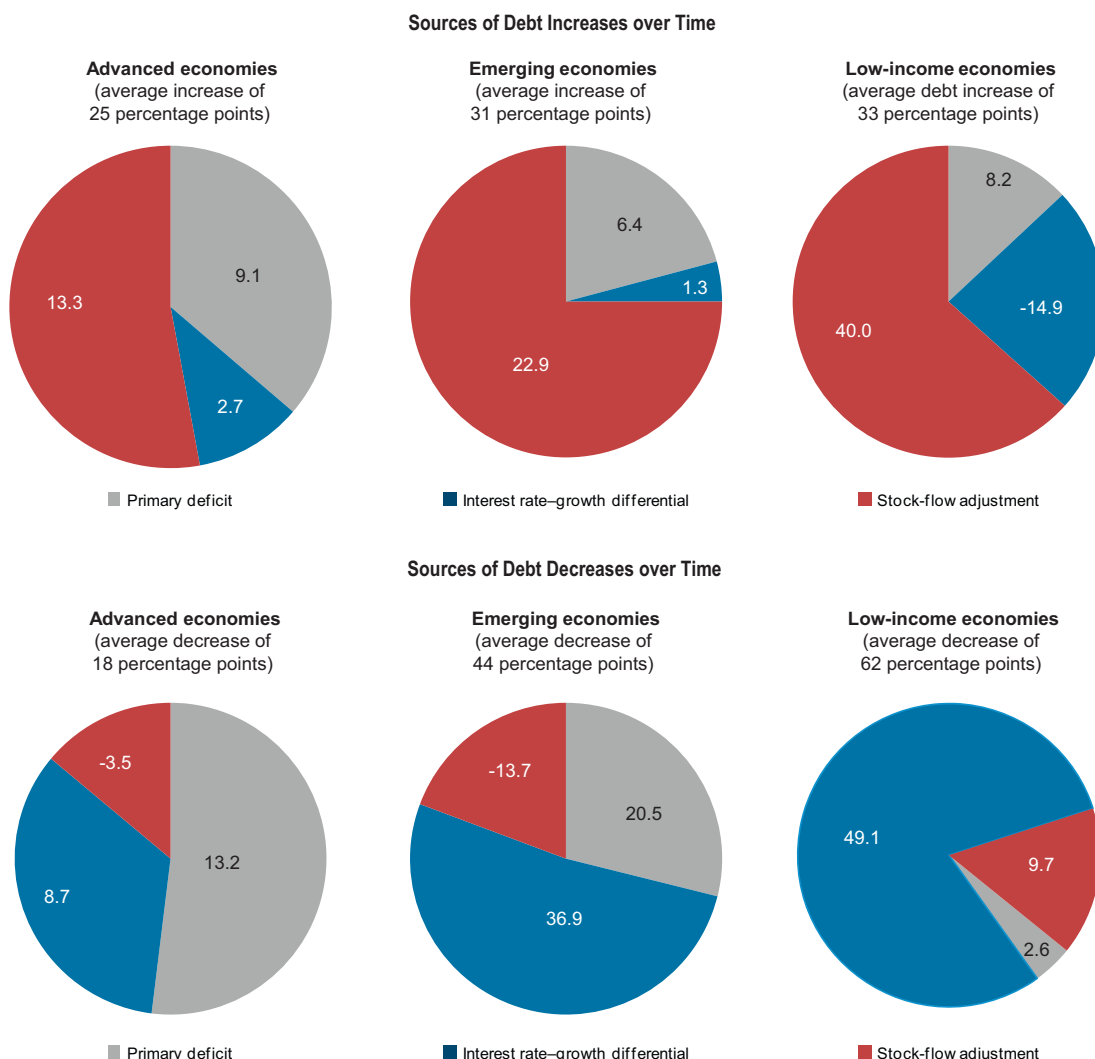
Sources: Country authorities; and IMF staff estimates.

Note: Outliers are defined as the top and bottom 2 percentiles of the stock-flow adjustments.

¹ This appendix summarizes Weber (2011).

Figure A4.2

Decomposition of Large Episodes of Debt Changes
(Percent of GDP)



Sources: Country authorities; and IMF staff estimates.

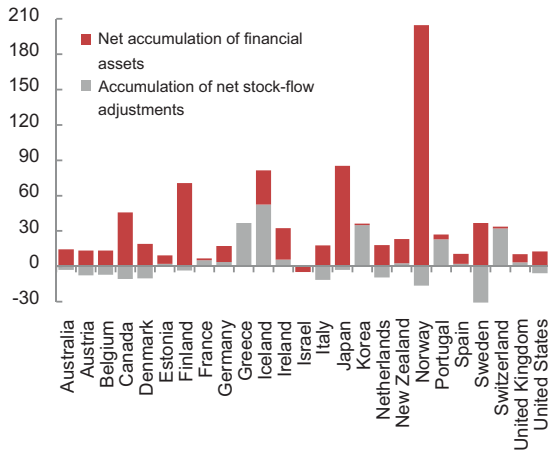
significantly when the sample concludes in 2007, with 5 advanced, 14 emerging, and 22 low-income economies not experiencing higher gross debt-to-GDP ratios than can be accounted for by their accumulated deficits and initial debt-to-GDP ratios. Thus, most countries had already experienced persistent positive stock-flow adjustments prior to the crisis period of 2008 to 2010, during which time sizable financial sector support occurred and a resurgence of accounting stratagems was observed (April 2011 *Fiscal Monitor*). For the low-

income economies, the larger number of negative cumulative stock-flow adjustments compared to the advanced and emerging economies is mainly the result of debt relief and forgiveness.

How large a role have stock-flow adjustments played in explaining large changes in the public debt ratio? Major episodes of debt changes are defined as changes of more than 10 percentage points in the gross public debt-to-GDP ratios while allowing temporary reversals, following the methodology

Figure A4.3

**Advanced Economies: Financial Assets
Accumulation and Stock-Flow Adjustments**
(Percentage of 2010 GDP)



Sources: Country authorities; and IMF staff calculations.

Note: *Accumulation of net stock-flow adjustments* measures the sum of net stock-flow adjustments between 1981 and 2010, as a percentage of 2010 GDP. Net stock-flow adjustments are defined as the difference between the change in the level of annual net debt minus the overall budget balance (in levels). *Net accumulation of financial assets* corresponds to the difference between cumulative gross stock-flow adjustments and net stock-flow adjustments.

outlined in Abbas and others (2011). Debt changes during these episodes can be decomposed into their determinants, namely, the primary deficit, the interest-growth differential, and the stock-flow adjustment.² Between 1980 and 2010, stock-flow adjustments were a significant source of debt increases, while they played only a minor role in explaining debt decreases (Figure A4.2). The average debt increase for country groups ranged from 25 percent of GDP in advanced economies to 33 percent of GDP in low-income economies, of which more than half was explained by stock-flow adjustments. While primary deficits accounted for

²The interest rate-growth differential refers to the difference between interest rates, higher values of which raise the debt ratio by pushing up the overall deficit, and output growth rates, higher values of which reduce the debt-to-GDP ratio by raising the denominator. Thus the larger the interest rate-growth differential, the faster is the growth of the debt ratio.

a substantial amount of debt increases in advanced economies, their contribution was smaller in emerging and low-income economies. The average debt decrease ranges from 18 percentage points of GDP in advanced to 62 percentage points of GDP in low-income economies. While in advanced economies, primary surpluses were the main contributor to debt reductions, in emerging and low-income economies, the combination of rapid output growth and low interest rates accounted for most of the debt decreases.

What were the main determinants of stock-flow adjustments over the past three decades? One important difference between the overall deficit and gross debt is that the latter includes financial transactions. The difference between gross and net debt data provides a measure of the magnitude of these below-the-line transactions, since government assets are netted from liabilities when compiling net debt data.

Using net debt and deficits data, the accumulated stock-flow adjustments become smaller, but remain sizable for several large advanced and emerging economies, including some among the G-20. More generally, however, data on net debt for emerging and low-income economies are scarce.

For a majority of advanced economies for which data are available, financial assets account for a large proportion of stock-flow adjustments (Figure A4.3). Countries may accumulate financial assets to invest budget surpluses instead of paying back debt. However, in countries with numerical budget balance rules, which have often received more attention than debt rules, governments may have an incentive to shift expenditure below the line in order to avoid breaching the deficit limit. These transactions could take the form of capital injections into public companies, thereby reducing spending by having it undertaken by entities excluded from the fiscal accounts (April 2011 *Fiscal Monitor*; Von Hagen and Wolff, 2006). A large majority of transactions in financial assets in the advanced economies have been positive over the last three decades (Table A4.2). Excluding banking crises, about one-third of financial asset

Table A4.2

Advanced Economies: Transactions of Financial Assets, 1980–2010*(Percent of GDP)*

	Mean	Number of countries	Number of observations
All transactions (accumulations and decumulations)	2.0	25	559
Accumulations	3.6	25	411
<i>Accumulations excluding banking crises</i>			
All	3.5	25	370
Surplus countries	6.8	7	97
Numeric budget balance rules and deficit	2.0	14	94

Sources: Country authorities; IMF Fiscal Affairs Department, Fiscal Rules Database; Fiscal Policy and Surveillance Division (2009); and IMF staff calculations.

Note: Surplus countries are Denmark, Estonia, Finland, Korea, Norway, New Zealand, and Sweden.

Table A4.3

Unbalanced Fixed-Effects Panel Regressions, 1980–2010, with Stock-Flow Adjustments as the Dependent Variable*(Percent of GDP)*

	Advanced	Emerging and low-income
Constant	–0.89 (0.47)*	1.66 (0.38)***
Inflation	0.06 (0.06)	0.18 (0.03)***
Valuation effect	0.00 (0.00)	0.75 (0.06)***
Debt forgiveness or reduction		–0.46 (0.06)***
Banking crises	5.33 (0.70)***	3.92 (1.84)**
R^2 (within)	0.17	0.19
R^2 with country fixed effects	0.12	0.24
Number of observations	313	1,316
Number of countries	20	102

Sources: *World Economic Outlook*; World Bank Global Development Finance Database; OECD; *International Financial Statistics*; and IMF Financial Crisis Episodes Database (Laeven and Valencia, 2010).

Note: The definition of stock-flow adjustments follows from the basic debt accumulation equation: $\frac{Debt_t - Debt_{t-1}}{NGDP_t} = \frac{Deficit_t}{NGDP_t} + \frac{SF_t}{NGDP_t}$, where

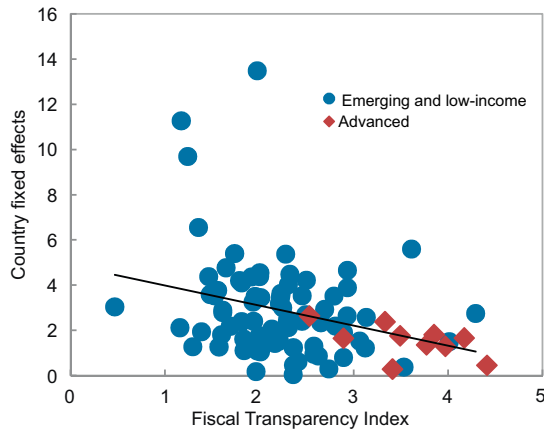
Debt denotes net debt for the advanced economies and gross debt for the emerging and low-income economies, *Deficit* denotes the overall budget deficit, *SF* denotes the stock-flow adjustment, and *NGDP* denotes nominal GDP. *Valuation effect* refers to the percentage change in the real effective exchange rate interacted with the public sector debt denominated in foreign currency (in percent of GDP); a positive change denotes exchange rate depreciation. *Debt forgiveness or reduction* refers to the total amount of debt that is forgiven or reduced. In the advanced economies, *Banking crises* denotes the total fiscal costs of a particular banking crisis spread equally over its duration. For emerging and low-income economies, for which detailed data on fiscal costs are not as widely available, *Banking crises* is a dummy variable that takes a value of 1 during a banking crisis. Robust standard errors in parentheses.

*significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level.

accumulations occurred in countries that were experiencing budget surpluses on average and had relatively small debt levels. About one-third of

financial asset accumulations took place in countries with numeric budget balance rules that were experiencing deficits at the same time. Thus there

Figure A4.4
Fiscal Transparency and Fixed Effects



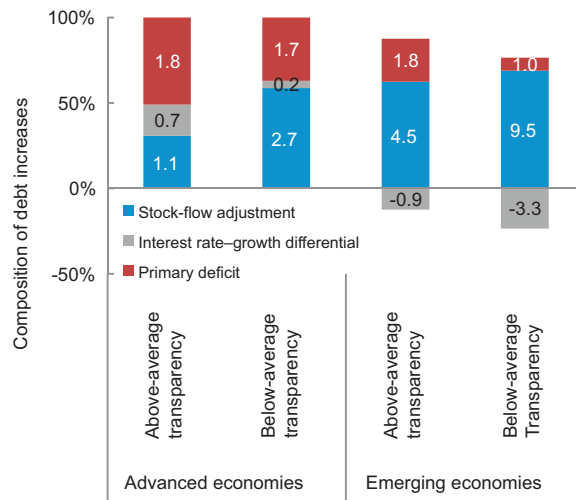
Source: IMF staff calculations.
 Note: Higher values of the Fiscal Transparency Index denote greater fiscal transparency. Absolute values of fixed effects for each country from panel regressions where stock-flow adjustments are derived from gross debt.

were a number of episodes during which countries may have had an incentive to revert to creative accounting practices.³

Econometric analysis also suggests that for the advanced economies over 1980–2010, in addition to the net accumulation of financial assets, fiscal costs arising from banking crises significantly contributed to stock-flow adjustments. In emerging and low-income economies, on the other hand, banking crises, valuation effects—primarily, changes in the domestic currency value of the public debt stock arising from exchange rate fluctuations—and debt forgiveness or reduction were the main determinants of stock-flow adjustments (Table A4.3). There are significant differences in the average stock-flow adjustments across countries that cannot be explained by the included variables in the above regressions but instead reflect country-specific characteristics (“country fixed effects” in regression analysis). Greater fiscal transparency—defined as openness toward the public at large about government structure and functions, fiscal policy intentions, public sector accounts and projections (IMF, 2007)—is associated with lower

³ See the April 2011 *Fiscal Monitor* for examples of accounting stratagems applied by some governments.

Figure A4.5
Fiscal Transparency and Composition of Debt Increases, 1980–2010



Source: IMF staff calculations.
 Note: Debt increases refer to any positive change in gross debt between 1980 and 2010. Data labels provide the mean of the components of debt increases for advanced, emerging, and low-income economies. Above- (below-) average transparency refers to groups of countries with Fiscal Transparency Index values above (below) the average of their peer groups (i.e., advanced or emerging economies). Higher values of the Fiscal Transparency Index denote greater fiscal transparency.

values of these country-specific characteristics (Figure A4.4). In general, fiscal transparency is higher in advanced economies than in emerging economies and low-income countries, and, correspondingly, country fixed effects in advanced economies are lower.⁴ Moreover, within each group, countries with above-average fiscal transparency also have lower stock-flow residuals (Figure A4.5). The interpretation is that fiscal transparency allows better scrutiny of fiscal accounts and thus decreases the ability of governments to use accounting stratagems and low-quality statistical systems, thereby lowering stock-flow adjustments. However, causation could also run in the other direction, in that governments that are not subject to these political incentives and data limitations may be more willing to be fiscally transparent.

⁴ For this analysis, an index of fiscal transparency is constructed, combining two sources: the fiscal transparency Report on Observance of Standards and Codes (see Hameed, 2005) and Dabla-Norris and others (2010).

Methodological and Statistical Appendix

This appendix comprises four sections: fiscal policy assumptions, data and conventions, economy groupings, and statistical tables. The assumptions underlying the estimates and projections for 2011–16 are summarized in the first section. The second section provides a general description of the data and of the conventions used for calculating economy group composites. The classification of countries in the various groups presented in the *Fiscal Monitor* is summarized in the third section. The fourth section provides a list of the three-letter country acronyms as well as the definition of other acronyms used throughout the text. The last section comprises the statistical tables on key fiscal variables. Data in these tables have been compiled on the basis of information available through September 2011.

Fiscal Policy Assumptions

The historical data and projections of key fiscal aggregates are in line with those of the September 2011 WEO, unless highlighted. For underlying assumptions, other than on fiscal policy, see the September 2011 WEO.

The short-term fiscal policy assumptions used in the WEO are based on officially announced budgets, adjusted for differences between the national authorities and the IMF staff regarding macroeconomic assumptions and projected fiscal outturns. The medium-term fiscal projections incorporate policy measures that are judged likely to be implemented. In cases where the IMF staff has insufficient information to assess the authorities' budget intentions and prospects for policy implementation, an unchanged structural primary balance is assumed, unless indicated otherwise. The specific assumptions relating to selected economies follow.

Argentina. The 2011 forecasts are based on the 2010 outturn and IMF staff assumptions. For the outer years, the IMF staff assumes unchanged policies.

Australia. Fiscal projections are based on the 2011–12 budget.

Austria. Projections assume compliance with the expenditure ceilings of the federal financial framework law for 2012–15.

Belgium. IMF staff projections for 2011 and beyond are based on unchanged policies. The 2011 projections, however, include some of the planned measures for the 2011 federal budget. For local governments, unchanged policies imply the continuation of their electoral cycle.

Brazil. The 2011 forecast is based on the budget law, the spending reduction package announced by the authorities earlier this year, and IMF staff assumptions. For 2012 and outer years, the IMF staff assumes adherence to the announced primary target and a further increase in public investment in line with the authorities' intentions.

Canada. Projections use the baseline forecasts in the latest Budget 2011—A Low-Tax Plan for Jobs and Growth, tabled on June 6, 2011. The IMF staff makes some adjustments to this forecast for differences in macroeconomic projections. The IMF staff forecast also incorporates the most recent data releases from Finance Canada (Update of Economic and Fiscal Projections, October) and Statistics Canada, including federal, provincial, and territorial budgetary outturns through the end of 2011:Q1.

China. For 2010, the government is assumed to continue and complete the stimulus program it announced in late 2008, and so there is no significant fiscal impulse. The withdrawal of the stimulus is assumed to start in 2011, resulting in a negative fiscal impulse of about 1 percent of GDP (reflecting both higher revenue and lower spending).

Denmark. Projections for 2010–11 are aligned with the latest official budget estimates and the underlying economic projections, adjusted where appropriate for the IMF staff's macroeconomic assumptions. For 2012–16, the projections incorporate key features of the medium-term fiscal plan as embodied in the

authorities' 2009 Convergence Program submitted to the European Union.

France. Estimates for the general government in 2010 reflect the actual outturn. Projections for 2011 and beyond reflect the authorities' 2011–14 multiyear budget, adjusted for differences in assumptions on macro and financial variables, and revenue projections.

Germany. The estimates for 2010 are preliminary estimates from the Federal Statistical Office of Germany. The IMF staff's projections for 2011 and beyond reflect the authorities' adopted core federal government budget plan adjusted for the differences in the IMF staff's macroeconomic framework and staff assumptions on the fiscal developments in state and local governments, social insurance system, and special funds. The estimate of gross debt at end-2010 includes portfolios of impaired assets and noncore business transferred to winding up institutions.

Greece. Macroeconomic, monetary, and fiscal projections for 2011 and the medium term are consistent with those under the EU/IMF-supported program. Fiscal projections assume a strong front-loaded fiscal adjustment, which already started in 2010, but will be followed through with further measures in 2011–15 in line with the Medium-Term Fiscal Strategy. Growth is expected to bottom out in late 2010 and gradually rebound after that, coming into positive territory in 2012. Deposits outflows are expected to continue through 2012, and credit to contract as banks deleverage. The data include fiscal data revisions for 2006–09. These revisions rectify a number of shortfalls with earlier statistics. First, government-controlled enterprises in which sales cover less than 50 percent of production costs have been reclassified into the general government sector, in line with Eurostat guidelines. A total of 17 such enterprises or entities were identified and included, including a number of large loss-making entities. The inclusion implies that the debt of these entities (7¼ percent of GDP) is now included in headline general government debt data, and their annual losses increase the annual deficit (to the extent their called guarantees were

not already reflected). Second, the revisions reflect better information on arrears (including tax refund arrears, arrears on lump sum payments to retiring civil servant pensioners, and arrears to health sector suppliers), as well as corrections of social security balances on account of corrections of imputed interest payments, double counting of revenues, and other inaccuracies. Finally, new information on swaps also became available and further helps explain the upward revision in debt data.

Hong Kong SAR. Projections are based on the authorities' medium-term fiscal projections.

Hungary. Fiscal projections are based on IMF staff projections of the macroeconomic framework, the impact of existing legislated measures, and fiscal policy plans as announced by mid-2011.

India. Historical data are based on budgetary execution data. Projections are based on available information about the authorities' fiscal plans, with adjustments for the IMF staff's assumptions. Subnational data are incorporated with a lag of up to two years; general government data are thus finalized long after central government data. The IMF presentation differs from Indian national accounts data, particularly regarding divestment and license auction proceeds, net versus gross recording of revenues in certain minor categories, and some public sector lending.

Indonesia. The 2011 deficit is estimated at 1.3 percent of GDP, lower than the budget estimate of 2.1 percent of GDP. While higher oil prices will have a negative budgetary impact in the absence of fuel subsidy reform, this effect is likely to be offset by underspending, in particular on public investment, given significant budgeted increases. Fiscal projections for 2012–16 are built around key policy reforms needed to support economic growth, namely, enhancing budget implementation to ensure fiscal policy effectiveness, reducing energy subsidies through gradual administrative price increases, and continuous revenue mobilization efforts to increase space for infrastructure development. A preliminary adjustment is also made for the reduction in interest rates on EU financing

agreed on July 21 by the European Council (see the Alternative Scenario in Annex I of the IMF staff report for Ireland's Third Review under the Extended Arrangement).

Ireland. The fiscal projections are based on the 2011 budget and the medium-term adjustment envisaged in the December 2010 EU/IMF-supported program, as modified by the May 2011 Jobs Initiative, which include a total of €15 billion in consolidation measures over 2011–14, with €6 billion in savings programmed for 2011. The fiscal projections are adjusted for differences in macroeconomic projections between the IMF staff and the Irish authorities. The new government that assumed office in early March 2011 has also committed to the 2011–12 fiscal program and to further consolidation in the medium term.

Italy. The fiscal projections incorporate the impact of the July 2010 fiscal adjustment measures for 2011–13 and July–August 2011 fiscal adjustment packages for 2011–14 (the August package is based on the government's decree approved on August 13, 2011). The estimates for 2010 are the preliminary outturn data from the Italian National Institute of Statistics (Istat). The IMF staff projections are based on the authorities' estimates of the policy scenario (as derived, in part, by the IMF staff), including the above-mentioned medium-term fiscal consolidation packages, and adjusted mainly for differences in macroeconomic assumptions and for less optimistic assumptions concerning the impact of revenue administration measures. After 2014, a gradually deteriorating cyclically adjusted primary balance net of one-time items is assumed, with the primary surplus remaining below 5 percent of GDP.

Japan. The projections assume fiscal measures already assumed by the government and gross reconstruction spending of about 1 percent of GDP in each of 2011 and 2012 (total of 2 percent of GDP). The medium-term projections assume that expenditure and revenue of the general government are adjusted in line with current underlying demographic and economic trends (excluding fiscal stimulus and reconstruction spending).

Korea. The fiscal projections assume that fiscal policies will be implemented in 2011 as announced by the government. Projections of expenditure for 2011 are about 3 percent lower than the budget, taking into account the authorities' historically conservative budget assumptions. Revenue projections reflect the IMF staff's macroeconomic assumptions, adjusted for discretionary revenue-raising measures included in the 2009 and 2010 tax revision plans. The medium-term projections assume that the government will continue with its consolidation plans and balance the budget (excluding social security funds) by 2013, while the government's medium-term goal is to achieve balanced finance by 2013–14.

Mexico. Fiscal projections are based on (1) the IMF staff's macroeconomic projections; (2) the modified balanced-budget rule under the Fiscal Responsibility Legislation, including the use of the exceptional clause; and (3) the authorities' projections for spending, including that for pensions and health care, and for wage restraint. For 2012, projections assume a deviation of 0.2 percent of GDP from the balanced-budget rule in line with the 2012 proposed budget and compliance with the rule in 2013.

Netherlands. Fiscal projections for 2010–15 are based on the Bureau for Economic Policy Analysis budget projections, after adjusting for differences in macroeconomic assumptions. For 2016, the projection assumes that fiscal consolidation continues at the same pace as for 2015.

New Zealand. Fiscal projections are based on the authorities' 2011 budget and IMF staff estimates. The New Zealand fiscal accounts switched to generally accepted accounting principles beginning in fiscal year 2006/07, with no comparable historical data.

Portugal. 2011 and medium-term fiscal projections reflect the authorities' commitments under the EU/IM-supported program.

Russian Federation. Projections for 2011–13 are based on the non-oil deficit in percent of GDP implied by the approved 2011–13 medium-term budget,

the 2011 supplemental budget, and an assumed second supplemental budget for 2011, and on the IMF staff's revenue projections. The IMF staff assumes an unchanged non-oil federal government balance in percent of GDP during 2013–16.

Saudi Arabia. The authorities base their budget on a conservative assumption for oil prices—the 2011 budget is based on a price of US\$54 a barrel—with adjustments to expenditure allocations considered in the event that revenues exceed budgeted amounts. IMF staff projections of oil revenues are based on WEO baseline oil prices discounted by 5 percent, reflecting the higher sulfur content in Saudi crude oil. Regarding non-oil revenues, customs receipts are assumed to grow in line with imports, investment income in line with the London Interbank Offered Rate (LIBOR), and fees and charges as a function of non-oil GDP. On the expenditure side, wages are assumed to rise at a natural rate of increase in the medium term, with adjustments for recently announced changes in the wage structure. In 2013 and 2016, 13th-month pay is awarded based on the lunar calendar. Transfers are projected to increase in 2011 primarily due to a one-time transfer to specialized credit institutions and a two-month salary bonus. Interest payments are projected to decline in line with the authorities' policy of reducing the outstanding stock of public debt. Capital spending in 2011 is projected to be about 25 percent higher than in the budget approved in December 2010, and in line with the priorities established in the authorities' Ninth Development Plan. Recently announced capital spending on housing is assumed to start in 2012 and continue over the medium term.

Singapore. For fiscal year 2011/12, projections are based on budget numbers. For the remainder of the projection period, the IMF staff assumes unchanged policies.

South Africa. Fiscal projections are based on the authorities' 2011 budget and policy intentions stated in the Budget Review, adjusted for the IMF staff's macroeconomic projections.

Spain. The 2010 numbers are the authorities' estimated outturns for the general government

for the year. For 2011 and beyond, the projections are based on the 2011 budget, new measures implemented during the course of 2011, and the authorities' medium-term plan, adjusted for the IMF staff's macroeconomic projections.

Sweden. Fiscal projections for 2011 are in line with the authorities' projections. The impact of cyclical developments on the fiscal accounts is calculated using the OECD's latest semielasticity.

Switzerland. Projections for 2011–16 are based on IMF staff calculations, which incorporate measures to restore balance in the federal accounts and strengthen social security finances.

Turkey. Fiscal projections assume that the authorities' 2011–13 Medium-Term Program budget balance targets will be exceeded by saving amnesty-related revenue and partially saving revenue overperformance in excess of their Medium-Term Program projections.

United Kingdom. Fiscal projections are based on the authorities' 2011 budget announced in March 2011 and Economic and Fiscal Outlook by the Office for Budget Responsibility, published along with the budget. These projections incorporate the announced medium-term consolidation plans from 2011 onwards. The projections are adjusted for differences in forecasts of macroeconomic and financial variables.

United States. Fiscal projections are based on the President's fiscal year 2012 budget proposal adjusted for the final fiscal year 2011 appropriations and the IMF staff's assessment of likely future policies adopted by Congress. Compared with the President's budget proposal, the IMF staff assumes deeper and more front-loaded discretionary spending cuts, a further extension of emergency unemployment benefits and the payroll tax cut, and delayed action on the proposed revenue-raising measures. No explicit adjustment has been made for the provisions contained in the August Budget Control Act to the extent that the President's budget proposal already contained significant deficit reduction measures. The fiscal projections are adjusted to reflect the IMF staff's forecasts on

key macroeconomic and financial variables, as well as different accounting treatment of the financial sector support, and are converted to the general government basis.

Data and Conventions

Data and projections for key fiscal variables are based on the September 2011 WEO, unless indicated otherwise. Where the *Fiscal Monitor* includes additional fiscal data and projections not covered by the WEO, data sources are listed in the respective tables and figures. All fiscal data refer to the general government where available and to calendar years, with the exceptions of Pakistan and Singapore, for which data refer to the fiscal year.

Composite data for country groups are weighted averages of individual country data, unless otherwise specified. Data are weighted by GDP valued at purchasing-power parity (PPP) as a share of the group GDP in 2009. Fixed weights are assumed for all years, except in figures where annual weights are used.

For most countries, fiscal data follow the IMF's GFSM 2001. The concept of overall fiscal balance refers to net lending (+)/borrowing (–) of the general government. In some cases, however, the overall balance refers to total revenue and grants minus total expenditure and net lending.

Data on the financial sector support measures are based on the database on public interventions in the financial system compiled by the IMF's Fiscal Affairs and Monetary and Capital Markets Departments, revised following a survey of the G-20 economies. Survey questionnaires were sent to all G-20 members in early December 2009 to review and update IMF staff estimates of financial sector support. This information was later completed using national sources and data provided by the authorities. For each type of support, data were compiled for the amounts actually utilized and recovered to date. The period covered is June 2007 to the latest available.

Statistical Tables 3 and 4 of this appendix present IMF staff estimates of the general government

cyclically adjusted overall and primary balances. For some countries, the series reflect additional adjustments as natural-resource-related revenues or commodity price developments (Chile, Peru); land revenue and investment income (Hong Kong SAR); tax policy changes and the effects of asset prices on revenues (Sweden); and extraordinary operations related to the banking sector (Switzerland). Data for Norway are for the cyclically adjusted non-oil overall or primary balance.

Additional country information follows, including for cases in which reported fiscal aggregates in the *Monitor* differ from those reported in the WEO:

Argentina. Total expenditures, total revenues, the primary balance, and the overall balance are consolidated at the general government level and thus aggregate both federal and provinces' fiscal outcomes. Total expenditure and the overall balance account for cash and accrued interest payments. Accrued interest corresponds to inflation adjustment on the stock of CPI-indexed debt, interest capitalization, and interest arrears on defaulted debt. The cyclically adjusted balances are defined at the federal level.

Brazil. Fiscal data are for the nonfinancial public sector.

China. Fiscal data exclude allocation to the stabilization fund. Until 2009, debt data cover only the central government. From 2010, they cover the general government, with 2010 data revised compared to the April *Monitor* to include the stock of local government debt (mostly bank loans) of RMB 6.7 trillion for which local governments have direct repayment obligations as of end-2010, based on a recently published report by the National Audit Office (NAO). Going forward, consistent with the authorities' plans, public debt projections assume that about 60 percent of the stock of local governments debt will be amortized over 2011–13, 16 percent over 2014–15, and 24 percent beyond 2016.

Colombia. Historical figures for the overall fiscal balance as reported in the *Monitor* and WEO differ from those published by the Ministry of Finance as they do not include the statistical discrepancy.

Hong Kong SAR. Data on gross general government debt-to-GDP ratio were revised upward compared to the April 2011 *Monitor* to include insurance technical reserves.

Hungary. The cyclically adjusted and cyclically adjusted primary balances for 2011 exclude one-off revenues estimated at 10.8 percent of GDP (10.3 percent of potential GDP) as per asset transfer to the general government due to changes to the pension system.

Korea. Fiscal data are for the central government, with the exception of debt data, which are for the general government. There has been a slight statistical revision to the historical data, as of the time of publication, which will be reflected in the next *Fiscal Monitor*.

Latvia. In accordance with WEO conventions, the fiscal deficit shown in the *Monitor* includes bank restructuring costs and thus is higher than the deficit in official statistics.

Mexico. The general government data reported in the tables cover central government, social

security, public enterprises, development banks, the national insurance corporation, and the National Infrastructure Fund but exclude subnational governments. Cyclically adjusted balances include net lending by development banks.

Pakistan. Data are on a fiscal year rather than calendar year basis.

Philippines. Fiscal data are for central government.

Singapore. Data are on a fiscal year rather than calendar year basis.

Switzerland. Data submissions at the cantonal and commune level are received with a long and variable lag and are subject to sizable revisions.

Turkey. Information on general government balance, primary balance, and cyclically adjusted primary balance as reported in this *Monitor* and the WEO differs from that published in the authorities' official statistics or country reports, which still include net lending. An additional difference from the authorities' official statistics is the exclusion of privatization receipts in staff projections.

Economy Groupings

The following groupings of economies are used in the *Fiscal Monitor*.

Advanced Economies	Emerging Economies	G-7	G-20	Advanced G-20	Emerging G-20	Euro Area
Australia	Argentina	Canada	Argentina	Australia	Argentina	Austria
Austria	Brazil	France	Australia	Canada	Brazil	Belgium
Belgium	Bulgaria	Germany	Brazil	France	China	Cyprus
Canada	Chile	Italy	Canada	Germany	India	Estonia
Czech Republic	China	Japan	China	Italy	Indonesia	Finland
Denmark	Colombia	United Kingdom	France	Japan	Mexico	France
Estonia	Hungary	United States	Germany	Korea, Rep. of	Russia	Germany
Finland	India		India	United Kingdom	Saudi Arabia	Greece
France	Indonesia		Indonesia	United States	South Africa	Ireland
Germany	Jordan		Italy		Turkey	Italy
Greece	Kazakhstan		Japan			Luxembourg
Hong Kong SAR	Kenya		Korea, Rep of			Malta
Iceland	Latvia		Mexico			Netherlands
Ireland	Lithuania		Russia			Portugal
Israel	Malaysia		Saudi Arabia			Slovak Republic
Italy	Mexico		South Africa			Slovenia
Japan	Morocco		Turkey			Spain
Korea, Rep. of	Nigeria		United Kingdom			
Netherlands	Pakistan		United States			
New Zealand	Peru					
Norway	Philippines					
Portugal	Poland					
Singapore	Romania					
Slovak Republic	Russia					
Slovenia	Saudi Arabia					
Spain	South Africa					
Sweden	Thailand					
Switzerland	Turkey					
United Kingdom	Ukraine					
United States						

Economy Groupings (continued)

Emerging Asia	Emerging Europe	Emerging Latin America	Emerging Middle East and North Africa	Low-Income Economies	Oil Producers	
China	Bulgaria	Argentina	Jordan	Afghanistan, Rep. of	Mali	Algeria
India	Estonia	Brazil	Morocco	Armenia	Mauritania	Angola
Indonesia	Hungary	Chile	Tunisia	Bangladesh	Moldova	Azerbaijan
Malaysia	Latvia	Colombia		Benin	Mongolia	Bahrain
Pakistan	Lithuania	Mexico		Bolivia	Mozambique	Brunei Darussalam
Philippines	Poland	Peru		Burkina Faso	Myanmar	Cameroon
Thailand	Romania			Burundi	Nepal	Chad
	Russia			Cambodia	Nicaragua	Congo, Rep. of
	Turkey			Cameroon	Niger	Ecuador
	Ukraine			Cape Verde	Papa New Guinea	Equatorial Guinea
				Central African Republic	Rwanda	Gabon
				Chad	São Tomé and Príncipe	Indonesia
				Comoros	Senegal	Iran, I.R. of
				Congo, Dem. Rep. of	Sierra Leone	Kazakhstan
				Congo, Rep. of	St. Lucia	Kuwait
				Côte d'Ivoire	St. Vincent and the Grenadines	Libya
				Djibouti	Sudan	Mexico
				Dominica	Tajikistan	Nigeria
				Eritrea	Tanzania	Norway
				Ethiopia	Togo	Oman
				Gambia, The	Uganda	Qatar
				Georgia	Uzbekistan	Saudi Arabia
				Ghana	Vanuatu	Sudan
				Grenada	Vietnam	Syrian Arab Republic
				Guinea	Yemen	Timor-Leste
				Guinea-Bissau	Zambia	Trinidad and Tobago
				Guyana		United Arab Emirates
				Haiti		Venezuela, República Bolivariana de
				Honduras		Vietnam
				Kyrgyz Republic		Yemen
				Lao P.D.R.		
				Lesotho		
				Liberia		
				Madagascar		
				Malawi		
				Maldives		

Statistical Table 1. General Government Balance (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	1.8	1.3	-0.8	-4.1	-4.9	-3.9	-1.9	-0.5	-0.1	0.0	0.3
Austria	-1.7	-1.0	-1.0	-4.1	-4.6	-3.5	-3.2	-2.7	-2.3	-2.0	-2.1
Belgium	0.1	-0.3	-1.3	-5.9	-4.1	-3.5	-3.4	-3.3	-3.2	-3.2	-3.2
Canada	1.6	1.6	0.1	-4.9	-5.6	-4.3	-3.2	-1.9	-1.0	-0.2	0.3
Czech Republic	-2.6	-0.7	-2.7	-5.8	-4.7	-3.8	-3.7	-3.6	-3.5	-3.4	-3.4
Denmark	5.4	4.8	3.4	-2.8	-2.9	-3.0	-3.0	-2.8	-2.7	-2.4	-2.0
Estonia	3.2	2.9	-2.3	-2.1	0.2	-0.1	-2.3	-1.1	0.3	1.0	1.5
Finland	3.9	5.2	4.1	-2.8	-2.8	-1.0	0.3	0.3	0.4	0.5	0.5
France	-2.4	-2.7	-3.3	-7.6	-7.1	-5.9	-4.6	-4.0	-3.1	-2.3	-1.4
Germany	-1.6	0.3	0.1	-3.1	-3.3	-1.7	-1.1	-0.8	0.0	0.2	0.4
Greece	-6.1	-6.7	-9.8	-15.5	-10.4	-8.0	-6.9	-5.2	-2.8	-2.8	-2.8
Hong Kong SAR	4.1	7.7	0.1	1.6	4.3	2.5	4.0	4.0	4.3	4.5	4.5
Iceland	6.3	5.4	-0.5	-8.6	-5.4	-4.1	-2.3	-1.2	0.0	1.1	1.5
Ireland	2.9	0.1	-7.3	-14.2	-32.0	-10.3	-8.6	-6.8	-4.4	-4.1	-3.7
Israel	-1.2	-0.2	-2.8	-5.6	-4.1	-2.8	-2.2	-1.6	-1.1	-1.1	-1.0
Italy	-3.3	-1.5	-2.7	-5.3	-4.5	-4.0	-2.4	-1.1	-1.1	-1.1	-1.1
Japan	-4.0	-2.4	-4.2	-10.3	-9.2	-10.3	-9.1	-7.8	-7.5	-7.4	-7.3
Korea	1.1	2.3	1.6	0.0	1.7	2.1	2.4	2.7	2.8	2.9	2.8
Netherlands	0.6	0.3	0.4	-5.5	-5.3	-3.8	-2.8	-2.3	-1.9	-1.3	-0.6
New Zealand	3.2	2.5	0.1	-3.3	-6.0	-6.2	-3.5	-1.2	0.0	0.5	0.9
Norway	18.5	17.7	19.4	10.6	10.9	12.0	11.2	10.8	10.3	9.9	9.4
Portugal	-0.4	-3.1	-3.5	-10.1	-9.1	-5.9	-4.5	-3.0	-2.3	-1.9	-1.7
Singapore	5.1	10.0	5.3	-0.8	5.2	3.2	3.6	3.7	3.8	3.9	4.0
Slovak Republic	-3.2	-1.8	-2.1	-8.0	-7.9	-4.9	-3.8	-3.1	-2.8	-2.0	-2.0
Slovenia	-0.8	0.3	-0.3	-5.6	-5.3	-6.2	-4.7	-3.8	-3.4	-3.2	-3.2
Spain	2.0	1.9	-4.1	-11.1	-9.2	-6.1	-5.2	-4.4	-4.1	-4.1	-4.1
Sweden	2.2	3.6	2.2	-0.9	-0.3	0.8	1.3	1.7	2.0	2.2	2.2
Switzerland	1.0	1.4	1.9	0.5	0.4	0.8	0.6	0.5	0.9	0.9	0.9
United Kingdom	-2.6	-2.7	-4.9	-10.3	-10.2	-8.5	-7.0	-5.1	-3.5	-2.3	-1.7
United States	-2.0	-2.7	-6.5	-12.8	-10.3	-9.6	-7.9	-6.2	-5.5	-5.6	-6.0
Emerging Economies											
Argentina	-0.9	-2.1	-0.8	-3.6	-1.6	-2.0	-1.9	-1.5	-1.4	-0.5	-0.1
Brazil	-3.5	-2.7	-1.4	-3.1	-2.9	-2.5	-2.8	-2.6	-2.5	-2.4	-2.4
Bulgaria	3.3	3.3	2.9	-0.9	-3.9	-2.5	-2.2	-1.4	-1.0	-0.8	-0.4
Chile	7.9	8.4	4.3	-4.4	-0.3	1.4	1.6	1.4	1.4	1.2	1.0
China	-0.7	0.9	-0.4	-3.1	-2.3	-1.6	-0.8	-0.1	0.0	0.1	0.2
Colombia	-0.8	-1.0	0.0	-2.5	-3.1	-3.0	-1.5	-1.2	-1.0	-0.9	-0.9
Hungary	-9.3	-5.0	-3.6	-4.5	-4.3	2.0	-3.6	-3.2	-2.7	-2.1	-1.6
India	-5.5	-4.2	-7.2	-9.7	-8.8	-8.0	-7.6	-7.4	-7.4	-7.2	-7.1
Indonesia	0.2	-1.0	0.0	-1.8	-1.2	-1.8	-1.3	-1.2	-1.2	-1.2	-1.0
Jordan	-4.0	-4.7	-4.3	-8.5	-5.4	-6.2	-6.0	-5.6	-5.0	-4.5	-4.3
Kazakhstan	7.7	5.2	1.2	-1.3	1.5	1.8	1.7	1.5	1.3	1.4	1.4
Kenya	-2.5	-3.1	-4.3	-5.2	-6.0	-5.4	-4.8	-4.3	-4.0	-3.3	-2.9
Latvia	-0.5	0.6	-7.5	-7.8	-7.8	-4.5	-2.3	-2.0	-1.6	-1.9	-1.6
Lithuania	-0.4	-1.0	-3.3	-9.2	-7.1	-5.3	-4.5	-4.1	-3.5	-3.1	-2.8
Malaysia	-2.3	-2.6	-3.6	-5.9	-5.1	-5.1	-4.9	-4.7	-4.6	-4.4	-4.3
Mexico ¹	-1.0	-1.2	-1.1	-4.7	-4.3	-3.2	-2.8	-2.4	-2.4	-2.3	-2.2
Morocco	-1.2	1.5	1.4	-2.2	-3.5	-6.8	-4.9	-4.3	-3.7	-3.2	-2.8
Nigeria	11.6	0.5	4.8	-10.2	-8.5	0.4	2.2	2.0	1.3	0.4	-1.5
Pakistan	-3.7	-5.5	-7.3	-5.2	-5.9	-6.5	-5.3	-5.2	-4.2	-4.0	-3.8
Peru	1.9	3.2	2.2	-1.9	-0.4	0.6	0.9	1.4	1.7	1.7	1.8
Philippines	-1.3	-1.5	-1.2	-3.7	-3.5	-2.9	-2.5	-2.0	-2.0	-2.0	-2.0
Poland	-3.6	-1.9	-3.7	-7.3	-7.9	-5.5	-3.8	-3.5	-3.2	-2.6	-2.4
Romania	-1.4	-3.1	-4.8	-7.3	-6.5	-4.4	-2.8	-2.4	-2.2	-1.8	-1.4
Russia	8.3	6.8	4.9	-6.3	-3.5	-1.1	-2.1	-2.3	-3.1	-3.7	-4.3
Saudi Arabia	24.6	15.8	34.4	-4.6	6.7	9.4	8.0	4.5	3.2	1.3	-1.7
South Africa	0.8	1.5	-0.5	-5.2	-5.1	-4.3	-3.9	-3.4	-2.9	-2.1	-1.2
Thailand	2.2	0.2	0.1	-3.2	-2.7	-2.6	-2.9	-3.2	-3.1	-3.1	-3.0
Turkey	0.0	-1.6	-2.4	-5.6	-2.9	-0.9	-1.0	-0.7	-1.0	-1.2	-1.1
Ukraine	-1.4	-2.0	-3.2	-6.3	-5.7	-2.8	-2.0	-2.0	-2.0	-2.0	-2.0
Average	-0.8	-0.6	-2.3	-7.1	-5.9	-5.0	-4.1	-3.2	-2.9	-2.8	-2.8
Advanced	-1.4	-1.2	-3.6	-8.8	-7.5	-6.7	-5.4	-4.2	-3.5	-3.4	-3.4
Emerging	-0.1	0.1	-0.5	-4.8	-3.7	-2.6	-2.3	-2.0	-2.0	-2.0	-2.0
G-7	-2.3	-2.1	-4.6	-10.1	-8.6	-8.0	-6.5	-5.1	-4.4	-4.3	-4.3
G-20	-1.2	-0.9	-2.6	-7.5	-6.1	-5.4	-4.4	-3.5	-3.2	-3.1	-3.1
Advanced	-2.0	-1.8	-4.2	-9.5	-8.1	-7.4	-6.0	-4.7	-4.0	-3.8	-3.8
Emerging	-0.1	0.3	-0.3	-4.8	-3.5	-2.6	-2.3	-2.0	-2.0	-2.0	-2.1

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

¹For details, see "Data and Conventions" in text.

Statistical Table 2. General Government Primary Balance (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	1.5	0.9	-1.1	-4.2	-4.7	-3.4	-1.4	0.1	0.4	0.5	0.7
Austria	0.5	1.1	1.1	-1.9	-2.5	-1.3	-0.9	-0.3	0.1	0.4	0.5
Belgium	3.9	3.3	2.3	-2.5	-0.9	-0.3	0.0	0.1	0.2	0.2	0.2
Canada	2.2	2.2	0.2	-4.0	-4.9	-3.7	-2.5	-1.4	-0.5	0.3	0.9
Czech Republic	-1.9	0.1	-1.9	-4.8	-3.5	-2.7	-2.3	-2.0	-1.8	-1.5	-1.5
Denmark	6.0	5.2	3.6	-2.2	-2.4	-2.6	-2.5	-2.2	-2.1	-1.7	-1.3
Estonia	3.4	3.0	-2.2	-1.8	0.4	0.2	-2.0	-0.9	0.5	1.2	1.6
Finland	3.5	4.5	3.2	-3.5	-3.2	-1.5	-0.2	-0.1	0.1	0.2	0.3
France	0.0	-0.3	-0.6	-5.3	-4.9	-3.4	-2.1	-1.4	-0.4	0.6	1.5
Germany	0.8	2.7	2.5	-0.8	-1.2	0.4	0.8	1.2	1.9	2.1	2.1
Greece	-1.5	-2.0	-4.8	-10.3	-4.9	-1.3	0.8	3.3	5.7	5.1	4.4
Hong Kong SAR	4.2	7.7	0.1	1.6	4.3	2.5	4.0	4.0	4.3	4.5	4.5
Iceland	6.7	5.7	-0.5	-6.5	-2.5	-0.3	1.8	2.8	3.9	4.8	5.0
Ireland	3.9	0.8	-6.5	-12.4	-28.9	-6.8	-4.4	-1.5	1.3	1.8	2.2
Israel	2.8	3.8	0.8	-2.2	-0.7	0.6	1.2	1.6	2.0	2.0	1.9
Italy	1.1	3.3	2.2	-1.0	-0.3	0.5	2.6	4.1	4.5	4.5	4.6
Japan	-3.5	-1.9	-3.4	-9.4	-8.1	-8.9	-7.7	-6.2	-5.6	-5.2	-4.8
Korea	2.5	3.7	3.0	1.1	2.8	3.3	3.6	3.9	3.9	3.9	3.7
Netherlands	2.2	2.0	2.0	-3.9	-3.9	-2.2	-1.2	-0.5	0.1	0.7	1.8
New Zealand	4.7	3.9	1.4	-2.0	-4.6	-4.6	-1.7	0.7	2.0	2.4	2.8
Norway	16.3	14.8	16.3	8.1	8.4	9.3	8.5	8.1	7.5	7.0	6.5
Portugal	2.2	-0.4	-0.7	-7.4	-6.3	-1.9	0.1	1.9	2.6	3.0	3.2
Singapore	4.4	9.3	4.6	-1.5	4.5	2.5	2.9	3.0	3.2	3.2	3.3
Slovak Republic	-2.0	-0.8	-1.2	-6.7	-6.8	-3.3	-1.9	-1.1	-0.7	0.2	0.3
Slovenia	0.3	1.2	0.5	-4.7	-4.1	-4.8	-3.2	-2.2	-1.7	-1.4	-1.3
Spain	3.3	3.0	-3.1	-9.9	-7.8	-4.4	-3.1	-2.1	-1.4	-1.2	-0.9
Sweden	1.9	3.0	1.4	-1.8	-1.1	0.3	0.6	1.0	1.2	1.2	1.3
Switzerland	1.9	2.1	2.5	1.2	1.0	1.4	1.3	1.2	1.5	1.5	1.4
United Kingdom	-1.1	-1.1	-3.3	-8.5	-7.7	-5.6	-4.1	-2.2	-0.7	0.4	1.2
United States	-0.1	-0.7	-4.5	-10.9	-8.4	-8.0	-6.3	-4.6	-3.5	-3.1	-2.8
Emerging Economies											
Argentina	4.2	2.5	2.8	0.2	1.7	1.1	1.0	1.1	1.1	1.3	1.4
Brazil	3.2	3.4	4.0	2.1	2.4	3.2	3.0	3.0	3.0	3.0	3.0
Bulgaria	4.3	3.9	2.8	-0.6	-3.7	-2.1	-1.7	-0.7	-0.5	-0.3	0.0
Chile	8.0	8.2	4.0	-4.6	-0.3	1.6	1.7	1.5	1.4	1.2	0.9
China	-0.2	1.3	0.0	-2.7	-1.8	-0.7	-0.1	0.5	0.5	0.5	0.5
Colombia	1.7	1.7	2.2	-0.5	-1.4	-1.1	0.2	0.4	0.4	0.3	0.2
Hungary	-5.6	-1.2	0.0	-0.3	-0.5	5.6	0.2	0.8	1.3	1.7	2.0
India	0.0	1.1	-2.1	-4.7	-4.3	-3.6	-3.1	-2.9	-3.2	-3.1	-3.0
Indonesia	2.6	1.0	1.8	-0.1	0.2	-0.4	0.1	0.1	0.2	0.1	0.3
Jordan	-1.2	-1.8	-2.0	-6.3	-3.3	-3.7	-3.7	-3.3	-2.5	-1.8	-1.6
Kazakhstan	7.2	4.3	1.5	-1.4	1.8	2.0	1.9	1.7	1.4	1.4	1.4
Kenya	-0.2	-0.9	-2.1	-3.1	-3.7	-3.2	-2.5	-2.0	-1.9	-1.2	-0.9
Latvia	0.1	1.0	-7.1	-6.7	-6.4	-2.8	-0.4	0.0	0.7	0.7	0.8
Lithuania	0.1	-0.5	-2.8	-8.1	-5.5	-3.5	-2.6	-2.2	-1.5	-1.1	-0.8
Malaysia	-0.6	-1.1	-1.9	-4.3	-3.6	-3.4	-3.3	-3.3	-3.2	-3.0	-3.0
Mexico ¹	1.8	1.5	1.6	-2.1	-1.9	-0.7	-0.3	0.1	0.3	0.4	0.5
Morocco	2.1	4.6	4.0	0.2	-1.2	-4.4	-2.4	-1.8	-1.1	-0.7	-0.3
Nigeria	12.6	1.5	5.8	-9.0	-7.4	1.8	3.6	3.4	2.7	1.6	-0.4
Pakistan	-0.6	-1.2	-2.6	-0.2	-1.6	-2.5	-1.5	-0.3	0.5	0.3	0.0
Peru	3.7	4.9	3.7	-0.6	0.7	1.8	2.0	2.5	2.7	2.7	2.8
Philippines	3.8	2.6	2.4	-0.1	-0.1	0.1	0.7	1.3	1.2	1.1	1.0
Poland	-1.0	0.4	-1.5	-4.7	-5.2	-2.8	-0.9	-0.5	-0.2	0.3	0.6
Romania	-0.6	-2.4	-4.1	-6.1	-5.1	-2.6	-1.1	-0.7	-0.5	-0.2	0.2
Russia	8.9	6.8	5.1	-6.0	-3.2	-0.6	-1.3	-1.4	-2.4	-3.0	-3.7
Saudi Arabia	25.6	15.5	33.8	-4.5	7.2	9.6	8.2	4.5	3.1	0.9	-2.1
South Africa	3.7	4.3	2.1	-2.7	-2.5	-1.6	-0.9	-0.3	0.3	1.1	1.8
Thailand	3.5	1.2	1.0	-2.4	-1.9	-1.7	-2.0	-2.4	-2.4	-2.3	-2.2
Turkey	5.1	3.2	2.0	-1.0	0.8	1.8	1.8	1.9	1.6	1.5	1.5
Ukraine	-0.7	-1.5	-2.6	-5.1	-4.1	-0.9	0.0	-0.2	-0.1	-0.1	-0.2
Average	1.2	1.3	-0.4	-5.2	-4.0	-3.0	-2.1	-1.3	-0.8	-0.6	-0.5
Advanced	0.3	0.6	-1.9	-7.1	-5.7	-4.8	-3.5	-2.2	-1.4	-1.0	-0.7
Emerging	2.3	2.3	1.6	-2.7	-1.7	-0.5	-0.2	0.0	-0.1	-0.1	-0.2
G-7	-0.4	-0.1	-2.6	-8.1	-6.6	-6.0	-4.6	-3.1	-2.2	-1.7	-1.4
G-20	0.9	1.1	-0.6	-5.5	-4.2	-3.4	-2.5	-1.6	-1.1	-0.9	-0.7
Advanced	-0.2	0.1	-2.3	-7.6	-6.2	-5.5	-4.1	-2.7	-1.9	-1.4	-1.1
Emerging	2.4	2.5	1.8	-2.6	-1.5	-0.4	-0.1	0.1	-0.1	-0.1	-0.2

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Note: *Primary balance* is defined as the overall balance excluding net interest payments.

¹For details, see "Data and Conventions" in text.

Statistical Table 3. General Government Cyclically Adjusted Overall Balance (Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	1.8	1.0	-1.0	-4.1	-4.8	-3.7	-1.8	-0.3	0.1	0.1	0.2
Austria	-2.2	-2.4	-2.6	-2.9	-3.6	-3.2	-3.0	-2.6	-2.3	-2.1	-2.1
Belgium	-0.9	-1.2	-1.8	-3.2	-2.9	-2.6	-2.7	-2.8	-2.8	-3.0	-3.1
Canada	0.8	0.6	-0.5	-2.5	-4.0	-3.0	-1.9	-1.0	-0.5	0.1	0.5
Czech Republic	-2.7	-1.2	-3.1	-4.3	-3.6	-2.9	-2.9	-3.0	-3.2	-3.3	-3.4
Denmark	3.9	3.4	3.1	-0.9	-1.5	-2.0	-2.1	-2.1	-2.2	-2.0	-2.0
Estonia	...	...	...	...	...	...	...	...	...	...	...
Finland	3.0	3.0	2.6	0.9	-0.3	0.7	1.2	0.7	0.6	0.5	0.5
France	-2.6	-3.1	-3.0	-5.3	-5.2	-4.4	-3.4	-3.1	-2.6	-2.0	-1.4
Germany	-2.2	-1.1	-1.1	-1.1	-2.5	-1.5	-0.9	-0.6	0.0	0.2	0.4
Greece	-8.4	-10.4	-13.7	-18.6	-11.4	-6.9	-4.7	-3.3	-1.4	-2.0	-2.7
Hong Kong SAR ¹	0.5	1.7	0.2	-2.2	-1.4	-3.0	-1.4	-1.3	-1.1	-0.8	-0.8
Iceland	5.3	3.7	-15.0	-9.4	-5.9	-5.0	-1.9	-1.0	0.0	1.1	1.5
Ireland ²	-5.8	-8.7	-13.3	-11.6	-8.9	-6.8	-5.5	-4.3	-2.5	-2.7	-2.6
Israel	-1.4	-1.3	-3.5	-5.0	-3.9	-3.1	-2.4	-1.8	-1.3	-1.2	-1.1
Italy	-3.7	-2.3	-2.4	-3.3	-2.9	-2.5	-1.0	0.0	-0.3	-0.7	-1.1
Japan	-3.9	-2.6	-3.7	-7.1	-7.4	-8.1	-7.6	-6.9	-7.0	-7.2	-7.3
Korea	1.1	2.3	1.8	0.7	1.8	2.1	2.4	2.7	2.8	2.9	2.8
Netherlands	0.1	-1.3	-1.1	-4.4	-4.5	-3.3	-2.3	-1.9	-1.6	-1.2	-0.6
New Zealand	2.6	2.1	0.3	-2.1	-4.5	-5.1	-3.0	-1.1	0.0	0.5	0.9
Norway ¹	-2.7	-2.6	-2.9	-4.7	-5.1	-5.0	-5.0	-5.1	-5.2	-5.2	-5.1
Portugal	-3.5	-3.4	-3.3	-8.4	-8.2	-4.0	-1.3	0.0	0.0	-0.1	-0.1
Singapore	6.4	11.1	5.4	-1.3	3.2	1.9	2.2	2.4	2.6	2.7	2.8
Slovak Republic	-3.6	-2.5	-2.6	-6.4	-6.7	-4.2	-3.4	-2.9	-2.8	-2.0	-2.0
Slovenia	-2.0	-2.6	-3.9	-4.4	-3.9	-3.6	-3.6	-3.1	-3.0	-3.0	-3.2
Spain	0.7	0.2	-5.3	-9.7	-7.5	-4.6	-4.1	-3.8	-3.9	-4.1	-4.1
Sweden ¹	2.0	1.1	0.9	1.2	1.4	1.2	1.2	1.5	1.9	2.3	2.4
Switzerland ¹	0.7	0.6	1.0	0.8	0.3	0.6	0.5	0.5	0.8	0.8	0.8
United Kingdom	-2.8	-3.3	-5.9	-8.5	-8.0	-6.3	-4.7	-2.9	-1.8	-1.1	-1.1
United States ²	-2.0	-2.2	-4.5	-6.7	-7.0	-6.4	-5.0	-3.7	-3.6	-4.2	-4.9
Emerging Economies											
Argentina ¹	-1.8	-2.9	-1.0	-2.2	-1.3	-2.6	-2.2	-1.6	-1.5	-0.6	-0.3
Brazil	-3.3	-3.1	-2.1	-2.0	-3.1	-2.6	-2.7	-2.5	-2.4	-2.5	-2.5
Bulgaria	1.8	0.4	-0.2	-0.2	-0.9	0.5	0.8	1.0	0.9	0.6	0.4
Chile ¹	0.8	0.0	-1.2	-4.4	-2.0	-1.7	-1.1	-1.0	-0.9	-0.8	-0.7
China	-0.6	0.3	-0.9	-3.4	-2.6	-1.8	-0.9	-0.1	0.0	0.1	0.2
Colombia	-1.0	-1.9	-1.2	-1.2	-2.6	-2.9	-1.5	-1.2	-1.0	-1.0	-0.9
Hungary ¹	-11.3	-6.7	-5.4	-2.6	-2.7	-7.4	-2.5	-2.4	-2.2	-1.9	-1.6
India	-5.5	-5.8	-9.4	-10.6	-9.2	-8.3	-8.0	-7.9	-7.7	-7.6	-7.4
Indonesia	0.2	-1.2	-0.2	-1.7	-1.2	-1.7	-1.3	-1.2	-1.2	-1.2	-1.0
Jordan	...	...	...	...	...	...	...	...	...	...	...
Kazakhstan	...	...	...	...	...	...	...	...	...	...	...
Kenya	...	...	...	...	...	...	...	...	...	...	...
Latvia	...	...	...	...	...	...	...	...	...	...	...
Lithuania	-2.8	-4.6	-6.7	-5.8	-5.0	-4.4	-4.0	-3.9	-3.5	-3.1	-2.9
Malaysia	-3.6	-3.9	-5.4	-6.3	-5.1	-5.4	-5.0	-4.8	-4.5	-4.3	-4.1
Mexico ¹	-0.9	-1.7	-1.7	-4.3	-4.3	-3.4	-3.1	-2.8	-2.8	-2.7	-2.8
Morocco	...	...	...	...	...	...	...	...	...	...	...
Nigeria	...	...	...	...	...	...	...	...	...	...	...
Pakistan	...	...	...	...	...	...	...	...	...	...	...
Peru ¹	0.1	1.5	1.0	-0.9	-1.2	-0.2	0.3	1.1	1.7	1.8	1.9
Philippines	-1.4	-2.0	-1.7	-3.4	-3.6	-3.2	-2.8	-2.1	-2.1	-2.1	-2.1
Poland	-4.1	-3.0	-4.6	-6.9	-7.7	-5.7	-3.7	-3.4	-3.1	-2.6	-2.4
Romania	...	...	...	...	...	...	...	...	...	...	...
Russia	8.1	5.9	3.7	-3.4	-1.8	-0.3	-1.8	-2.2	-3.1	-3.7	-4.4
Saudi Arabia	...	...	...	...	...	...	...	...	...	...	...
South Africa	-0.1	-0.1	-2.1	-4.8	-4.5	-3.7	-3.4	-3.1	-2.7	-2.0	-1.1
Thailand	1.9	-0.1	-0.8	-2.2	-2.3	-2.4	-2.9	-3.5	-3.8	-4.0	-4.1
Turkey	-1.7	-3.2	-3.3	-4.9	-3.7	-2.1	-1.5	-1.1	-1.2	-1.4	-1.5
Ukraine	-2.6	-4.1	-3.8	-2.8	-3.1	-1.6	-1.4	-2.0	-2.0	-2.0	-2.0
Average	-1.5	-1.4	-2.9	-5.1	-4.8	-4.1	-3.3	-2.6	-2.5	-2.6	-2.7
Advanced	-1.8	-1.7	-3.3	-5.5	-5.5	-4.8	-3.8	-2.9	-2.6	-2.8	-3.0
Emerging	-1.0	-1.1	-2.2	-4.4	-3.8	-3.1	-2.6	-2.3	-2.3	-2.2	-2.2
G-7	-2.4	-2.2	-3.7	-5.8	-6.1	-5.6	-4.4	-3.4	-3.2	-3.4	-3.7
G-20	-1.6	-1.5	-2.9	-5.1	-5.0	-4.3	-3.5	-2.7	-2.6	-2.7	-2.9
Advanced	-2.1	-1.9	-3.4	-5.5	-5.7	-5.2	-4.0	-3.0	-2.8	-3.0	-3.3
Emerging	-0.9	-1.0	-2.2	-4.6	-3.8	-3.0	-2.6	-2.3	-2.3	-2.2	-2.2

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

¹ For details, see "Data and Conventions" in text.

² Cyclically adjusted overall balance excluding financial sector support recorded above the line.

Statistical Table 4. General Government Cyclically Adjusted Primary Balance (Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	1.5	0.6	-1.3	-4.1	-4.6	-3.3	-1.3	0.2	0.6	0.6	0.7
Austria	0.0	-0.3	-0.5	-0.8	-1.5	-1.0	-0.7	-0.2	0.1	0.3	0.5
Belgium	2.9	2.4	1.8	0.1	0.3	0.6	0.7	0.6	0.6	0.4	0.4
Canada	1.5	1.2	-0.4	-1.6	-3.4	-2.4	-1.2	-0.5	0.0	0.6	1.1
Czech Republic	-2.0	-0.5	-2.3	-3.3	-2.4	-1.8	-1.5	-1.4	-1.5	-1.4	-1.5
Denmark	4.6	3.8	3.3	-0.3	-1.0	-1.5	-1.6	-1.5	-1.6	-1.4	-1.3
Estonia	...	...	...	...	...	...	...	...	...	...	...
Finland	2.6	2.4	1.7	0.3	-0.7	0.1	0.7	0.3	0.3	0.3	0.3
France	-0.2	-0.6	-0.3	-3.1	-3.0	-2.0	-0.9	-0.6	0.1	0.8	1.5
Germany	0.3	1.4	1.3	1.1	-0.4	0.6	1.1	1.4	2.0	2.1	2.1
Greece	-3.5	-5.3	-8.3	-13.1	-5.8	-0.4	2.6	4.8	6.8	5.7	4.4
Hong Kong SAR ¹	0.5	1.7	0.3	-2.2	-1.3	-3.0	-1.3	-1.3	-1.0	-0.7	-0.7
Iceland	5.7	4.0	-15.0	-7.3	-3.1	-1.4	2.2	3.0	3.9	4.8	5.0
Ireland ²	-4.8	-7.9	-12.5	-9.8	-6.0	-3.4	-1.5	0.8	3.1	3.1	3.3
Israel	2.6	2.7	0.2	-1.6	-0.6	0.3	1.0	1.4	1.9	1.9	1.9
Italy	0.7	2.5	2.4	0.9	1.2	1.9	3.8	5.1	5.2	4.9	4.6
Japan	-3.4	-2.1	-3.0	-6.2	-6.3	-6.7	-6.2	-5.3	-5.2	-5.1	-4.8
Korea	2.5	3.7	3.2	1.8	2.9	3.3	3.6	3.9	3.9	3.9	3.7
Netherlands	1.7	0.4	0.5	-2.8	-3.0	-1.7	-0.7	-0.1	0.4	0.8	1.8
New Zealand	4.1	3.4	1.6	-0.9	-3.2	-3.5	-1.3	0.8	2.0	2.4	2.7
Norway ¹	-4.9	-5.7	-6.0	-7.2	-7.6	-7.6	-7.7	-7.9	-8.0	-8.0	-8.0
Portugal	-1.0	-0.6	-0.4	-5.7	-5.3	-0.1	3.0	4.6	4.8	4.7	4.7
Singapore	5.7	10.3	4.7	-2.0	2.5	1.2	1.6	1.7	1.9	2.0	2.1
Slovak Republic	-2.4	-1.4	-1.7	-5.2	-5.6	-2.6	-1.5	-0.9	-0.7	0.2	0.3
Slovenia	-0.9	-1.6	-3.1	-3.6	-2.7	-2.3	-2.1	-1.5	-1.3	-1.2	-1.3
Spain	2.1	1.3	-4.2	-8.5	-6.1	-2.9	-2.1	-1.6	-1.3	-1.2	-0.9
Sweden ¹	1.7	0.5	0.1	0.4	0.6	0.7	0.5	0.7	1.1	1.3	1.5
Switzerland ¹	1.7	1.4	1.6	1.5	0.9	1.3	1.2	1.1	1.4	1.4	1.4
United Kingdom	-1.3	-1.7	-4.3	-6.8	-5.6	-3.5	-1.9	-0.2	1.0	1.6	1.8
United States ²	0.0	-0.1	-2.5	-4.9	-5.1	-4.8	-3.4	-2.2	-1.7	-1.7	-1.8
Emerging Economies											
Argentina ¹	3.4	1.7	2.6	1.5	1.9	0.5	0.7	1.0	1.1	1.2	1.2
Brazil	3.4	3.0	3.4	3.1	2.2	3.0	3.1	3.1	3.0	3.0	2.9
Bulgaria	2.8	1.0	-0.3	0.1	-0.7	0.8	1.2	1.6	1.4	1.0	0.8
Chile ¹	1.0	-0.2	-1.6	-4.6	-2.0	-1.6	-0.9	-0.9	-0.8	-0.8	-0.7
China	-0.2	0.7	-0.4	-3.0	-2.2	-0.9	-0.2	0.5	0.5	0.6	0.5
Colombia	1.6	0.9	1.0	0.8	-1.0	-1.1	0.2	0.4	0.4	0.3	0.2
Hungary ¹	-7.5	-2.8	-1.6	1.4	0.9	-4.0	1.2	1.5	1.7	1.9	2.0
India	0.0	-0.5	-4.2	-5.6	-4.6	-4.0	-3.5	-3.4	-3.6	-3.5	-3.4
Indonesia	2.6	0.9	1.6	0.0	0.2	-0.3	0.1	0.1	0.1	0.1	0.2
Jordan	...	...	...	...	...	...	...	...	...	...	...
Kazakhstan	...	...	...	...	...	...	...	...	...	...	...
Kenya	...	...	...	...	...	...	...	...	...	...	...
Latvia	...	...	...	...	...	...	...	...	...	...	...
Lithuania	-2.2	-4.1	-6.2	-4.8	-3.4	-2.7	-2.2	-2.0	-1.5	-1.1	-0.8
Malaysia	-1.9	-2.4	-3.7	-4.7	-3.6	-3.7	-3.4	-3.3	-3.2	-3.0	-2.8
Mexico ¹	2.0	1.1	1.0	-1.9	-2.0	-0.9	-0.6	-0.3	-0.2	0.0	-0.1
Morocco	...	...	...	...	...	...	...	...	...	...	...
Nigeria	...	...	...	...	...	...	...	...	...	...	...
Pakistan	...	...	...	...	...	...	...	...	...	...	...
Peru ¹	1.9	3.2	2.6	0.3	0.0	1.0	1.5	2.2	2.7	2.8	2.8
Philippines	3.8	2.1	2.1	0.1	-0.3	-0.2	0.4	1.1	1.0	1.0	0.9
Poland	-1.4	-0.6	-2.4	-4.3	-5.0	-2.9	-0.9	-0.5	-0.2	0.3	0.6
Romania	...	...	...	...	...	...	...	...	...	...	...
Russia	8.7	5.9	3.9	-3.1	-1.5	0.2	-0.9	-1.3	-2.5	-3.1	-3.7
Saudi Arabia	...	...	...	...	...	...	...	...	...	...	...
South Africa	2.9	2.6	0.5	-2.3	-2.0	-1.0	-0.4	0.0	0.5	1.2	1.8
Thailand	3.2	0.9	0.1	-1.5	-1.5	-1.4	-2.1	-2.8	-3.0	-3.1	-3.2
Turkey	3.5	1.8	1.2	-0.5	0.0	0.6	1.2	1.6	1.3	1.2	1.1
Ukraine	-1.9	-3.6	-3.3	-1.7	-1.6	0.2	0.5	-0.2	-0.1	-0.1	-0.2
Average	0.5	0.5	-0.9	-3.2	-3.0	-2.2	-1.4	-0.7	-0.5	-0.4	-0.4
Advanced	-0.1	0.1	-1.5	-3.8	-3.8	-3.1	-2.0	-1.0	-0.6	-0.5	-0.4
Emerging	1.5	1.2	-0.1	-2.3	-1.8	-0.9	-0.5	-0.2	-0.3	-0.3	-0.3
G-7	-0.5	-0.2	-1.8	-4.0	-4.2	-3.7	-2.5	-1.5	-1.0	-0.9	-0.8
G-20	0.5	0.6	-0.9	-3.2	-3.0	-2.3	-1.5	-0.8	-0.5	-0.5	-0.5
Advanced	-0.3	0.0	-1.5	-3.7	-3.9	-3.4	-2.2	-1.2	-0.7	-0.6	-0.6
Emerging	1.7	1.4	0.1	-2.4	-1.8	-0.8	-0.4	-0.1	-0.3	-0.3	-0.3

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

¹ For details, see "Data and Conventions" in text.

² Cyclically adjusted primary balance excluding financial sector support recorded above the line.

Statistical Table 5. General Government Expenditure (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	34.3	34.0	34.3	37.7	37.2	36.7	36.3	35.0	34.3	34.0	33.7
Austria	49.5	49.0	49.3	53.0	52.9	51.8	51.5	50.9	50.5	50.1	50.1
Belgium	48.6	48.4	50.2	54.1	52.9	52.4	52.3	52.2	52.3	52.3	52.3
Canada	39.3	39.2	39.5	44.1	43.8	42.3	41.9	41.4	41.0	40.8	40.5
Czech Republic	43.7	42.5	42.9	45.9	45.2	45.0	44.7	44.4	44.4	44.2	44.3
Denmark	51.2	50.8	51.8	58.3	57.9	56.6	55.8	55.5	54.8	54.4	53.5
Estonia	34.6	35.4	41.5	47.6	45.5	43.2	43.1	40.0	37.3	36.3	35.4
Finland	49.0	47.2	49.1	55.6	55.1	53.9	52.8	52.9	52.8	52.7	52.7
France	52.9	52.6	53.3	56.7	56.7	56.6	55.9	55.0	54.2	53.4	52.5
Germany	45.6	43.6	43.9	48.0	47.0	45.8	45.2	44.7	43.8	43.5	43.3
Greece	45.2	46.6	49.6	52.8	49.5	48.1	47.6	45.7	43.7	43.1	41.3
Hong Kong SAR	15.4	14.5	18.8	18.0	17.3	19.8	18.1	17.9	17.6	17.3	17.3
Iceland	41.6	42.3	44.6	49.7	47.7	45.4	43.7	42.2	41.4	40.5	39.9
Ireland	33.4	35.7	41.7	47.8	66.0	44.9	43.8	42.2	39.8	39.7	39.1
Israel	45.7	44.8	44.6	44.5	44.1	43.6	44.0	43.7	43.5	43.8	44.0
Italy	48.7	47.9	48.8	51.8	50.5	50.0	49.3	49.0	49.1	49.2	49.2
Japan	34.7	33.4	35.8	40.1	39.8	41.7	41.3	40.5	40.1	40.1	40.0
Korea	21.5	21.9	22.4	23.0	21.2	20.9	20.4	20.2	20.3	20.3	20.4
Netherlands	45.6	44.9	45.8	50.6	50.2	49.5	49.4	49.2	48.9	48.6	48.0
New Zealand	31.1	31.0	32.8	34.4	35.1	35.0	33.1	31.3	30.8	30.6	30.3
Norway	40.3	41.0	40.5	47.1	46.4	45.5	46.0	46.3	46.7	47.1	47.4
Portugal	40.8	44.3	44.6	49.8	50.6	48.0	46.8	45.2	44.6	44.2	44.0
Singapore	15.0	14.2	19.2	19.6	17.8	19.5	19.4	19.3	19.1	18.2	18.2
Slovak Republic	36.6	34.3	35.0	41.5	41.0	38.3	37.5	36.7	36.0	34.9	34.5
Slovenia	42.5	40.3	41.4	46.4	46.4	46.7	45.2	44.3	43.9	43.6	43.6
Spain	38.4	39.2	41.3	45.8	45.0	42.9	42.0	41.4	41.1	41.1	41.2
Sweden	50.8	49.0	49.6	53.1	51.0	48.4	47.2	46.7	46.3	46.1	46.1
Switzerland	35.7	34.6	32.6	34.4	34.2	34.3	34.3	34.4	34.2	34.3	34.3
United Kingdom	40.6	40.3	42.7	47.1	46.8	45.6	44.4	42.8	41.1	39.9	39.0
United States	35.9	36.7	39.3	44.1	41.3	41.2	40.6	40.1	40.3	40.9	41.6
Emerging Economies											
Argentina	30.8	33.6	34.2	37.9	38.8	39.6	38.7	38.2	37.9	37.2	37.0
Brazil	39.5	38.3	37.7	38.7	40.4	39.2	39.2	39.0	38.9	39.0	39.0
Bulgaria	33.6	34.9	35.2	36.2	36.7	35.0	35.7	35.6	34.8	34.5	34.1
Chile	19.7	20.4	22.8	26.4	25.1	24.7	24.3	24.0	23.7	23.5	23.2
China	18.9	18.9	20.0	23.1	22.7	22.4	22.6	22.6	22.6	22.6	22.6
Colombia	28.1	28.2	26.3	29.1	27.5	28.3	27.4	27.4	27.1	27.2	27.1
Hungary	52.0	50.0	48.8	50.5	48.9	50.7	46.6	45.2	44.9	44.5	44.1
India	25.7	26.0	27.5	29.1	27.3	26.5	26.6	26.7	26.6	26.1	25.9
Indonesia	20.1	20.3	21.3	18.3	18.3	19.5	18.6	18.7	18.7	19.0	19.1
Jordan	36.4	37.0	34.4	34.9	30.2	34.0	30.5	30.0	29.3	29.0	28.7
Kazakhstan	19.8	24.1	26.7	23.4	22.5	22.8	22.8	23.1	23.1	23.2	23.1
Kenya	24.7	26.2	27.6	27.9	31.2	31.4	31.1	30.8	30.4	29.1	28.5
Latvia	36.6	35.6	42.9	44.0	44.0	42.0	38.9	36.7	35.2	34.6	33.5
Lithuania	33.9	35.0	37.5	44.1	41.7	39.3	38.2	36.8	36.3	35.6	35.2
Malaysia	27.1	28.0	28.9	32.9	31.1	31.0	30.4	30.0	29.5	29.0	28.5
Mexico	22.4	22.5	24.1	27.0	26.3	24.8	24.9	24.5	23.8	23.4	23.0
Morocco	26.7	26.3	29.8	28.5	29.0	32.2	30.4	30.1	29.5	29.1	28.6
Nigeria	22.3	27.9	28.1	30.4	33.1	29.0	26.2	25.3	24.9	23.9	24.7
Pakistan	18.4	20.8	22.3	19.9	20.3	19.7	18.0	18.6	18.4	18.4	18.1
Peru	18.2	17.7	18.9	20.7	20.4	19.7	19.7	19.6	19.5	19.6	19.5
Philippines	16.9	16.7	16.4	17.7	16.9	16.6	16.6	16.3	16.2	16.1	16.1
Poland	43.9	42.2	43.2	44.5	45.7	45.8	44.6	44.7	44.3	43.9	43.8
Romania	33.7	35.4	37.0	38.7	39.4	37.9	36.7	36.6	36.6	36.3	36.1
Russia	31.1	33.1	34.3	41.4	38.5	38.2	37.7	36.9	37.0	36.9	36.9
Saudi Arabia	32.0	34.6	31.6	45.6	42.2	41.4	39.7	41.9	41.6	41.8	42.8
South Africa	26.9	28.1	30.2	33.0	33.0	32.5	32.1	31.8	31.5	31.1	30.5
Thailand	20.1	21.3	21.2	24.0	23.5	23.5	22.9	22.7	22.7	22.7	22.7
Turkey	32.8	33.3	33.8	37.6	35.6	34.8	34.6	33.9	33.9	34.1	34.1
Ukraine	44.6	43.8	47.4	48.6	48.5	45.0	43.4	42.4	41.9	41.4	40.9
Average	33.1	33.2	34.6	38.2	37.1	36.7	36.2	35.8	35.6	35.6	35.6
Advanced	38.6	38.6	40.4	44.5	43.1	42.8	42.2	41.5	41.3	41.3	41.4
Emerging	25.5	25.9	26.8	29.6	28.9	28.5	28.2	28.1	28.0	27.8	27.7
G-7	39.2	39.2	41.1	45.5	43.9	43.8	43.2	42.5	42.3	42.4	42.6
G-20	32.7	32.8	34.2	38.0	36.7	36.5	36.0	35.6	35.5	35.5	35.5
Advanced	38.3	38.2	40.1	44.3	42.7	42.6	41.9	41.3	41.1	41.2	41.3
Emerging	24.8	25.2	26.1	29.2	28.4	27.9	27.8	27.7	27.7	27.5	27.5

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Statistical Table 6. General Government Revenue (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	36.2	35.2	33.5	33.5	32.2	32.8	34.5	34.5	34.2	34.0	34.0
Austria	47.8	48.0	48.3	48.8	48.3	48.3	48.3	48.2	48.1	48.1	48.0
Belgium	48.7	48.1	48.9	48.2	48.9	48.9	48.9	49.0	49.0	49.1	49.1
Canada	40.8	40.7	39.7	39.2	38.3	38.0	38.7	39.5	40.0	40.6	40.8
Czech Republic	41.1	41.8	40.2	40.1	40.6	41.2	41.0	40.8	40.8	40.9	40.9
Denmark	56.6	55.6	55.2	55.5	54.9	53.6	52.8	52.6	52.1	52.0	51.5
Estonia	37.8	38.2	39.2	45.5	45.7	43.1	40.9	38.9	37.5	37.3	36.9
Finland	52.9	52.4	53.2	52.7	52.3	52.9	53.2	53.2	53.2	53.2	53.2
France	50.6	49.8	50.0	49.2	49.6	50.7	51.2	51.1	51.1	51.1	51.1
Germany	44.0	43.9	44.0	44.9	43.7	44.1	44.1	44.0	43.8	43.7	43.7
Greece	39.0	40.0	39.8	37.3	39.1	40.1	40.7	40.6	40.9	40.3	38.5
Hong Kong SAR	19.5	22.2	18.9	19.6	21.6	22.3	22.1	21.9	21.9	21.9	21.8
Iceland	48.0	47.7	44.1	41.1	42.3	41.3	41.4	41.1	41.4	41.6	41.5
Ireland	36.3	35.7	34.3	33.6	34.0	34.6	35.2	35.3	35.4	35.5	35.3
Israel	44.5	44.6	41.8	38.8	40.0	40.8	41.8	42.0	42.4	42.7	43.0
Italy	45.4	46.4	46.1	46.5	46.0	45.9	46.9	47.9	48.0	48.1	48.0
Japan	30.7	31.0	31.6	29.8	30.6	31.4	32.2	32.7	32.6	32.6	32.7
Korea	22.7	24.2	24.0	23.0	22.9	22.9	22.8	22.9	23.1	23.2	23.2
Netherlands	46.2	45.2	46.3	45.2	44.9	45.7	46.6	46.9	47.0	47.3	47.4
New Zealand	34.3	33.6	32.9	31.1	29.2	28.8	29.6	30.1	30.9	31.1	31.2
Norway	58.8	58.7	59.9	57.7	57.3	57.5	57.2	57.1	57.0	56.9	56.8
Portugal	40.5	41.1	41.1	39.7	41.5	42.2	42.3	42.2	42.3	42.3	42.3
Singapore	20.1	24.1	24.5	18.8	23.0	22.7	22.9	23.0	22.9	22.1	22.3
Slovak Republic	33.4	32.5	32.9	33.6	33.1	33.4	33.7	33.6	33.2	32.9	32.5
Slovenia	41.7	40.5	41.1	40.8	41.1	40.6	40.5	40.5	40.4	40.4	40.4
Spain	40.4	41.1	37.1	34.7	35.7	36.8	36.9	37.0	37.0	37.0	37.1
Sweden	53.0	52.5	51.9	52.1	50.7	49.2	48.5	48.4	48.3	48.3	48.3
Switzerland	36.6	36.0	34.5	34.9	34.6	35.1	34.9	35.0	35.1	35.2	35.2
United Kingdom	38.0	37.7	37.8	36.8	36.6	37.1	37.4	37.7	37.7	37.6	37.3
United States	33.8	33.9	32.7	31.2	30.9	31.6	32.6	33.9	34.8	35.2	35.6
Emerging Economies											
Argentina	29.9	31.5	33.4	34.3	37.2	37.6	36.8	36.6	36.5	36.7	36.8
Brazil	35.9	35.7	36.3	35.6	37.5	36.7	36.4	36.4	36.5	36.5	36.6
Bulgaria	37.0	38.2	38.0	35.3	32.7	32.5	33.5	34.2	33.8	33.8	33.7
Chile	27.6	28.8	27.2	22.0	24.8	26.1	25.9	25.4	25.1	24.7	24.2
China	18.2	19.8	19.7	20.0	20.4	20.9	21.8	22.5	22.6	22.7	22.7
Colombia	27.3	27.2	26.3	26.5	24.4	25.3	25.9	26.2	26.0	26.2	26.2
Hungary	42.7	45.0	45.2	46.1	44.6	52.7	43.1	42.0	42.2	42.4	42.5
India	20.2	21.8	20.3	19.3	18.5	18.5	19.1	19.2	19.3	18.9	18.9
Indonesia	20.3	19.3	21.3	16.5	17.1	17.7	17.3	17.4	17.5	17.8	18.1
Jordan	32.4	32.3	30.1	26.4	24.8	27.8	24.4	24.3	24.4	24.5	24.4
Kazakhstan	27.5	29.3	27.9	22.1	23.9	24.5	24.5	24.6	24.4	24.6	24.5
Kenya	22.2	23.1	23.2	22.8	25.2	26.0	26.3	26.5	26.3	25.8	25.6
Latvia	36.1	36.2	35.4	36.2	36.2	37.5	36.6	34.7	33.6	32.7	31.9
Lithuania	33.4	34.0	34.2	34.9	34.6	34.1	33.7	32.7	32.7	32.5	32.4
Malaysia	24.8	25.4	25.3	27.0	26.0	26.0	25.6	25.2	25.0	24.6	24.2
Mexico	21.4	21.3	23.0	22.3	22.0	21.6	22.1	22.0	21.5	21.1	20.9
Morocco	25.6	27.8	31.1	26.3	25.5	25.4	25.5	25.8	25.8	25.8	25.8
Nigeria	33.9	28.4	32.8	20.2	24.5	29.4	28.5	27.4	26.1	24.4	23.2
Pakistan	14.7	15.3	14.9	14.7	14.4	13.2	12.6	13.4	14.2	14.3	14.3
Peru	20.1	20.9	21.1	18.9	20.0	20.4	20.6	21.0	21.2	21.3	21.4
Philippines	15.6	15.2	15.2	14.1	13.4	13.7	14.1	14.3	14.3	14.1	14.2
Poland	40.2	40.3	39.5	37.2	37.8	40.3	40.8	41.3	41.1	41.2	41.4
Romania	32.3	32.3	32.2	31.4	32.8	33.5	33.9	34.2	34.4	34.5	34.7
Russia	39.5	39.9	39.2	35.1	35.0	37.1	35.6	34.7	33.8	33.2	32.5
Saudi Arabia	56.6	50.4	66.0	41.0	48.9	50.8	47.7	46.3	44.8	43.0	41.1
South Africa	27.7	29.6	29.7	27.8	27.8	28.2	28.2	28.4	28.7	29.0	29.2
Thailand	22.3	21.5	21.4	20.8	20.8	20.9	20.0	19.5	19.6	19.6	19.7
Turkey	32.8	31.7	31.5	32.0	32.7	33.9	33.6	33.2	33.0	32.9	32.9
Ukraine	43.2	41.8	44.3	42.3	42.8	42.2	41.4	40.4	39.9	39.4	38.9
Average	32.2	32.6	32.3	31.1	31.2	31.8	32.2	32.6	32.7	32.8	32.8
Advanced	37.2	37.4	36.7	35.7	35.6	36.1	36.8	37.4	37.8	37.9	38.0
Emerging	25.4	26.0	26.3	24.8	25.2	25.8	25.9	26.1	25.9	25.8	25.7
G-7	37.0	37.0	36.5	35.4	35.2	35.8	36.6	37.4	37.9	38.1	38.3
G-20	31.4	31.8	31.7	30.5	30.5	31.1	31.6	32.1	32.3	32.4	32.4
Advanced	36.3	36.4	35.9	34.8	34.6	35.2	35.9	36.7	37.1	37.3	37.5
Emerging	24.7	25.5	25.8	24.4	24.9	25.4	25.6	25.8	25.7	25.5	25.4

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Statistical Table 7. General Government Gross Debt (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	9.9	9.6	11.7	16.9	20.5	22.8	23.8	23.0	21.6	20.0	18.2
Austria	62.8	60.7	63.8	69.6	72.2	72.3	73.9	74.1	73.8	73.4	72.9
Belgium	88.0	84.2	89.8	96.3	96.7	94.6	94.3	93.9	93.6	93.2	93.0
Canada	70.3	66.5	71.1	83.3	84.0	84.1	84.2	82.3	79.7	76.4	73.0
Czech Republic	29.4	29.0	30.0	35.4	38.5	41.1	43.2	44.6	45.7	46.7	47.6
Denmark	41.0	34.1	42.2	41.8	43.7	44.3	45.8	47.0	48.1	48.8	49.2
Estonia	4.4	3.7	4.6	7.2	6.6	6.0	5.6	5.3	5.1	4.8	4.6
Finland	39.6	35.2	33.9	43.3	48.4	50.2	50.3	51.0	51.6	52.0	52.3
France	63.9	64.2	68.3	79.0	82.4	86.9	89.4	90.8	90.8	89.7	87.7
Germany	67.9	65.0	66.4	74.1	84.0	82.6	81.9	81.0	79.1	77.1	75.0
Greece	106.1	105.4	110.7	127.1	142.8	165.6	189.1	187.9	178.5	165.1	162.8
Hong Kong SAR ¹	31.9	30.8	30.4	34.0	33.2	31.6	30.5	29.7	29.1	28.6	28.0
Iceland	30.1	29.1	70.3	88.2	92.4	101.2	96.8	95.0	91.7	88.2	82.5
Ireland	24.7	24.9	44.4	65.2	94.9	109.3	115.4	118.3	117.7	116.1	114.3
Israel	85.0	78.1	77.1	80.7	77.4	71.1	68.9	66.8	64.4	62.0	59.7
Italy	106.6	103.6	106.3	116.1	119.0	121.1	121.4	120.1	118.4	116.3	114.1
Japan	191.3	187.7	195.0	216.3	220.0	233.1	238.4	242.9	245.9	249.9	253.4
Korea	31.1	30.7	30.1	33.8	33.4	32.0	30.0	28.0	26.0	24.0	22.2
Netherlands	47.4	45.3	58.2	60.8	63.7	65.5	66.5	66.9	66.7	65.8	64.4
New Zealand	19.4	17.4	20.3	26.1	32.0	35.3	34.6	34.1	33.3	31.1	29.7
Norway	60.5	58.6	56.8	55.4	55.4	55.4	55.4	55.4	55.4	55.4	55.4
Portugal	63.9	68.3	71.6	83.0	92.9	106.0	111.8	114.9	114.6	112.5	110.5
Singapore	86.8	85.9	97.2	105.0	96.3	93.5	90.1	87.8	85.3	83.1	81.7
Slovak Republic	30.5	29.6	27.8	35.4	41.8	44.9	46.9	47.1	46.9	46.1	45.4
Slovenia	26.7	23.4	22.5	35.5	37.3	43.6	47.2	49.2	50.8	52.1	53.5
Spain	39.6	36.1	39.8	53.3	60.1	67.4	70.2	72.8	74.9	76.1	77.4
Sweden	45.3	40.2	38.8	42.8	39.7	36.0	32.6	29.2	25.7	22.4	19.3
Switzerland	64.4	57.2	54.8	54.8	54.5	52.4	51.2	50.0	49.1	47.7	46.4
United Kingdom	43.1	43.9	52.0	68.3	75.5	80.8	84.8	85.9	85.1	83.1	80.4
United States	61.1	62.3	71.6	85.2	94.4	100.0	105.0	108.9	111.4	113.2	115.4
Emerging Economies											
Argentina	76.5	67.1	58.5	58.7	49.1	43.3	41.5	40.4	39.5	38.0	37.3
Brazil	66.7	65.2	63.6	68.1	66.8	65.0	64.0	62.5	60.9	59.0	57.2
Bulgaria	23.4	18.6	15.5	15.6	17.4	17.8	20.5	20.7	20.4	20.5	19.3
Chile	5.3	4.1	5.2	6.2	9.2	10.5	10.6	10.6	10.7	10.7	10.9
China ¹	16.2	19.6	17.0	17.7	33.8	26.9	22.2	18.4	15.5	13.0	10.9
Colombia	36.8	32.7	30.8	35.8	36.0	35.9	34.7	33.7	32.8	32.1	31.2
Hungary	65.7	66.1	72.3	78.4	80.2	76.1	75.5	75.6	74.4	73.1	71.5
India	78.5	75.4	74.7	74.2	67.3	64.9	64.2	63.2	62.6	62.2	61.7
Indonesia	40.4	36.9	33.2	28.6	27.4	25.2	24.0	22.7	21.4	20.2	19.0
Jordan	76.3	73.8	60.2	64.5	66.8	68.5	67.8	66.9	66.3	64.4	63.6
Kazakhstan	6.7	5.9	6.7	10.2	10.7	12.9	13.0	13.8	14.2	14.4	14.1
Kenya	46.8	46.1	46.2	47.6	50.4	51.2	50.2	49.2	48.9	48.4	47.4
Latvia	9.9	7.8	17.1	32.8	39.9	39.6	40.5	43.4	46.6	42.0	39.6
Lithuania	18.0	16.9	15.6	29.6	38.7	42.8	44.6	45.9	46.4	46.5	46.4
Malaysia	43.2	42.7	42.8	55.4	54.2	55.1	55.9	56.6	57.0	57.2	57.4
Mexico	38.4	37.8	43.1	44.7	42.9	42.9	43.6	43.5	43.4	43.3	43.2
Morocco	59.4	54.6	48.2	47.9	51.1	54.2	55.5	56.0	55.8	54.9	53.5
Nigeria	11.8	12.8	11.6	15.2	17.3	15.7	16.3	17.1	15.7	15.0	13.4
Pakistan	56.4	53.9	58.7	57.4	56.8	57.6	57.3	56.5	55.1	52.8	51.1
Peru	33.2	30.9	25.0	27.1	24.5	21.5	19.2	16.4	13.4	10.8	8.1
Philippines	53.3	46.1	46.7	47.1	44.7	44.4	43.6	42.2	40.9	39.7	38.5
Poland	47.7	45.0	47.1	50.9	55.0	56.0	56.4	56.5	56.2	55.6	54.7
Romania	12.6	12.7	13.6	23.9	31.7	34.4	34.4	34.0	33.6	32.8	31.7
Russia	9.0	8.5	7.9	11.0	11.7	11.7	12.1	12.6	14.5	16.8	19.5
Saudi Arabia	27.3	18.5	13.2	15.9	9.9	7.1	6.1	5.1	4.3	3.6	3.0
South Africa	32.6	28.3	27.3	31.5	34.8	36.9	38.5	39.5	39.6	38.6	36.3
Thailand	42.0	38.3	37.3	45.2	44.1	43.0	43.5	44.5	45.3	46.2	47.1
Turkey	46.1	39.4	39.5	46.1	42.2	40.3	38.1	36.3	35.1	34.2	33.2
Ukraine	14.8	12.3	20.5	35.4	40.1	39.3	39.4	39.0	39.3	38.4	35.1
Average	58.3	57.5	60.6	68.5	73.8	75.3	76.3	76.7	76.6	76.3	76.1
Advanced	74.3	73.4	79.7	91.9	98.1	102.9	106.1	108.0	108.7	109.0	109.4
Emerging	36.6	35.9	34.7	36.7	40.9	37.8	36.0	34.3	33.0	31.9	30.9
G-7	82.9	82.4	89.5	103.4	110.4	115.9	119.6	122.1	123.3	124.1	124.8
G-20	61.0	60.6	63.7	71.9	77.8	79.1	80.1	80.6	80.5	80.4	80.3
Advanced	78.6	78.1	84.7	97.8	104.4	109.5	112.9	115.1	116.1	116.7	117.2
Emerging	36.6	36.3	34.6	35.9	40.7	36.9	34.7	32.7	31.2	30.0	29.0

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

¹ For Hong Kong SAR, entire series was revised upward compared to the April *Monitor* to include additional items. For China, data revisions from the authorities indicate that debt at end-2010 was much larger than previously reported, but no revised historical series is yet available for previous years. For details, see "Data and Conventions" in text.

Statistical Table 8. General Government Net Debt (Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Advanced Economies											
Australia	-6.3	-7.2	-5.3	-0.6	4.4	7.7	9.4	9.3	8.7	7.9	6.7
Austria	43.4	41.2	42.0	49.5	52.4	52.5	53.9	54.1	53.7	53.3	52.9
Belgium	77.2	73.3	73.9	80.1	81.1	79.9	80.2	80.4	80.6	80.7	80.9
Canada	26.3	22.9	22.3	28.3	32.2	34.9	36.8	37.1	36.5	35.1	33.3
Czech Republic	...	...	...	...	...	...	...	...	...	...	...
Denmark	1.9	-3.8	-5.3	-3.7	-1.3	1.8	4.7	7.4	9.8	11.9	13.5
Estonia	-4.9	-5.6	-3.3	-1.3	-1.0	-1.7	0.7	1.7	1.4	0.3	-1.2
Finland	-69.4	-72.5	-52.2	-62.5	-64.5	-59.7	-56.9	-54.8	-52.9	-51.3	-49.7
France	59.6	59.5	62.3	72.0	76.6	81.0	83.6	84.9	85.0	83.9	81.9
Germany	53.0	50.2	49.7	56.4	57.6	57.2	57.0	56.6	55.3	55.3	55.3
Greece	...	...	...	...	...	...	...	...	...	...	...
Hong Kong SAR	...	...	...	...	...	...	...	...	...	...	...
Iceland	7.8	10.8	41.7	55.8	62.6	67.1	65.6	63.7	60.9	57.4	53.4
Ireland	12.1	11.2	24.6	42.3	78.0	98.8	104.6	107.4	105.7	103.1	100.3
Israel	74.1	69.1	69.9	73.9	72.5	67.5	66.1	64.3	62.1	59.9	57.7
Italy	89.8	87.3	89.2	97.1	99.4	100.4	100.7	99.6	98.4	96.7	94.8
Japan	84.3	81.5	96.5	110.0	117.2	130.6	139.0	146.4	152.8	160.0	166.9
Korea	29.4	28.7	28.8	32.3	32.1	30.8	28.9	26.9	25.0	23.0	21.3
Netherlands	24.5	21.7	20.5	23.0	27.7	30.6	32.6	34.0	34.8	34.9	34.4
New Zealand	0.2	-5.7	-4.8	-0.8	3.3	7.8	11.0	11.7	11.4	10.7	9.8
Norway	-136.3	-142.5	-126.4	-152.0	-157.0	-161.0	-167.0	-171.5	-176.0	-179.8	-183.1
Portugal	58.8	63.7	67.4	78.8	88.7	101.8	107.6	110.7	110.4	108.3	106.3
Singapore	...	...	...	...	...	...	...	...	...	...	...
Slovak Republic	...	...	...	...	...	...	...	...	...	...	...
Slovenia	...	...	...	...	...	...	...	...	...	...	...
Spain	30.5	26.5	30.5	41.9	48.7	56.0	58.7	61.3	63.4	64.7	65.9
Sweden	-14.0	-17.5	-12.6	-19.8	-21.5	-20.8	-20.8	-21.5	-22.4	-23.6	-24.8
Switzerland	64.2	56.9	52.9	53.1	52.8	50.8	49.6	48.4	47.5	46.2	45.0
United Kingdom	38.0	38.2	45.6	60.9	67.7	72.9	76.9	78.0	77.2	75.2	72.5
United States	42.0	42.9	48.7	60.6	68.3	72.6	78.4	82.2	84.6	86.7	88.7
Emerging Economies											
Argentina	...	...	...	...	...	...	...	...	...	...	...
Brazil	47.0	45.1	38.1	42.2	40.2	38.6	37.5	36.4	35.2	34.1	33.2
Bulgaria	-10.4	-10.2	-13.6	-13.9	-11.2	-9.0	-6.1	-5.8	-5.6	-5.8	-6.3
Chile	-1.8	-10.0	-17.7	-6.9	-2.4	-2.7	-7.6	-6.8	-8.3	-7.9	-8.2
China	...	...	...	...	...	...	...	...	...	...	...
Colombia	26.3	22.7	21.0	26.9	28.1	29.2	28.4	27.5	27.0	26.6	26.1
Hungary	63.8	64.6	65.8	72.4	74.8	74.5	74.6	74.8	73.6	72.3	70.8
India	...	...	...	...	...	...	...	...	...	...	...
Indonesia	...	...	...	...	...	...	...	...	...	...	...
Jordan	68.8	67.6	54.8	57.1	61.1	62.1	61.9	61.4	61.3	59.8	59.5
Kazakhstan	-10.7	-14.4	-13.7	-10.9	-10.0	-9.9	-10.5	-10.6	-10.6	-10.6	-10.5
Kenya	42.1	41.5	41.2	42.6	45.3	46.2	45.2	44.2	43.8	43.4	42.3
Latvia	7.4	4.7	11.3	21.5	30.7	33.1	33.9	34.0	33.6	33.5	33.1
Lithuania	11.0	11.2	12.8	23.5	31.4	36.3	38.5	40.1	41.0	41.5	41.7
Malaysia	...	...	...	...	...	...	...	...	...	...	...
Mexico	32.4	31.1	35.6	39.1	39.3	39.3	40.0	39.9	39.8	39.7	39.6
Morocco	56.8	53.1	47.5	47.3	50.6	53.6	55.0	55.5	55.3	54.4	53.5
Nigeria	-13.7	0.8	-3.2	15.1	20.1	11.7	4.6	-1.0	-3.6	-2.6	-0.7
Pakistan	52.2	48.6	53.7	53.7	53.3	54.2	54.0	53.3	51.9	49.7	48.0
Peru	...	...	...	...	...	...	...	...	...	...	...
Philippines	...	...	...	...	...	...	...	...	...	...	...
Poland	15.0	10.2	9.9	15.0	21.3	24.5	26.3	27.5	27.3	26.6	25.7
Romania	...	...	...	...	...	...	...	...	...	...	...
Russia	...	...	...	...	...	...	...	...	...	...	...
Saudi Arabia	1.7	-17.1	-45.8	-50.2	-50.1	-49.5	-55.7	-56.6	-56.6	-54.7	-50.0
South Africa	29.7	24.8	23.4	27.3	30.9	33.2	35.3	36.6	36.9	36.6	34.8
Thailand	...	...	...	...	...	...	...	...	...	...	...
Turkey	38.5	32.2	32.8	38.5	36.0	33.8	31.3	29.2	27.7	26.4	25.2
Ukraine	11.7	10.1	18.3	31.9	38.0	37.6	38.9	38.7	39.0	38.2	34.9
Average	43.2	41.7	45.4	54.2	59.0	62.6	65.7	67.5	68.5	69.2	70.0
Advanced	46.5	45.5	50.8	60.6	66.4	70.9	75.0	77.5	78.8	79.9	80.9
Emerging	29.7	26.2	23.3	27.9	28.7	28.5	27.5	26.9	26.2	25.7	25.3
G-7	52.5	52.0	57.9	69.1	75.3	80.2	84.9	87.9	89.8	91.5	92.9
G-20	47.6	46.4	50.4	60.0	64.8	68.6	72.1	74.3	75.6	76.7	77.8
Advanced G-20	49.8	49.3	54.8	65.5	71.3	75.9	80.2	83.0	84.6	86.0	87.3
Emerging G-20	35.2	30.6	26.1	29.4	28.6	28.0	26.8	26.1	25.4	25.0	24.7

Source: IMF staff estimates and projections. Projections are based on staff assessment of current policies (see "Fiscal Policy Assumptions" in text).

Statistical Table 9. Structural Fiscal Indicators (Percent of GDP, unless indicated otherwise)

	Pension spending change, 2010–30 ¹	Net present value of pension spending change, 2010–50 ^{1,2}	Health care spending change, 2010–30 ³	Net present value of health care spending change, 2010–50 ^{2,3}	Gross financing needs, 2012 ⁴	Average term to maturity, 2011 (years) ⁵	Debt-to-average maturity, 2011	Projected interest rate-growth differential, 2012–16 (percent)	Precrisis overall balance, 2000–07	Postcrisis overall balance, 2011–16	Nonresident holding of marketable central government debt, 2010 (percent of total) ⁶	Nonresident holding of general government debt, 2010 (percent of total) ⁷
Advanced Economies												
Australia	1.2	34.0	2.1	67.0	5.1	5.1	4.5	0.2	1.6	-1.0	72.7	53.0
Austria	1.1	25.7	3.2	104.6	9.2	7.2	10.0	0.4	-1.7	-2.7	71.2	81.5
Belgium	3.6	92.5	2.0	64.3	22.2	6.3	14.9	0.0	-0.4	-3.3	58.0	63.5
Canada	1.6	35.8	2.0	61.1	18.6	5.8	14.6	0.5	1.1	-1.7	20.7	20.5
Czech Republic	0.0	18.9	0.6	17.5	11.7	5.8	7.1	-0.3	-4.1	-3.6	27.8	33.5
Denmark	1.2	29.4	0.8	21.5	10.8	6.9	6.4	0.0	2.4	-2.7	42.9	37.6
Estonia	-0.8	-22.8	1.1	37.3	...	11.5	0.6	-1.3	1.5	-0.1	...	79.8
Finland	3.2	76.7	2.5	76.4	8.3	5.2	9.6	-0.9	4.0	0.2	95.3	89.5
France	0.1	-0.7	1.5	43.8	20.8	7.0	12.4	-0.3	-2.8	-3.5	62.9	62.5
Germany	1.3	34.7	0.9	28.1	10.5	5.6	14.7	0.5	-2.2	-0.5	59.2	51.9
Greece	0.3	24.1	3.2	106.9	16.5	6.9	24.0	2.5	-5.5	-4.7	75.5	57.4
Hong Kong SAR	...	...	...	...	...	...	...	-6.9	-0.1	4.0	...	1.9
Iceland	2.1	56.6	3.2	105.0	10.9	6.6	15.3	0.2	1.5	-0.8	28.1	...
Ireland	0.7	31.7	0.7	23.2	13.9	6.2	17.7	0.8	1.4	-6.3	82.3	54.8
Israel	...	...	...	...	...	5.2	13.7	0.3	-3.2	-1.6	11.0	16.7
Italy	0.3	13.1	0.6	18.8	23.5	7.2	16.9	2.2	-2.9	-1.8	44.3	44.4
Japan	-0.2	6.6	1.0	27.5	58.6	5.8	40.4	-0.4	-5.9	-8.2	4.8	6.9
Korea	1.7	54.5	3.2	111.9	1.0	3.7	8.6	-3.0	2.1	2.6	...	13.0
Netherlands	2.8	77.8	2.6	79.3	16.0	6.1	10.7	0.7	-0.6	-2.1	70.0	64.7
New Zealand	2.0	54.9	3.0	95.9	9.3	4.3	8.1	0.6	2.5	-1.6	36.4	...
Norway	3.1	86.5	1.7	52.0	-1.0	2.3	23.9	-2.2	13.5	10.6	37.8	41.9
Portugal	0.7	18.9	3.5	116.5	22.3	6.0	17.8	2.0	-1.3	-3.2	63.3	60.5
Singapore ⁸	...	...	...	...	...	3.1	30.1	-5.0	4.9	3.8	...	...
Slovak Republic	0.7	25.8	1.2	37.1	14.2	5.0	8.9	-0.8	-5.0	-3.1	35.2	36.3
Slovenia	3.2	110.4	0.7	22.2	8.2	7.3	6.0	-0.6	-1.0	-4.1	60.9	61.4
Spain	0.5	55.1	1.6	51.5	20.6	6.2	10.8	1.0	0.3	-4.7	44.0	45.7
Sweden	-0.1	-6.8	0.4	11.7	3.6	5.8	6.2	-1.5	1.3	1.7	43.3	46.1
Switzerland	...	...	3.9	127.7	2.5	7.0	7.5	-0.6	0.2	0.7	...	7.4
United Kingdom	0.9	23.4	3.3	113.3	14.7	13.9	5.8	-0.9	-1.9	-4.7	31.1	27.3
United States	1.1	23.9	5.1	164.5	30.4	5.1	19.7	-0.8	-3.1	-6.8	53.0	32.2

Statistical Table 9. Structural Fiscal Indicators (continued)

	Pension spending change, 2010–30 ¹	Net present value of pension spending change, 2010–50 ^{1,2}	Health care spending change, 2010–30 ³	Net present value of health care spending change, 2010–50 ^{2,3}	Gross financing needs, 2012 ⁴	Average term to maturity, 2011 (years) ⁵	Debt-to-average maturity, 2011	Projected interest rate-growth differential, 2012–16 (percent)	Precrisis overall balance, 2000–07	Postcrisis overall balance, 2011–16	Nonresident holding of marketable central government debt, 2010 (percent of total) ⁶	Nonresident holding of general government debt, 2010 (percent of total) ⁷
Emerging Economies												
Argentina	0.4	20.3	1.5	51.8	6.3	14.4	3.0	-9.6	-4.6	-1.2	...	38.2
Brazil	1.3	67.4	1.6	52.0	19.4	4.7	13.8	0.6	-3.5	-2.5	...	4.7
Bulgaria	-0.5	-2.5	1.3	44.6	4.7	4.1	4.3	-1.5	1.1	-1.4	...	46.3
Chile	...	...	1.5	50.5	0.3	7.4	1.4	-1.2	2.5	1.3	...	22.4
China	0.2	7.6	0.8	27.8	5.2	8.8	3.1	-8.3	-1.8	-0.4	...	...
Colombia	...	...	...	...	4.9	6.6	5.4	0.9	-1.8	-1.4	...	29.6
Hungary	-0.3	6.3	1.6	51.9	15.3	5.0	15.2	0.0	-6.6	-1.9	...	58.1
India	0.4	5.8	0.4	12.6	8.1	9.0	7.2	-5.1	-8.0	-7.4	...	6.8
Indonesia	0.4	14.4	0.5	15.6	3.0	9.3	2.7	-5.2	-1.0	-1.3	...	55.1
Jordan	...	...	...	...	6.4	1.5	45.9	-4.4	-3.5	-5.3	...	31.1
Kazakhstan	...	...	...	...	-1.2	6.8	1.9	-6.1	4.6	1.5	...	24.0
Kenya	...	...	...	...	...	6.5	7.9	-5.8	-1.9	-4.1	...	...
Latvia	0.8	16.3	1.0	34.7	6.8	4.1	9.6	-0.2	-1.4	-2.3	...	82.0
Lithuania	1.7	50.7	1.5	49.4	12.2	4.3	9.9	-1.6	-1.8	-3.9	...	76.6
Malaysia	1.7	47.5	0.8	25.8	7.8	5.1	10.8	-3.6	-3.8	-4.6	...	4.2
Mexico	2.1	49.3	1.1	37.7	10.3	7.2	5.9	-2.1	-2.1	-2.5	...	22.8
Morocco	...	...	...	...	15.7	5.3	10.1	-2.8	-2.2	-4.3	...	22.0
Nigeria	...	...	...	...	...	3.8	4.2	-2.6	3.2	0.8	...	...
Pakistan	0.4	13.8	0.2	8.3	26.5	2.2	26.6	-6.1	-3.2	-4.8	...	...
Peru	...	...	...	...	0.5	14.6	1.5	-0.7	-0.4	1.4	...	51.4
Philippines	0.5	14.6	0.5	15.6	12.4	9.8	4.5	-1.0	-3.4	-2.2	...	...
Poland	-1.4	-42.4	1.8	58.7	12.0	5.1	10.9	-0.6	-4.3	-3.5	...	42.5
Romania	2.0	74.2	1.3	43.0	12.1	4.7	7.3	-2.9	-2.6	-2.5	...	47.1
Russia	4.6	126.4	1.1	36.7	2.9	6.4	1.8	-2.5	4.6	-2.8	...	19.9
Saudi Arabia	1.4	53.0	1.0	35.5	...	3.1	2.3	-0.2	10.8	4.1	...	...
South Africa	0.6	16.7	1.1	36.5	4.8	9.0	4.1	-0.6	-0.6	-3.0	...	27.8
Thailand	...	...	1.1	36.5	7.7	6.4	6.5	-4.5	-0.4	-3.0	...	5.6
Turkey	3.2	70.3	1.3	44.0	8.4	4.0	10.1	0.6	-5.0	-1.0	...	26.3
Ukraine	6.0	172.6	1.2	38.8	7.0	4.8	8.2	-5.9	-2.4	-2.1	...	41.8
Average	0.9	25.4	3.0	95.7	25.2	6.0	18.1	-0.4	-2.2	-4.4	45.8	34.7
Advanced Emerging	0.9	28.6	0.9	29.5	7.4	7.6	5.8	-4.5	-2.1	-2.2	...	21.4
G-7	0.8	20.4	3.3	104.2	29.6	6.2	20.2	-0.3	-3.1	-5.4	...	32.6
G-20	1.0	27.6	2.4	78.4	20.2	6.6	14.1	-2.2	-2.1	-3.5	...	30.4
Advanced Emerging	0.8	22.3	3.2	103.5	27.7	6.1	19.2	-0.4	-2.7	-5.0	...	32.2
Emerging	1.1	37.2	1.0	33.2	6.7	7.6	4.8	-5.4	-1.0	-1.0	...	22.8

Sources: Bloomberg L.P.; country authorities; Organization for Economic Cooperation and Development; Joint External Debt Hub; and IMF staff estimates and projections.

¹ Pension projections are based on IMF staff estimates (IMF, 2010b). Projections do not take into account recent reforms (or plans for reforms) in the following countries: Estonia, Hungary, Latvia, Poland, Romania, and Russia. Pension spending projections for France, Greece, Ireland, Italy, and Spain reflect recent reforms. For Spain, estimates assume that future revisions to the sustainability factor would offset expected increases in life expectancy after 2030. For Greece, the estimates for the main pension funds are from the Greek Actuarial Authority and also assume that supplementary pensions grow in line with other pensions.

² For net present value calculations, a discount rate of 1 percent a year in excess of GDP growth is used for each country.

³ Health care spending projections are based on IMF staff estimates (IMF, 2010c). Projections do not take into account recent reforms (or plans for reforms) in the following countries: France, Germany, Greece, Ireland, Italy, Portugal, Spain, and the United Kingdom.

⁴ Gross financing needs are defined as the projected overall balance and maturing government debt in 2012; for more details on the assumptions for advanced economies, see note in Table 3.

⁵ Average term to maturity data refer to government securities; source is Bloomberg; for Estonia, data refer to 2010.

⁶ Nonresident holding of central government debt (marketable securities) data are from national authorities and OECD (2011); general government for Germany, Italy, Portugal, and Spain.

⁷ Nonresident holding of general government debt data are 2010:Q4 or latest available from the Joint External Debt Hub (JEDH). Quarterly External Debt Statistics, which include marketable and nonmarketable debt.

⁸ For some countries, tradable instruments in the JEDH are reported at market value. External debt in U.S. dollars is converted to local currency, then taken as a ratio of 2010 gross general government debt.

⁹ Singapore's general government debt is covered by financial assets and issued to develop the bond market.

Glossary

Term	Definition
Automatic stabilizers	Budgetary measures that dampen fluctuation in real GDP, automatically triggered by the tax code and by spending rules.
CDS spreads	The spread on credit default swap (CDS) refers to the annual amount (in basis points of the notional amount) that the protection buyer must pay the seller over the length of the contract to protect the underlying asset against a credit event.
Cyclical balance	Cyclical component of the overall fiscal balance, computed as the difference between cyclical revenues and cyclical expenditure. The latter are typically computed using country-specific elasticities of aggregate revenue and expenditure series with respect to the output gap. Where unavailable, standard elasticities (0,1) are assumed for expenditure and revenue, respectively.
Cyclically adjusted balance (CAB)	Overall balance minus cyclical balance.
Cyclically adjusted (CA) expenditure and revenue	Revenue and expenditure adjusted for the effect of the economic cycle (i.e., net of cyclical revenue and expenditure).
Cyclically adjusted primary balance (CAPB)	Cyclically adjusted balance excluding net interest payments
Expenditure elasticity	Elasticity of expenditure with respect to the output gap.
Fiscal stimulus	Discretionary fiscal policy actions (including revenue reductions and spending increases) adopted in response to the financial crisis.
General government	The general government sector consists of all government units and all nonmarket, nonprofit institutions that are controlled and mainly financed by government units comprising the central, state, and local governments. The general government sector does not include public corporations or quasi-corporations.
Gross debt	All liabilities that require future payment of interest and/or principal by the debtor to the creditor. This includes debt liabilities in the form of SDRs, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. (See the 2001 edition of the IMF's <i>Government Finance and Statistics Manual</i> and the forthcoming edition of the <i>Public Sector Debt Statistics Guide</i> .) The term "public debt" is used in this <i>Monitor</i> , for simplicity, as synonymous with gross debt of the general government, unless otherwise specified. (Strictly speaking, the term "public debt" refers to the debt of the public sector as a whole, which includes financial and nonfinancial public enterprises and the central bank.)
Gross financing needs	Overall new borrowing requirement plus debt maturing during the year.
Net debt	Gross debt minus financial assets, including those held by the broader public sector: for example, social security funds held by the relevant component of the public sector, in some cases.
Output gap	Deviation of actual from potential GDP, in percent of potential GDP.
Overall fiscal balance (also "headline" fiscal balance)	Net lending/borrowing, defined as the difference between revenue and total expenditure, using the 2001 edition of the IMF's <i>Government Finance Statistics Manual</i> (GFSM 2001). Does not include policy lending. For some countries, the overall balance continues to be based on GFSM 1986, in which it is defined as total revenue and grants minus total expenditure and net lending.
Policy lending	Transactions in financial assets that are deemed to be for public policy purposes but are not part of the overall balance.
Primary balance	Overall balance excluding net interest payment (interest expenditure minus interest revenue).
Public debt	See gross debt.
Public sector	The public sector consists of the general government sector plus government-controlled entities, known as public corporations, whose primary activity is to engage in commercial activities.
Revenue elasticity	Elasticity of revenue with respect to the output gap.
Structural fiscal balance	Cyclically adjusted balance, corrected for one-off and other factors, such as asset and commodity prices and output compositions effects.
Tax expenditures	Tax expenditures are government revenues that are foregone as a result of preferential tax treatments to specific sectors, activities, regions or economic agents.
VIX	The Volatility Index (VIX) maintained by the Chicago Board Options Exchange is a measure of the market's expectation of stock market volatility over the next 30-day period. It is a weighted blend of prices for a range of options on the S&P 500 index.

Abbreviations

Acronyms		Codes	Country Name
BIS	Bank for International Settlements	AFG	Afghanistan, Rep. of
CAB	cyclically adjusted balance	ALB	Albania
CAPB	cyclically adjusted primary balance	DZA	Algeria
CBO	Congressional Budget Office (U.S.)	AGO	Angola
CDS	credit default swap	ATG	Antigua and Barbuda
CEA	Council of Economic Advisers of the White House	ARG	Argentina
CIS	Commonwealth of Independent States (WEO classification)	ARM	Armenia
CIT	corporate income tax	AUS	Australia
EC	European Commission	AUT	Austria
ECB	European Central Bank	AZE	Azerbaijan
EFSD	European Financial Stability Facility	BHS	Bahamas, The
EIU	Economist Intelligence Unit	BHR	Bahrain
EME	emerging market economies	BGD	Bangladesh
EU	European Union	BRB	Barbados
FAT	financial activities tax	BLR	Belarus
FCR	financial crisis responsibility fee	BEL	Belgium
FII	Fiscal Indicators Index	BLZ	Belize
FSC	financial stability contribution	BEN	Benin
FTT	financial transaction tax	BTN	Bhutan
GDP	gross domestic product	BOL	Bolivia
GFSDM	<i>Government Finance Statistics Manual</i>	BIH	Bosnia and Herzegovina
GFSDR	<i>Global Financial Stability Report</i>	BWA	Botswana
GSE	government-sponsored enterprise	BRA	Brazil
IMF	International Monetary Fund	BRN	Brunei Darussalam
LAC	Latin America and the Caribbean	BGR	Bulgaria
MBSs	mortgage-backed securities	BFA	Burkina Faso
MENA	Middle East and North Africa	BDI	Burundi
OECD	Organization for Economic Cooperation and Development	KHM	Cambodia
OMB	Office of Management and Budget (U.S.)	CMR	Cameroon
PB	primary balance	CAN	Canada
PIT	personal income tax	CPV	Cape Verde
RAS	relative asset swap	CAF	Central African Republic
SCE	employee's social contributions	TCD	Chad
SCR	employer's social contributions	CHL	Chile
SGP	Stability and Growth Pact	CHN	China
SMP	Securities Market Program	COL	Colombia
SSA	sub-Saharan Africa	COM	Comoros
SSC	social security contributions	COD	Congo, Democratic Republic of
TARP	Troubled Asset Relief Program	COG	Congo, Republic of
VAT	value-added tax	CRI	Costa Rica
VIX	Volatility Index (Chicago Board Options Exchange)	CIV	Côte d'Ivoire
WEO	<i>World Economic Outlook</i>	HRV	Croatia
WH	Western Hemisphere	CYP	Cyprus

FISCAL MONITOR—ADDRESSING FISCAL CHALLENGES TO REDUCE ECONOMIC RISKS

Codes	Country Name	Codes	Country Name
CZE	Czech Republic	KWT	Kuwait
DNK	Denmark	KGZ	Kyrgyz Republic
DJI	Djibouti	LAO	Lao P.D.R.
DMA	Dominica	LVA	Latvia
DOM	Dominican Republic	LBN	Lebanon
ECU	Ecuador	LSO	Lesotho
EGY	Egypt	LBR	Liberia
SLV	El Salvador	LBY	Libya
GNQ	Equatorial Guinea	LTU	Lithuania
ERI	Eritrea	LUX	Luxembourg
EST	Estonia	MKD	Macedonia, former Yugoslav Republic of
ETH	Ethiopia	MDG	Madagascar
FJI	Fiji	MWI	Malawi
FIN	Finland	MYS	Malaysia
FRA	France	MDV	Maldives
GAB	Gabon	MLI	Mali
GMB	Gambia, The	MLT	Malta
GEO	Georgia	MRT	Mauritania
DEU	Germany	MUS	Mauritius
GHA	Ghana	MEX	Mexico
GRC	Greece	MDA	Moldova
GRD	Grenada	MNG	Mongolia
GTM	Guatemala	MAR	Morocco
GIN	Guinea	MOZ	Mozambique
GNB	Guinea-Bissau	MMR	Myanmar
GUY	Guyana	NAM	Namibia
HTI	Haiti	NPL	Nepal
HND	Honduras	NLD	Netherlands
HKG	Hong Kong SAR	NZL	New Zealand
HUN	Hungary	NIC	Nicaragua
ISL	Iceland	NER	Niger
IND	India	NGA	Nigeria
IDN	Indonesia	NOR	Norway
IRN	Iran, I.R. of	OMN	Oman
IRQ	Iraq	PAK	Pakistan
IRL	Ireland	PAN	Panama
ISR	Israel	PNG	Papua New Guinea
ITA	Italy	PRY	Paraguay
JAM	Jamaica	PER	Peru
JPN	Japan	PHL	Philippines
JOR	Jordan	POL	Poland
KAZ	Kazakhstan	PRT	Portugal
KEN	Kenya	QAT	Qatar
KIR	Kiribati	ROM	Romania
KOR	Korea, Republic of	RUS	Russian Federation

Codes	Country Name
RWA	Rwanda
KNA	St. Kitts and Nevis
LCA	St. Lucia
VCT	St. Vincent and the Grenadines
WSM	Samoa
STP	São Tomé and Príncipe
SAU	Saudi Arabia
SEN	Senegal
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SVK	Slovak Republic
SVN	Slovenia
SLB	Solomon Islands
ZAF	South Africa
ESP	Spain
LKA	Sri Lanka
SDN	Sudan
SUR	Suriname
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syrian Arab Republic
TWN	Taiwan, Province of China
TJK	Tajikistan
TZA	Tanzania
THA	Thailand
TGO	Togo
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
UGA	Uganda
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
USA	United States
URY	Uruguay
UZB	Uzbekistan
VUT	Vanuatu
VEN	Venezuela, República Bolivariana de
VNM	Vietnam
YEM	Yemen

Codes	Country Name
ZMB	Zambia
ZWE	Zimbabwe

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