World Economic and Financial Surveys

Fiscal Monitor

Taxing Times

Oct 13

INTERNATIONAL MONETARY FUND

World Economic and Financial Surveys

FISCAL MONITOR
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Editor's notes

(October 15, 2013)
The current marginal effective tax rates (METRs) reported in Chapter 2 were calculated incorrectly (in the treatment of the employee's social security contribution and its deductibility against personal income tax). The resultant changes are

	PRT	FRA	JAP	NZL	ITA	DEN	ESP	SWE	IRL	NOR	AUS	CAN	GBR	CHE	DEU	USA
Actual top rate - Fiscal Monitor	45.7	54.0	51.9	42.7	54.3	55.4	50.9	65.2	56.2	45.8	51.4	52.6	56.6	41.1	55.9	43.5
Actual top rate - Revised	59.9	55.1	52.6	42.7	54.3	64.8	50.9	65.2	56.2	58.2	51.4	52.6	58.3	48.5	55.9	46.3
Difference	14.1	1.1	0.8	0.0	0.0	9.5	0.0	0.0	0.0	12.5	0.0	0.0	1.7	7.4	0.0	2.7

The following changes have been made in the online versions:

- Figures 17, 18, and 19 have been replaced with corrected versions.
- The text on page 35, second column, lines 38–41, has been amended to read: "In several cases, current top marginal tax rates are towards the lower end of the range (Figure 17), implying that it might indeed be possible to raise more from those with the highest incomes."
- In the text on page 36, first column, line 3, "0.25 percent of GDP" has been replaced by "0.20 percent of GDP."

PREFACE

The projections included in this issue of the *Fiscal Monitor* are based on the same database used for the October 2013 *World Economic Outlook* and *Global Financial Stability Report* (and are referred to as "IMF staff projections"). Fiscal projections refer to the general government unless otherwise indicated. Short-term 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.

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the supervision of Carlo Cottarelli, Director of the Department; the team is led by Michael Keen and Martine Guerguil, Deputy Directors. Principal contributors include Luc Eyraud, Marialuz Moreno Badia, Priscilla Muthoora, Anna Shabunina, Philippe Wingender, and Jaejoon Woo. Ethan Alt, Mai Bui, Petra Dacheva, Raquel Gomez Sirera, Kelsey Moser, Louis Sears, and Nancy Tinoza provided outstanding research assistance under the supervision of Nathalie Carcenac. In addition, contributions were provided by Santiago Acosta Ormaechea, Elva Bova, Ruud de Mooij, Asmaa ElGanainy, Francesco Grigoli, Martin Grote, Tim Irwin, Stella Kaendera, Tidiane Kinda, Andrea Lemgruber, Constant Lonkeng Ngouana, Thornton Matheson, Samah Mazraani, Jimmy McHugh, Aiko Mineshima, Pritha Mitra, Kiyoshi Nakayama, John Norregaard, Masahiro Nozaki, Kentaro Ogata, Victoria Perry, Baoping Shang, Mauricio Soto, Sampawende Jules Tapsoba, Jose Torres, and Anke Weber. Nadia Malikyar, Liza Prado, and Ted Twinting provided excellent administrative and editorial assistance. From the IMF Communications Department, Nancy Morrison, Michael Harrup, and Cathy Gagnet edited the issue, and Michael Harrup and Cathy Gagnet managed its production.

Inputs, comments, and suggestions were received from other departments in the IMF, including area departments—namely, the African Department, Asia and Pacific Department, European Department, Middle East and Central Asia Department, and Western Hemisphere Department—as well as the Institute for Capacity Development, Monetary and Capital Markets Department, Research Department, Statistics Department, and Strategy, Policy, and 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.

The following symbols have been used throughout this publication:

. . . to indicate that data are not available;

— to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist;

– between years or months (for example, 2008–09 or January–June) to indicate the years or months covered, including the beginning and ending years or months;

/ between years (for example, 2008/09) to indicate a fiscal or financial year.

"Billion" means a thousand million; "trillion" means a thousand billion.

"Basis points" refer to hundredths of 1 percentage point (for example, 25 basis points are equivalent to ¼ of 1 percentage point).

"n.a." means "not applicable."

Minor discrepancies between sums of constituent figures and totals are due to rounding.

As used in this publication, the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

EXECUTIVE SUMMARY

High debt ratios amid persistently low growth in advanced economies and emerging fragilities in the developing world cast clouds on the global fiscal landscape. In advanced economies, with narrowing budget deficits (except, most notably, in Japan), the average public debt ratio is expected to stabilize in 2013–14. Yet it will be at a historic peak (about 110 percent of GDP, 35 percentage points above its 2007 level). Simulations show that maintaining the overall budget at a level consistent with the IMF staff's medium-term advice would bring the average debt ratio to about 70 percent of GDP by 2030, although in a few countries it would remain above 80 percent. However, the large debt stock, the uncertain global environment, weak growth prospects, and the absence of well-specified medium-term adjustment plans in systemic economies like Japan and the United States complicate the task. At the time of writing, a shutdown of the U.S. federal government and the failure so far to raise the debt ceiling add to uncertainty. Although a short period of government shutdown would likely have limited impact, a longer period could be more damaging. A failure to promptly raise the debt ceiling could have even more serious consequences. At the same time, fiscal vulnerabilities are on the rise in emerging market economies and low-income countries—on the back, in emerging market economies, of heightened financial volatility and downward revisions to potential growth, and in low-income countries, of possible shortfalls in commodity prices and aid.

Strengthening fiscal balances and buttressing confidence thus remain at the top of the policy agenda, although the degree of urgency varies from one country to another. In high-debt advanced economies, consolidation should be anchored in credible medium-term plans, defined in cyclically adjusted terms, leaving room for automatic stabilizers to cushion unexpected shocks. Its pace and composition should be calibrated (as long as financing allows) to reduce risks to near-term economic activity while enhancing long-term growth prospects. Those emerging market economies that have seen their fiscal space shrink or even disappear should start rebuilding their fiscal buffers, taking advantage of still generally favorable cyclical conditions. The pace should remain determined by debt and deficit levels, as well as financing access, although uncertainties about potential growth and interest rate prospects call for more proactivity to shield against sudden changes in market sentiment. In low-income countries, reduced access to concessional funds and, in resource-rich countries, declining commodity prices underscore the need to mobilize domestic revenue and increase the efficiency of spending.

Against that backdrop, this issue of the *Fiscal Monitor* explores whether and how tax reform can help strengthen public finances. Taxation is always a sensitive topic and is now more than ever at the center of policy debates around the world. The key challenges are: How can taxation best help bring down debt ratios in advanced economies and respond to mounting spending needs in developing countries? And how can equity concerns be balanced—especially in hard times—with the efficiency that is needed to secure long-term growth?

In practice, consolidation so far has been more reliant on revenue measures than was initially planned. But the options most often chosen have been guided by expediency rather than by a desire to build stronger and fairer tax systems, and they may be storing up problems for the longer term. Tax rates, for instance, have been raised when it would have been preferable to broaden the tax base and introduce new taxes to address environmental concerns or correct financial sector inefficiencies. With a large share of adjustment already behind in many countries but growth prospects still dim, policy design should now focus on addressing long-standing tax distortions and buoying potential growth.

Can countries tax more, better, more fairly? Results reported here show that the scope to raise more revenue is limited in many advanced economies and, where tax ratios are already high, the bulk of adjustment will have to fall on spending. Nonetheless, many (including some with the largest consolidation needs, like the United States and Japan) could still mobilize

significant amounts while limiting distortions and adverse effects on growth. Broadening the base of the value-added tax ranks high in terms of economic efficiency (as new findings tend to confirm) and can in most cases easily be combined with adequate protection for the poor. In emerging market economies and low-income countries, where the potential for raising revenue is often substantial, improving compliance remains a central challenge. Recognition that the international tax framework is broken is long overdue. Though the amount is hard to quantify, significant revenue can also be gained from reforming it. This is particularly important for developing countries, given their greater reliance on corporate taxation, with revenue from this taxation often coming from a handful of multinationals.

Scope seems to exist in many advanced economies to raise more revenue from the top of the income distribution (and in some cases meet a nontrivial share of adjustment needs), if so desired. And there is a strong case in most countries, advanced or developing, for raising substantially more from property taxes (though this is best done when property markets are reasonably resilient). In principle, taxes on wealth also offer significant revenue potential at relatively low efficiency costs. Their past performance is far from encouraging, but this could change as increased public interest and stepped-up international cooperation build support and reduce evasion opportunities. Reforming international taxation will be harder, as it must go beyond the control of tax-minimizing tricks to address more fundamental aspects such as the allocation of tax bases across countries and finding better ways to realize mutual gains from closer cooperation in tax matters.

Political constraints can trump even the best-designed tax reform. History shows that meaningful, long-lasting tax reforms have most often been implemented in good times, when buoyant revenues can be used to compensate losers. But they can happen in lean times, too, if carefully attuned to a particular country's institutional setting and supported by extensive political consensus building and a broad communication strategy. They are certainly increasingly needed in the current, taxing times.

1. Recent Fiscal Developments and the Short-Term Outlook

In advanced economies, fiscal consolidation is proceeding, although at varying speeds

The average fiscal deficit of advanced economies is set to narrow by 1½ percent of GDP in 2013 (in both headline and cyclically adjusted terms), the fastest pace since consolidation efforts started in 2011. This average, however, reflects different trends across countries: some economies are stepping up adjustment efforts, while others are tapering them off, and still others are adopting a looser stance to support growth. Nevertheless, relative to previous projections, fiscal deficits are somewhat larger in most countries, reflecting a weaker economic environment (Figure 1, Table 1). Although 2014 budgets are in most cases still to be fleshed out, fiscal tightening is expected to moderate significantly next year as a large part of the consolidation has already taken place or is close to completion. On average, close to two-thirds of the adjustment required to reach medium-term targets has been achieved in the 10 most highly indebted countries, with the notable exception of Japan.

In many advanced economies, the pace of fiscal adjustment is expected to reach above 1 percent of GDP in 2013, but it is set to slow down significantly in 2014 in most cases.

- In the *United States,* the cyclically adjusted balance is projected to improve by 2¼ percent of potential GDP in 2013 and another ¾ percent in 2014, cumulatively some 1½ percent of GDP more than previously projected, reflecting the extension of automatic spending cuts (the sequester) into 2014, as well as unexpected revenue strength.[1] In addition to the untimely drag on short-term activity, the indiscriminate expenditure cuts could also lower medium-term growth prospects by falling too heavily on productive public outlays. Moreover, they fail to address entitlement programs, key drivers of long-term deficits. Uncertainty about the course of fiscal policy remains, as negotiations on the next fiscal year's budget continue and the debt ceiling will likely become binding in mid- to late October. The projections assume that the shutdown of the U.S. federal government is short, discretionary spending is approved and executed, and the debt ceiling is raised promptly.
- In the *United Kingdom,* the cyclically adjusted balance is projected to improve by close to 2 percent of GDP in 2013—of which 1 percent is accounted for by the transfers of profits from the Bank of England's asset purchases to the Treasury, and the rest largely by discretionary measures. Consolidation is expected to continue in 2014, with planned measures of about 1 percent of GDP.
- In *France*, fiscal withdrawal in 2013, at 1¼ percent of GDP, largely relies on revenue measures. In 2014, the pace of consolidation is set to slow to ½ percent of GDP, with the composition of consolidation expected to shift more toward expenditure.
- In *Portugal*, the cyclically adjusted balance is projected to improve by 1¼ percent of GDP given the approval of a supplementary budget in June. About one-quarter of the measures are temporary, including the reprogramming of EU structural funds and some expenditure compression. For 2014, additional consolidation of about 1 percent is projected, but meeting the deficit target will depend critically on the implementation of the recommendations of the Public Expenditure Review.
- In *Greece,* a primary balance is expected to be achieved in 2013. Further adjustment through 2016 will require additional measures, including gains in tax administration, equivalent to 3½ percent of GDP.

In a second group of countries, adjustment is set to proceed at a more moderate pace through 2013 and 2014.

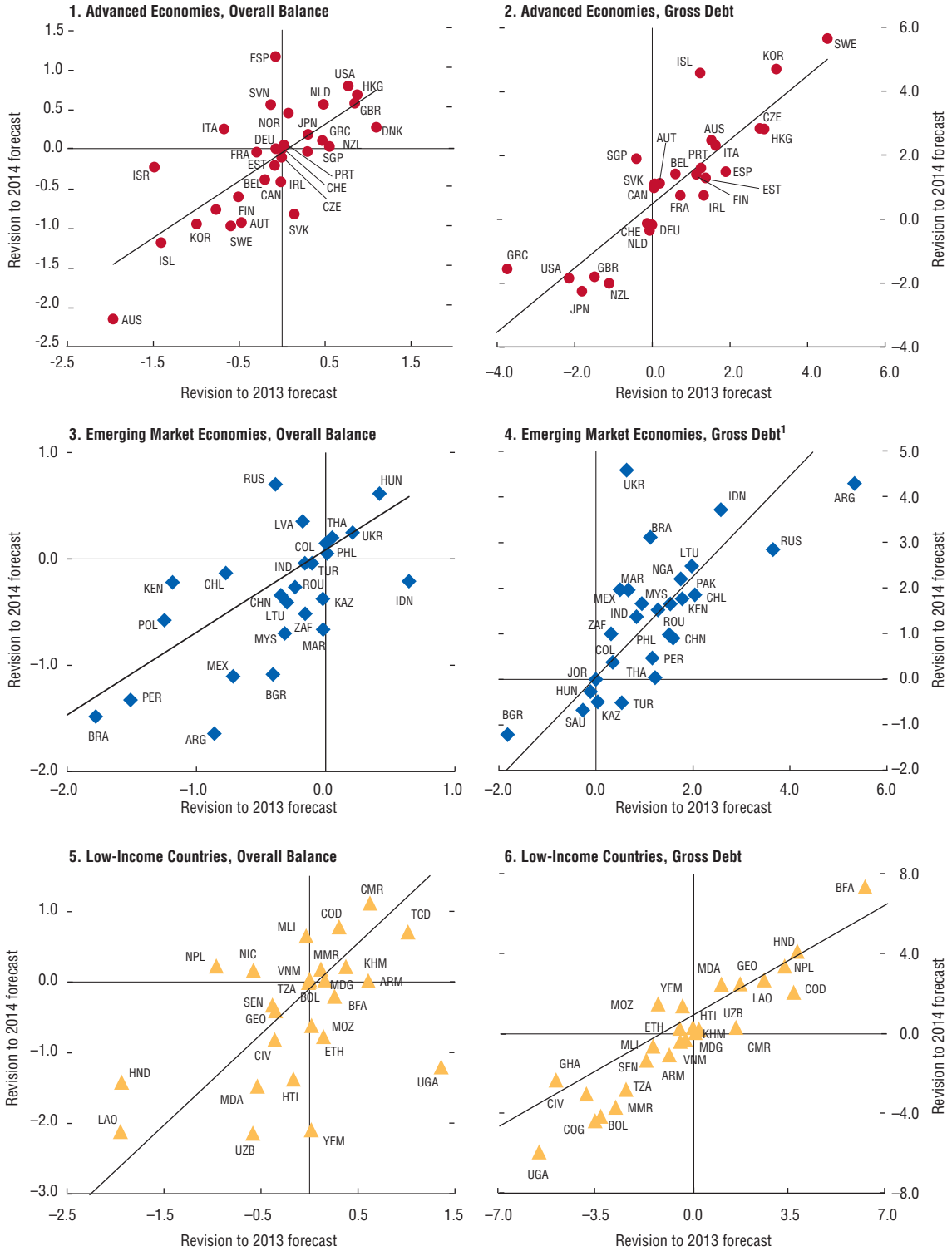
- In *Italy*, underlying consolidation of almost 1 percent of GDP in 2013 is expected to bring the structural balance[2] close to the zero target. Nonetheless, the public debt ratio will increase as a result of

[1] Some of the revenue strength likely reflects one-off factors—such as shifting of tax payments in anticipation of higher marginal rates from January 2013—that are not captured by the cyclical-adjustment procedure. If so, the decline in the measured cyclically adjusted deficit overestimates the actual degree of tightening.

[2] The structural balance excludes the clearance of capital expenditure arrears in 2013.

Figure 1. Revisions to Overall Balance and Debt-to-GDP Forecasts since the Last *Fiscal Monitor*

(Percent of GDP)



Source: IMF staff estimates and projections.

Note: "Revision to 2014 (2013) forecast" refers to the difference between the fiscal projections for 2014 (2013) in the October 2013 *Fiscal Monitor* and those for 2014 (2013) in the April 2013 *Fiscal Monitor*.

[1]For Brazil, gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

Table 1. Fiscal Balances, 2008–14

						Projections		Difference from April 2013 *Fiscal Monitor*		
	2008	2009	2010	2011	2012	2013	2014	2012	2013	2014
Overall balance *(Percent of GDP)*										
World	–2.2	–7.4	–5.9	–4.5	–4.3	–3.7	–3.0	–0.1	–0.2	–0.3
Advanced economies	–3.5	–8.9	–7.7	–6.5	–5.9	–4.5	–3.6	0.0	0.2	0.3
United States[1]	–6.5	–12.9	–10.8	–9.7	–8.3	–5.8	–4.6	0.1	0.8	0.8
Euro area	–2.1	–6.4	–6.2	–4.2	–3.7	–3.1	–2.5	–0.1	–0.2	0.1
France	–3.3	–7.6	–7.1	–5.3	–4.9	–4.0	–3.5	–0.2	–0.3	0.0
Germany	–0.1	–3.1	–4.2	–0.8	0.1	–0.4	–0.1	0.0	–0.1	0.0
Greece	–9.9	–15.6	–10.8	–9.6	–6.3	–4.1	–3.3	0.1	0.5	0.1
Ireland[2]	–7.3	–13.8	–30.5	–13.1	–7.6	–7.6	–5.0	0.1	0.0	–0.4
Italy	–2.7	–5.4	–4.3	–3.7	–2.9	–3.2	–2.1	0.1	–0.7	0.2
Portugal	–3.7	–10.2	–9.9	–4.4	–6.4	–5.5	–4.0	–1.5	0.0	0.0
Spain[2]	–4.5	–11.2	–9.7	–9.6	–10.8	–6.7	–5.8	–0.5	–0.1	1.2
Japan	–4.1	–10.4	–9.3	–9.9	–10.1	–9.5	–6.8	0.0	0.3	0.2
United Kingdom	–5.0	–11.3	–10.0	–7.8	–7.9	–6.1	–5.8	0.4	0.8	0.6
Canada	–0.3	–4.5	–4.9	–3.7	–3.4	–3.4	–2.9	–0.1	–0.5	–0.6
Others	2.5	–0.9	–0.2	0.4	0.4	0.4	0.7	0.0	–0.7	–0.7
Emerging market economies	–0.1	–4.6	–3.1	–1.7	–2.1	–2.7	–2.5	–0.1	–0.5	–0.3
Asia	–2.5	–4.3	–2.9	–2.6	–3.2	–3.4	–3.1	0.0	–0.3	–0.2
China	–0.7	–3.1	–1.5	–1.3	–2.2	–2.5	–2.1	0.0	–0.3	–0.3
India[4]	–10.0	–9.8	–8.4	–8.5	–8.0	–8.5	–8.5	0.3	–0.2	0.0
Europe	0.5	–6.1	–4.1	0.0	–0.7	–1.5	–1.2	–0.1	–0.4	0.2
Russia	4.9	–6.3	–3.4	1.5	0.4	–0.7	–0.3	0.0	–0.4	0.7
Turkey	–2.7	–6.0	–3.0	–0.7	–1.6	–2.3	–2.3	–0.2	–0.1	0.0
Latin America	–0.7	–3.6	–2.8	–2.4	–2.5	–2.8	–3.0	0.0	–1.2	–1.2
Brazil	–1.4	–3.1	–2.7	–2.5	–2.7	–3.0	–3.2	0.1	–1.8	–1.5
Mexico	–1.0	–5.1	–4.3	–3.4	–3.7	–3.8	–4.1	0.0	–0.7	–1.1
Middle East and North Africa	–5.0	–5.5	–7.0	–8.7	–9.8	–11.8	–10.5	–0.1	–2.6	–3.3
South Africa	–0.4	–5.5	–5.1	–4.0	–4.8	–4.9	–4.7	0.0	–0.2	–0.5
Low-income countries	–0.4	–4.1	–2.1	–1.7	–2.6	–3.0	–3.2	0.7	0.2	0.0
Oil producers	7.3	–2.5	–0.4	3.2	2.1	1.2	0.8	–0.2	–0.3	0.0
Cyclically adjusted balance *(Percent of potential GDP)*										
Advanced economies	–3.7	–6.2	–6.2	–5.4	–4.8	–3.4	–2.7	0.0	0.1	0.2
United States[1,3]	–5.0	–7.8	–8.0	–7.3	–6.3	–3.9	–3.2	0.1	0.7	0.7
Euro area	–3.3	–4.8	–5.0	–3.7	–2.7	–1.6	–1.2	–0.3	–0.3	0.1
France	–3.9	–5.9	–5.9	–4.8	–4.0	–2.8	–2.3	–0.9	–0.8	–0.5
Germany	–1.3	–1.1	–3.4	–1.1	0.0	–0.1	0.0	–0.1	–0.1	–0.1
Greece	–14.3	–19.1	–12.3	–8.3	–2.6	0.6	1.1	0.1	0.4	0.3
Ireland[3]	–11.9	–9.9	–8.3	–7.0	–5.9	–5.1	–3.6	0.6	0.7	0.4
Italy	–3.6	–3.5	–3.4	–2.8	–1.2	–0.7	0.1	0.0	–0.5	0.3
Portugal	–4.3	–9.4	–9.7	–3.6	–4.6	–3.3	–2.2	–1.6	–0.3	–0.2
Spain[3]	–5.6	–10.0	–8.4	–7.9	–5.4	–4.6	–4.1	–0.3	–0.4	1.0
Japan	–3.6	–7.5	–7.9	–8.5	–9.2	–9.2	–6.7	0.1	0.2	0.2
United Kingdom	–6.6	–10.3	–8.4	–6.0	–5.8	–4.0	–3.9	–0.3	0.3	–0.5
Canada	–0.6	–3.1	–4.2	–3.4	–3.0	–2.8	–2.3	–0.2	–0.6	–0.6
Others	–0.1	–2.0	–1.6	–1.4	–1.3	–1.1	–0.8	0.1	–0.6	–0.6
Emerging market economies	–1.6	–3.5	–2.8	–2.0	–2.1	–2.3	–2.1	0.0	–0.3	–0.2
Asia	–2.2	–3.8	–2.6	–1.9	–2.2	–2.4	–2.2	0.1	–0.1	–0.1
China	–0.5	–2.6	–0.9	–0.2	–0.9	–1.2	–1.0	0.0	–0.3	–0.3
India[4]	–9.5	–9.5	–9.0	–9.1	–8.1	–8.2	–8.2	0.7	0.6	0.7
Europe	–0.4	–4.0	–3.2	–0.7	–1.0	–1.4	–1.2	–0.4	–0.4	0.2
Russia	3.9	–3.2	–1.9	1.9	0.3	–0.5	–0.1	–0.2	0.0	1.1
Turkey	–3.1	–3.5	–2.4	–1.5	–1.7	–2.3	–2.1	–0.2	–0.3	–0.2
Latin America	–1.5	–2.5	–2.8	–2.8	–2.4	–2.6	–2.7	0.2	–0.9	–0.8
Brazil	–2.1	–2.3	–3.3	–3.0	–2.7	–3.0	–3.2	0.0	–1.8	–1.5
Mexico	–0.8	–3.1	–2.8	–2.3	–2.7	–2.7	–3.0	0.9	0.4	0.0
South Africa	–2.4	–3.4	–3.6	–4.1	–4.3	–4.3	–4.2	0.3	0.1	–0.2
Memorandum items:										
World growth (percent)	*2.7*	*–0.4*	*5.2*	*3.9*	*3.2*	*2.9*	*3.6*	*–0.1*	*–0.7*	*–0.6*

Source: IMF staff estimates and projections.

Note: All fiscal data country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies.

[1] U.S. data are subject to change pending completion of the release of the Bureau of Economic Analysis's Comprehensive Revision of the National Income and Product Accounts (NIPA).

[2] Including financial sector support.

[3] Excluding financial sector support.

[4] Starting in July 2013, India's data and forecasts are presented on a fiscal year basis.

the weak economy, the clearance of public arrears, and European Stability Mechanism contributions.

- In *Spain*, the IMF staff estimates that fiscal consolidation plans in train will reduce the cyclically adjusted deficit (excluding financial sector support) by ¾ percent of GDP in 2013, and by a similar magnitude in 2014. However, measures are expected to be specified in the 2014 budget to be discussed in Parliament in November.
- In *Ireland*, the implementation of the 2013 budget is on track, although buffers with respect to the 7½ percent of GDP deficit ceiling have narrowed. Consolidation efforts will continue in 2014, with projected tightening of about 1½ percent of GDP. Details are expected about the time of the 2014 budget.

Countries facing less fiscal pressures are adopting a more accommodative stance in 2013 in the face of weaker growth prospects, but they are expected to reverse gears and start tightening in 2014.

- In *Sweden*, the fiscal stance is projected to be expansionary in 2013, with the structural deficit increasing by ½ percent of GDP, on the back of the large corporate tax cut. The IMF staff projects the policy stance in 2014 to be broadly neutral, following the recently announced measures to support growth and employment, including additional income tax credits, and measures to tackle youth unemployment. A period of fiscal consolidation is now expected to begin in 2015.
- In *Germany*, a small loosening is expected in 2013 and only a modest tightening thereafter, as the deficit goals under the national debt brake rule have been achieved ahead of schedule at the federal level.
- In *Korea*, the government has launched a comprehensive housing market policy package. A supplementary budget (about 1¼ percent of GDP) aims at averting tightening—as the debt ceiling becomes binding in the face of potential revenue shortfalls—and providing modest additional stimulus.
- In *Canada*, fiscal adjustment in both 2013 and 2014 is expected to be slower than previously anticipated, reflecting a deterioration in the estimated fiscal position of provincial and local governments.

Japan continues to postpone consolidation, with the cyclically adjusted primary deficit projected to remain about 8½ percent of GDP in 2013. In 2014 and 2015, significant tightening is expected, with a two-step increase in the consumption tax rate. The recently announced decision to go forward with the first stage of the consumption tax increase to 8 percent in April 2014 is a welcome step but plans for a new stimulus in 2014 to mitigate the impact of this measure on growth put a premium on developing a concrete and credible medium-term plan as quickly as possible. Although the government has committed to halving the primary deficit by 2015 and reaching a primary surplus by 2020, a well-specified medium-term plan has not yet been outlined to achieve these targets.

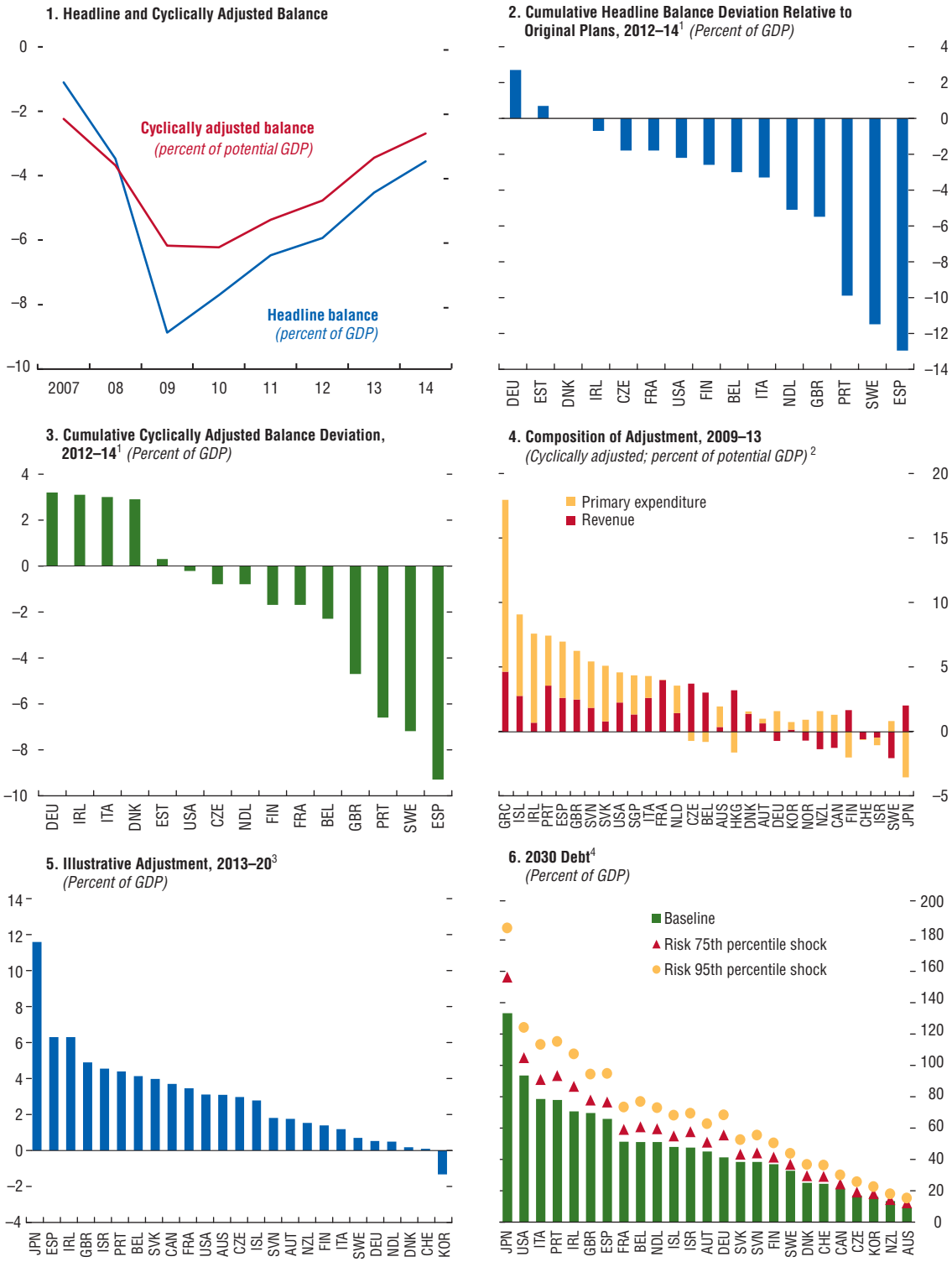
Although fiscal adjustment has picked up in 2013, headline overall balances remain in most countries weaker than projected when the fiscal correction phase started in 2011, reflecting slower-than-expected growth. In only a few countries (importantly, Germany and the United States) have fiscal developments proved generally close to plans drawn back in 2011, likely because original growth projections were close to actual outcomes (Figure 2). In most countries, however, lower growth led to a relaxation of headline deficit targets. These include euro area countries, such as those for which the European Council recently (in June 2013) sanctioned extending the deadline to attain the 3 percent deficit target. Structural balances are also lower than originally targeted in many cases, as revisions in potential output estimates and other shocks have contributed to a widening of underlying deficits. The composition of adjustment has relied on revenue more than was initially planned, with tax changes mostly guided by expediency rather than efficiency considerations (Section 2 discusses tax reform options). Meanwhile, expenditure ratios have stayed high—particularly in Europe, where they exceed 45 percent of potential GDP and remain some 1 percentage point above precrisis levels on average.[3]

In all, the average gross debt ratio in advanced economies is expected to stabilize at slightly below 110 percent of GDP—some 35 percentage points above its 2007 level (Table 2). As discussed in previous issues of the *Fiscal Monitor*, maintaining public debt at these historic peaks would leave advanced economies exposed to confidence shocks and rollover risks and hamper potential growth.[4] Thus, it remains important to lower public debt, although it will inevitably be a slow process.

[3] Future issues of the *Fiscal Monitor* will discuss spending reform options.

[4] The issue of how much high debt hampers growth—and whether there is a "threshold"—remains quite controversial. However, with few exceptions (including Panizza and Presbitero, 2012), most studies concur that the effect on potential growth is not trivial. That being said, the desirable level of debt need not be the same for all countries, as factors such as the investor base, volatility in the interest rate–growth differential, and the level of contingent liabilities also have a bearing on the appropriate debt target. See the April 2013 *Fiscal Monitor* for a review of the literature and related issues.

Figure 2. Fiscal Trends in Advanced Economies



Sources: European Commission (2013); IMF, Public Finances in Modern History database; and IMF staff estimates and projections.

Note: For country-specific details, see "Data and Conventions" in the Methodological and Statistical Appendix.

[1] For European countries, deviations refer to the differences between the 2011 and 2013 Stability and Convergence Plans. For the United States, deviations refer to differences in the 2011 and 2013 federal budgets. For Spain, the cyclically adjusted balance includes financial sector support.

[2] Cyclical adjustments to revenue and expenditure assume elasticities of 1 and 0, respectively.

[3] Required adjustment of structural primary balance to achieve structural balance targets. Structural balance targets are country specific and based on medium-term budgetary objectives.

[4] Gross general government debt, except in the cases of Australia, Canada, Japan, and New Zealand, for which net debt ratios are used. Shocks are based on the distribution of revisions to the five-year-ahead potential GDP growth between the November 2010 *World Economic Outlook* and the April 2013 *World Economic Outlook*.

Table 2. General Government Debt, 2008–14

(Percent of GDP)

						Projections		Difference from April 2013 *Fiscal Monitor*		
	2008	2009	2010	2011	2012	2013	2014	2012	2013	2014
Gross debt										
World	65.2	75.1	78.9	79.4	80.8	79.7	79.6	–0.6	–1.8	–1.0
Advanced economies	80.4	93.7	100.3	104.4	108.7	108.5	109.2	–1.4	–0.7	–0.5
United States[1]	73.3	86.3	95.2	99.4	102.7	106.0	107.3	–3.8	–2.1	–1.8
Euro area	70.3	80.1	85.7	88.2	93.0	95.7	96.1	0.1	0.7	0.8
France	68.2	79.2	82.4	85.8	90.2	93.5	94.8	–0.1	0.7	0.7
Germany	66.8	74.5	82.4	80.4	81.9	80.4	78.1	–0.1	0.0	–0.2
Greece	112.9	129.7	148.3	170.3	156.9	175.7	174.0	–1.7	–3.7	–1.6
Ireland	44.2	64.4	91.2	104.1	117.4	123.3	121.0	0.3	1.3	0.7
Italy	106.1	116.4	119.3	120.8	127.0	132.3	133.1	0.0	1.6	2.3
Portugal	71.7	83.7	94.0	108.4	123.8	123.6	125.3	0.8	1.3	1.6
Spain	40.2	54.0	61.7	70.4	85.9	93.7	99.1	1.8	1.9	1.5
Japan	191.8	210.2	216.0	230.3	238.0	243.5	242.3	0.1	–1.8	–2.3
United Kingdom	51.9	67.1	78.5	84.3	88.8	92.1	95.3	–1.5	–1.5	–1.8
Canada	71.3	81.3	83.1	83.5	85.3	87.1	85.6	–0.4	0.0	1.0
Emerging market economies	33.5	36.0	40.3	37.8	36.5	35.3	34.1	1.4	1.5	1.4
Asia	31.3	31.5	40.8	36.7	34.5	32.0	30.1	2.3	1.5	1.2
China[2]	17.0	17.7	33.5	28.7	26.1	22.9	20.9	3.3	1.6	0.9
India[3]	74.5	72.5	67.0	66.4	66.7	67.2	68.1	–0.1	0.8	1.4
Europe	23.6	29.5	29.1	27.7	26.9	28.1	27.5	0.9	2.0	0.8
Russia	7.9	11.0	11.0	11.7	12.5	14.1	14.6	1.6	3.7	2.8
Turkey	40.0	46.1	42.3	39.1	36.2	36.0	34.9	–0.2	0.5	–0.5
Latin America	50.4	53.2	51.7	51.5	52.0	51.5	51.6	0.1	1.4	2.5
Brazil[4]	63.5	66.8	65.0	64.7	68.0	68.3	69.0	–0.4	1.1	3.1
Mexico	42.9	43.9	42.4	43.6	43.5	44.0	45.8	0.0	0.5	2.0
Middle East and North Africa	62.3	64.9	66.8	70.1	75.5	81.8	83.8	0.5	3.0	6.5
South Africa	27.8	31.3	35.8	39.6	42.3	43.0	44.7	0.0	0.3	1.0
Low-income countries	39.9	42.7	41.8	40.8	41.9	41.4	42.2	–0.9	–1.0	0.3
Oil producers	22.1	24.9	24.3	22.2	22.0	23.5	24.2	–0.2	0.6	0.9
Net debt										
World	36.5	43.8	45.6	47.4	48.7	48.9	49.3	–1.0	–0.5	–0.3
Advanced economies	51.4	61.7	66.7	71.9	76.0	77.5	78.7	–1.7	–1.0	–0.9
United States[1]	52.4	64.6	72.8	79.9	84.1	87.4	88.3	–3.8	–1.7	–1.3
Euro area	54.1	62.4	65.6	68.2	72.2	74.9	75.6	0.3	1.0	1.1
France	62.3	72.0	76.1	78.6	84.0	87.2	88.5	–0.1	0.7	0.7
Germany	50.1	56.7	56.2	55.3	57.4	56.3	54.6	0.1	0.0	–0.2
Greece	112.4	129.3	147.4	168.0	154.8	172.6	172.6	–15.9	–9.3	–7.6
Ireland	21.2	38.6	70.4	85.1	92.8	105.5	107.9	–9.5	–0.6	0.3
Italy	89.3	97.9	100.0	102.6	106.1	110.5	111.2	2.9	4.7	5.2
Portugal	67.5	79.7	89.6	97.9	112.4	117.5	119.3	0.8	2.5	2.8
Spain	30.8	42.5	50.1	58.6	73.5	80.8	85.8	1.6	1.6	1.1
Japan	95.3	106.2	113.1	127.4	133.5	139.9	141.8	–0.9	–3.5	–4.9
United Kingdom	48.0	62.4	72.2	76.8	81.6	84.8	88.0	–1.2	–1.3	–1.6
Canada	22.4	27.6	29.7	32.4	34.7	36.5	38.0	0.1	0.6	1.3
Emerging market economies	23.0	27.9	28.0	26.6	24.7	24.4	23.7	0.1	0.9	1.2
Asia	…	…	…	…	…	…	…	…	…	…
Europe	21.9	27.8	28.9	27.8	25.8	26.0	23.6	0.2	1.6	–0.5
Latin America	31.1	34.7	33.8	32.3	31.0	30.6	31.2	0.1	0.6	1.9
Middle East and North Africa	52.9	55.2	57.6	61.6	67.4	74.6	77.4	0.5	2.9	6.3
Low-income countries	29.5	34.2	35.7	34.3	36.9	37.1	38.2	0.0	0.1	0.7

Source: IMF staff estimates and projections.

Note: All fiscal data country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies.

[1] U.S. data are subject to change pending completion of the release of the Bureau of Economic Analysis's Comprehensive Revision of the National Income and Product Accounts (NIPA).

[2] Up to 2009, public debt data include only central government debt as reported by the Ministry of Finance. For 2010, debt data include subnational debt identified in the 2011 *National Audit Report*. Information on new debt issuance by the local governments and some government agencies in 2011 and 2012 is not yet available, hence debt data reflect only amortization plans as specified in the 2011 *National Audit Report*. Public debt projections assume that about 60 percent of subnational debt will be amortized by 2014, 16 percent over 2015–16, and 24 percent beyond 2017, with no issuance of new debt or rollover of existing debt. For more details, see Box 4 in the April 2013 *Fiscal Monitor*.

[3] Starting in July 2013, India's data and forecasts are presented on a fiscal year basis.

[4] Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

There are two possible approaches to assessing the effort this would require. The first is to focus on the attainment of a certain debt-to-GDP ratio by a certain date, raising the primary balance to the level needed to attain the goal. Previous issues of the *Fiscal Monitor* have shown illustrative scenarios linked to specific debt targets (see Statistical Table 13a for an update of the scenarios targeting the attainment of a 60 percent debt target by 2030).[5]

Alternatively, the focus could be on attaining some given fiscal balance that would lead to a decline of the debt ratio over time. Focusing on the overall fiscal balance rather than a specific long-term debt objective has political and economic appeal. It can usefully focus the attention of policymakers. Once a certain fiscal balance has been achieved, the pace of decline in the debt ratio reflects the growth rate of nominal GDP, so this approach embodies an element of cyclicality, as the debt ratio drops faster during periods of faster growth. The stabilization dimension is enhanced if the target is defined in cyclically adjusted terms. A recent study of the relation between debt and growth concludes that once the debt ratio is on a steady downward path, the impact of high debt on growth loses statistical significance (Pescatori, Sandri, and Simon, 2013).

Simulations of advanced economies' debt paths under existing medium-term plans or, in their absence, gradual achievement of a structural budget balance consistent with the IMF staff's medium-term advice illustrate that point.[6] The average debt ratio would decline to about 70 percent of GDP by 2030 (Figure 2, Statistical Table 13b). By then, 7 countries would still have debt above 60 percent of GDP, but only in 2 would it be more than 80 percent. These results are, of course, sensitive to assumptions about nominal GDP growth. For example, if medium-term growth were lower by 1 percentage point (in line with the 75th percentile of the distribution of potential growth revisions in the aftermath of the crisis), the average debt ratio would be about 11 percentage points higher, and greater than 80 percent of GDP in 5 countries.

These simulations imply, on average, a structural primary adjustment of about 3¾ percent of GDP between 2013 and 2020, and the maintenance of a primary surplus of 2¾ percent of GDP on average over the subsequent 10-year period. Box 1 compares this effort with the historical evidence and concludes that for most countries, achieving the medium-term target would not require an adjustment effort well above the historical record. However, a few countries would have to undertake efforts close to or above the median of the top historical performers. Maintaining that target over time would be much more demanding—it would require above-median effort for 9 countries.

[5] The April 2013 *Fiscal Monitor* discusses these scenarios as well as underlying assumptions in detail.

[6] Depending on, among other factors, the starting debt level, the resulting structural balance targets vary between a 1 percent surplus and a 3 percent deficit. It is assumed that countries attain their medium-term structural targets no later than 2020 and maintain that level thereafter.

In emerging market economies and low-income countries, fiscal buffers have become thinner and vulnerabilities are on the rise

In the face of worsening cyclical conditions, many emerging market economies are postponing consolidation. The headline overall balance for this group is expected to continue deteriorating in 2013 and broadly stabilize in 2014, albeit in many cases at still relatively contained levels.

- In *Turkey*, the overall deficit is set to widen to 2¼ percent of GDP in 2013, with real expenditure growing close to 9 percent. The deficit is projected to remain unchanged in 2014, as consolidation is unlikely to take place ahead of next year's elections.
- In *Russia*, weaker oil prices are expected to push the headline balance back into deficit. Although the country's new oil-based fiscal rule is holding, spending pressures are emerging (through, for example, loan guarantees). From 2014 onward, the deficit is expected to widen further, reflecting the impact of declining oil revenues and expenditure floors.
- In *China*, the fiscal stance is expected to be mildly expansionary owing to targeted support to small and exporting companies. Headline deficits are expected to improve gradually over time. Fiscal space, however, is considerably more limited than headline data suggest once quasi-fiscal operations are taken into account (see Box 4 of the April 2013 *Fiscal Monitor*). Expanding the definition of government to include local-government financing vehicles and off-budget funds results in an estimated "augmented" fiscal deficit of 10 percent of GDP and "augmented" debt of nearly 50 percent of GDP in 2012 (IMF, 2013b). These figures remain tentative. The Chinese authorities have launched an in-depth audit of the fiscal position of local governments, a key step to better understanding fiscal conditions.
- In *Brazil*, the headline deficit would remain close to 3 percent of GDP in 2013, as the authorities have

lowered their primary surplus objective and revenue collection remains weak, reflecting a sluggish recovery and the extension of revenue measures. In 2014, the fiscal stance is expected to remain neutral. Quasi-fiscal operations in the form of policy lending are expected to moderate and remain below 1 percent of GDP through 2015.

- In *South Africa*, fiscal tightening has been postponed to buoy economic activity. The deficit will remain at 5 percent of GDP in 2013–14, with debt having increased some 15 percentage points since the crisis began.
- In *India,* consolidation has become more challenging. The deficit is expected to increase to 8½ percent of GDP in FY2013/14, largely because of the downward revision in GDP growth, the rupee depreciation, and higher global oil prices. Although greater tax compliance and ongoing fuel subsidy reforms are expected to reduce the structural primary deficit, any major reform effort will likely be postponed until after the 2014 general elections.
- Most *Arab countries in transition* (ACTs) are faced with the challenging task of consolidating their fiscal accounts in a difficult sociopolitical and external environment. Many have begun to address the problem of large untargeted energy subsidies. Nonetheless, deficits in these countries are still expected to rise or remain substantial, ranging from 5½ percent of GDP in Morocco to about 13 percent of GDP in Egypt this year. Debt is expected to increase, in some cases to more than 80 percent of GDP in 2013 (Box 2). Except in the case of Yemen, the fiscal position is expected to improve in ACTs from 2014 onward.

Altogether, the simple average of the debt ratio for emerging market economies is projected to increase in 2013–14, albeit at a moderate pace. Many countries (for example, Egypt, Morocco, Poland, and Ukraine) have seen fiscal vulnerabilities increase. This is evidenced by a shrinking or even negative fiscal space—as measured by the primary balance gap[7]—as downward revisions to potential growth and rapidly increasing primary spending have pushed structural deficits above previous estimates (Figure 3). Quasi-fiscal activities add to vulnerabilities, as much of the increase in the stock of debt since the beginning of the crisis is explained by transactions below the line.[8]

In low-income countries, fiscal deficits are also expected to continue to widen in 2013 and broadly stabilize in 2014 at more than 1½ percentage points above precrisis levels. The fiscal position is projected to improve in only a few oil importers in 2013, mostly owing to temporary factors, but to deteriorate or remain unchanged in most others, largely driven by spending pressures.

- In *Burkina Faso*, the deficit will be reduced to 2¼ percent of GDP in 2013 thanks to a rebound in agricultural production and strong gold exports. In *Uganda,* the overall balance is set to improve because of expected one-off tax revenues and delays in a large infrastructure project; excluding these one-off factors, the fiscal stance remains broadly unchanged. Other oil importers will, however, not register much of an improvement.
- Weak oil production is projected to weigh on the performance of most oil exporters (for example, *Chad* and the *Republic of Congo*), with only a few countries containing the deficits, thanks to efforts to raise non-oil revenue (*Sudan*) or control subsidies and the wage bill (*Ghana*).
- Deficits in fragile states are projected to remain large because of high infrastructure, social spending, or both (*Côte d'Ivoire*) or weak revenues (*Haiti* and *Myanmar*).

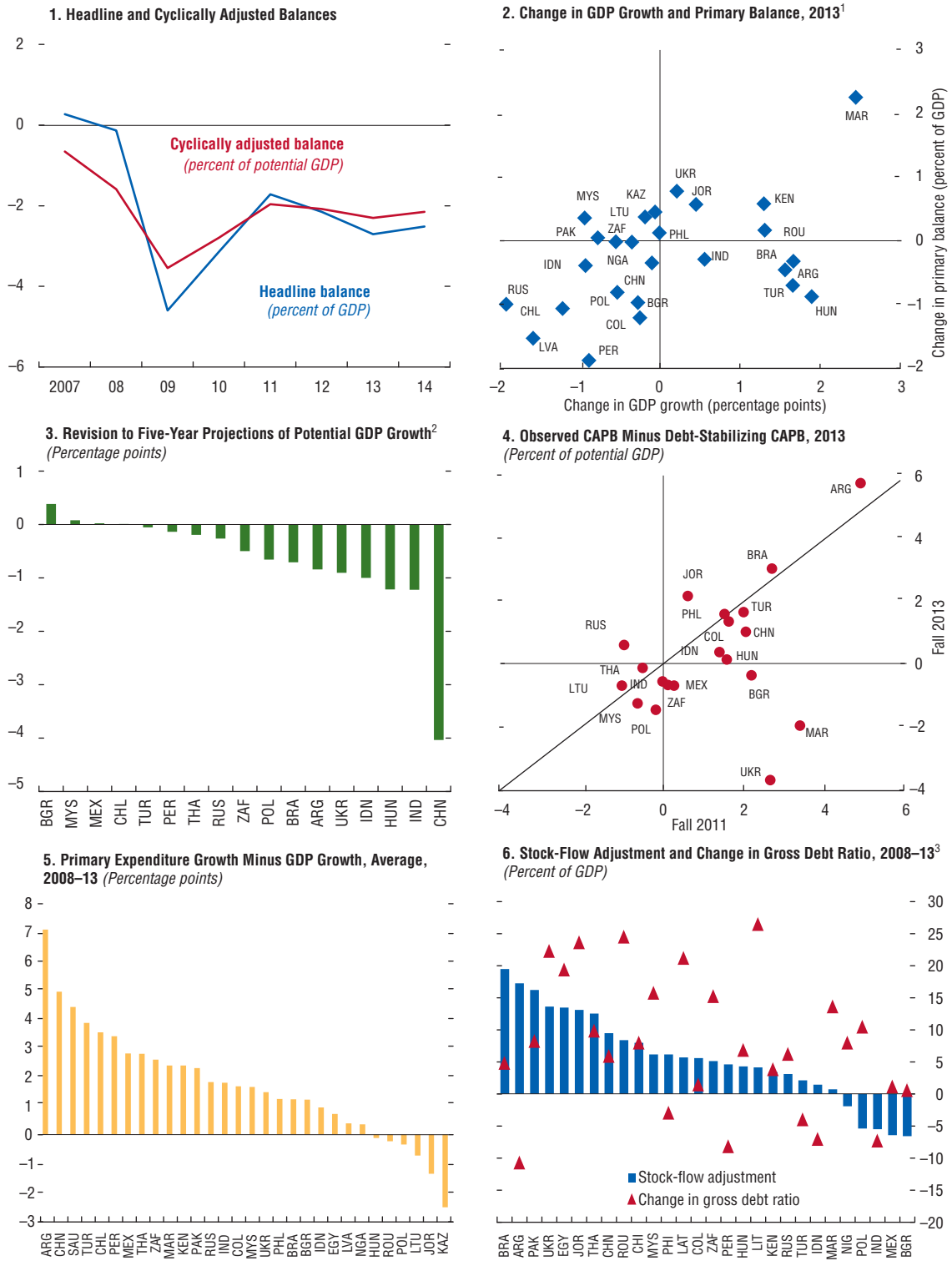
As in emerging market economies, fiscal space has declined in low-income countries. Spending has often outpaced output growth since the onset of the crisis. Even when these outlays respond to pressing developmental needs—for example, in infrastructure and health and education—there are concerns that their quality still lags behind (Figure 4).

In addition, spending growth has not always been matched by revenue mobilization efforts, an imbalance that declining commodity prices and aid shortfalls may exacerbate in coming years. With oil prices expected to decline by close to 20 percent over the next five years, oil exporters would need to adjust spending by 2 percent of GDP (assuming an elasticity of revenues to oil prices of 1), unless alternative sources of revenues are found. Also, aid data from donors indicate that disbursements may decline in many countries over 2014–15, in some cases by a large amount (Figure 5). Simple simulations suggest that a 10 percent cut in bilateral

[7] The primary balance gap is defined as the difference between the actual primary balance and the primary balance required to stabilize the debt at current levels, taking 2013 as the year of reference.

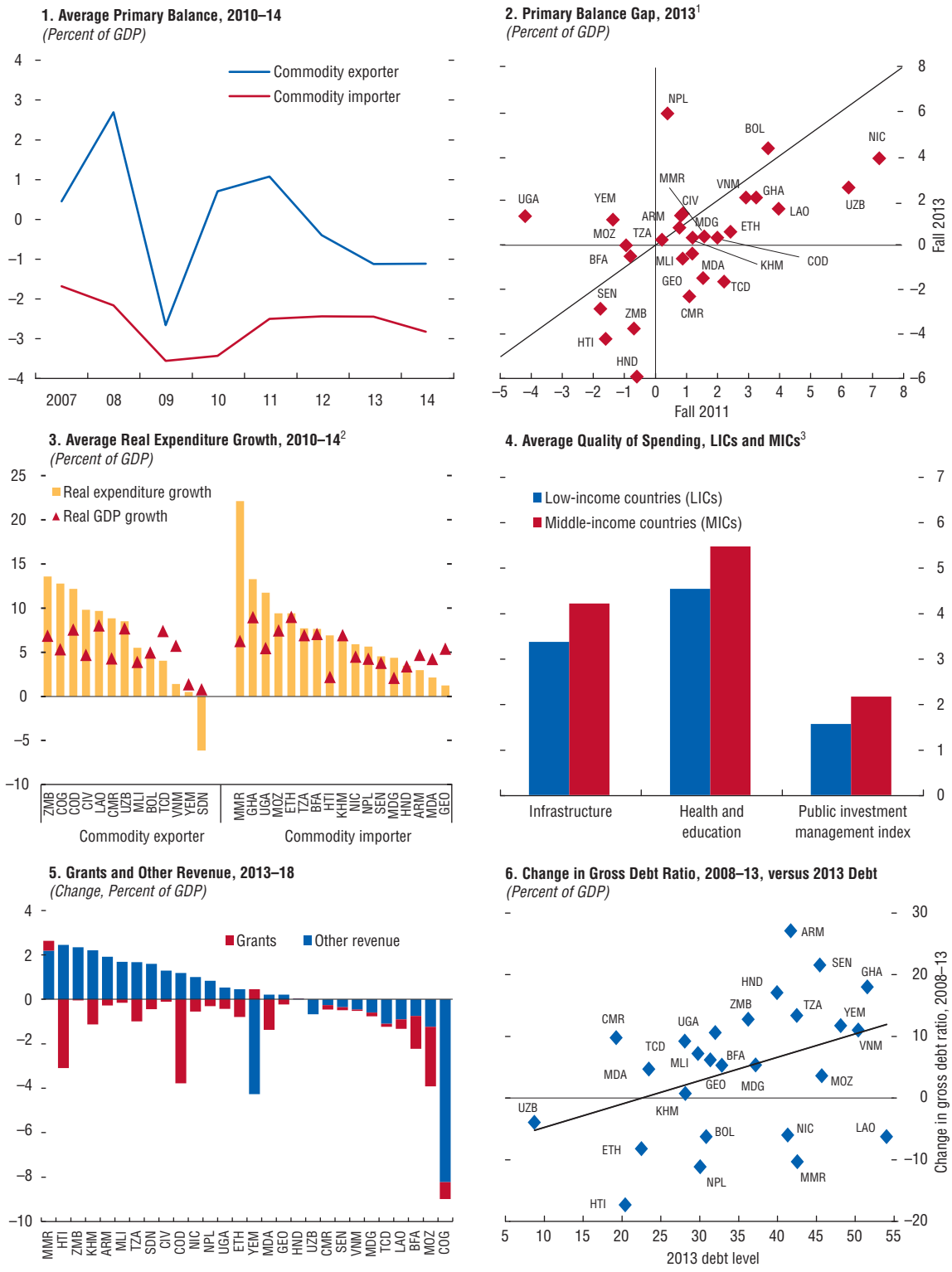
[8] For example, in Brazil policy lending to public financial institutions amounted to 8 percent of GDP from 2008 to 2012. In China, local-government financing vehicles and off-budget funds are estimated to account for about 19 percent of GDP.

Figure 3. Fiscal Trends in Emerging Market Economies



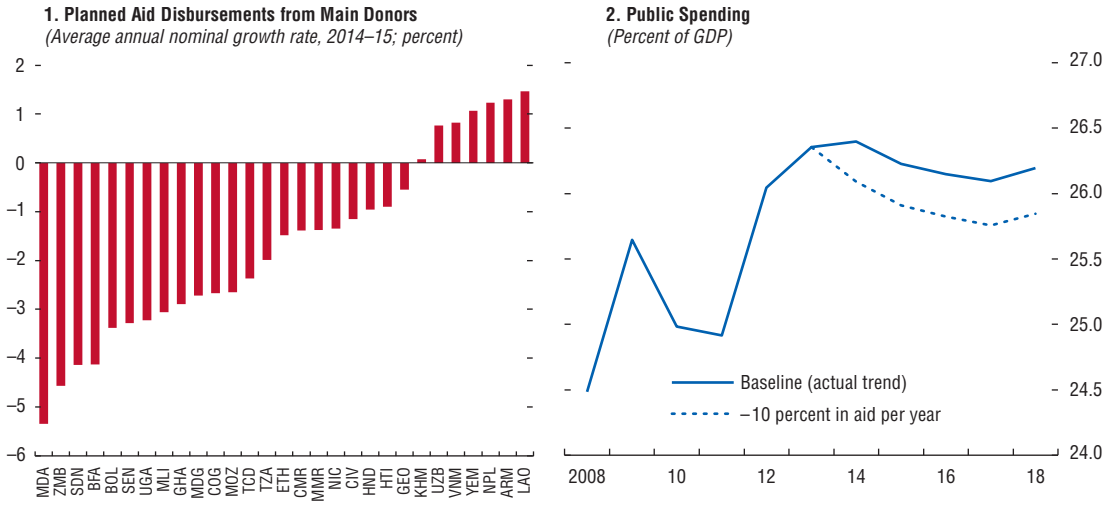
Source: IMF staff estimates and projections.
Note: CAPB = cyclically adjusted primary balance.
[1] Change relative to 2012.
[2] Differences between October 2013 and September 2011 projections.
[3] For a definition of *stock-flow adjustment,* see the Glossary. For Brazil, gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

Figure 4. Fiscal Trends in Low-Income Countries



Sources: Organisation for Economic Co-operation and Development; Schwab (2012); and IMF staff estimates and projections.
[1] Primary balance gap is defined as primary balance less debt-stabilizing primary balance.
[2] Real expenditure growth is calculated using nominal expenditure deflated by the GDP deflator.
[3] Unweighted average. Higher scores indicate better quality.

Figure 5. Public Spending and Aid Contraction Scenario in Low-Income Countries, 2008–18



Sources: IMF staff calculations based on Organisation for Economic Co-operation and Development data on actual and planned country programmable aid disbursements in countries eligible for support under the Poverty Reduction and Growth Trust (2013–15).
Note: Pass-through is set to 0.8 for full contraction of spending and in line with the proportion of grants in official assistance.

aid would lead to a reduction in spending of about ½ percent of GDP on average, without a compensating increase in domestic sources of revenue.[9] Countries with high aid dependency (such as Burkina Faso, Haiti, Mali, Mozambique, and Tanzania) would have to scale down spending by more than 1 percent of GDP.

Fiscal sustainability risks remain high in advanced economies and are rising in emerging market economies

Notwithstanding progress on fiscal consolidation, underlying fiscal vulnerabilities remain elevated in many advanced economies, reflecting persistently high debt, increasing uncertainty about the growth and interest rate environment, and failure to address long-term spending pressures (Tables 3 and 4). Fiscal vulnerabilities are also increasing in emerging market economies (Figure 6)—although from a lower level—as higher spreads and weaker growth prospects push negative interest rate–growth differentials closer to zero. Resource-rich economies that used revenue windfalls to fund large spending increases in recent years face particular challenges, as commodity prices (including oil and metals) have fallen and are expected to remain depressed (see the October 2013 *World Economic Outlook*), pushing these countries closer to a deficit position.[10] Gross financing needs in advanced economies, although still large, have stabilized at about 22½ percent of GDP (Table 5). They are set to rise in emerging market economies in 2013–14 relative to previous projections, mainly driven by higher levels of maturing debt. They are particularly large (exceeding 20 percent of GDP) in Egypt, Jordan, Hungary, and Pakistan, reflecting short maturities and high deficits (Table 6).

Age-related spending remains a key source of medium-term vulnerability, with projected growth of more than 4 percent of GDP in advanced economies and 3¼ percent of GDP in emerging market economies through 2030. The growth of public health spending has slowed across the board in advanced economies over the past three years, but econometric analysis suggests this is due more to deteriorating macroeconomic and fiscal conditions than to structural improvements in the efficiency of health care systems (Appendix 1). Nonetheless, in those economies in which the economic downturn and fiscal pressures have been more pronounced, health care spending growth is likely to remain significantly below precrisis rates for some time to come.

[9] This assumes a full pass-through of the cuts for the share of aid provided as grants (about 80 percent). For a discussion of possible domestic offsets to the scaling down of aid, see Section 2.

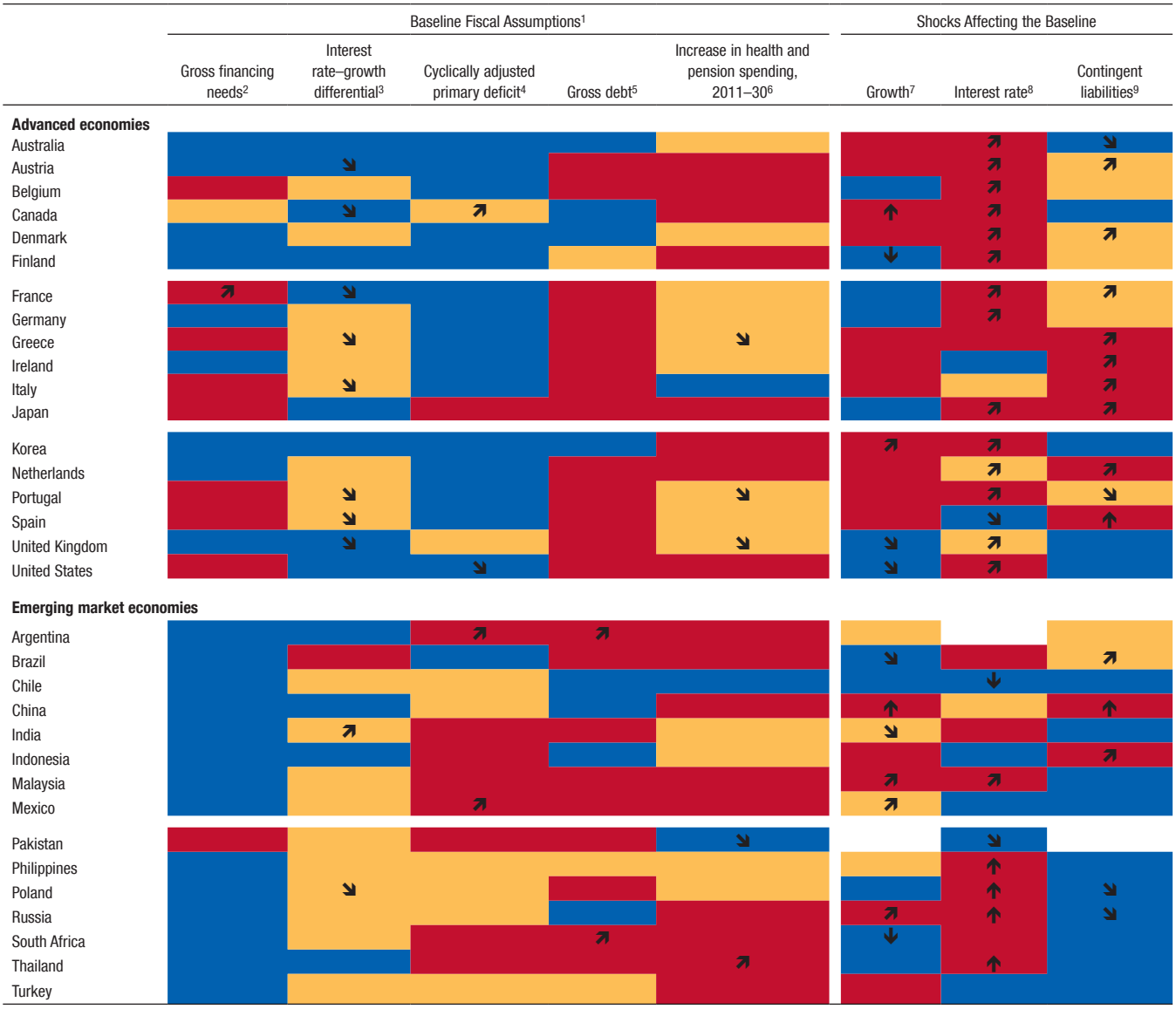
[10] Estimates based on a sample of nine emerging market economies representing a cross-section of commodity exporters suggest that a 10 percentage point across-the-board fall in commodity prices would lead to a decline of more than 1 percent of GDP in budget revenues annually (see the April 2011 *Fiscal Monitor*).

Table 3. Assessment of Underlying Fiscal Vulnerabilities over Time

Sources: Bloomberg L.P.; Consensus Economics; Thomson Reuters Datastream; Haver Analytics; and IMF staff estimates and projections.

Note: To allow for cross-country comparability, a uniform methodology is used to assess vulnerability. In-depth assessment of individual countries would require case-by-case analysis using a broader set of tools. As country-specific factors are not taken into account in the cross-country analysis, the results should be interpreted with caution. Based on fiscal vulnerability indicators presented in Table 4, red (yellow, blue) implies high (medium, moderate) levels of fiscal vulnerability. A revision of the methodology used to estimate the composite fiscal vulnerability indicator was introduced in April 2013, with a reduction in the weight assigned to shocks and a matching increase in the weight assigned to underlying fiscal vulnerabilities.

Table 4. Assessment of Underlying Fiscal Vulnerabilities, October 2013



Sources: Bloomberg L.P.; Consensus Economics; Thomson Reuters Datastream; Haver Analytics; and IMF staff estimates and projections.

Note: To allow for cross-country comparability, a uniform methodology is used for each vulnerability indicator. In-depth assessment of individual countries would require case-by-case analysis using a broader set of tools. As country-specific factors are not taken into account in the cross-country analysis, the results should be interpreted with caution. Fiscal data correspond to IMF staff forecasts for 2013 for the general government. Market data used for the *Growth, Interest rate,* and *Contingent liabilities* indicators are as of August 2013. A blank cell indicates that data are not available. Directional arrows indicate that, compared with the previous issue of the *Fiscal Monitor,* vulnerability signaled by each indicator is higher (↑), moderately higher (↗), moderately lower (↘), or lower (↓). No arrow indicates no change compared with the previous issue of the *Fiscal Monitor.*

[1] Red (yellow, blue) implies that the indicator is above (less than one standard deviation below, more than one standard deviation below) the corresponding threshold. Thresholds are from Baldacci, McHugh, and Petrova (2011) for all indicators except the increase in health and pension spending, which is benchmarked against the corresponding country group average.

[2] For advanced economies, gross financing needs above 17.3 percent of GDP are shown in red, those between 15.6 and 17.3 percent of GDP are shown in yellow, and those below 15.6 percent of GDP are shown in blue. For emerging market economies, gross financing needs above 20.6 percent of GDP are shown in red, those between 20 and 20.6 percent of GDP are shown in yellow, and those below 20 percent of GDP are shown in blue.

[3] For advanced economies, interest rate–growth differentials above 3.6 percent are shown in red, those between 0.3 and 3.6 percent are shown in yellow, and those below 0.3 percent are shown in blue. For emerging market economies, interest rate–growth differentials above 1.1 percent of GDP are shown in red, those between –4.2 and 1.1 percent of GDP are shown in yellow, and those below –4.2 percent of GDP are shown in blue.

[4] For advanced economies, cyclically adjusted deficits above 4.2 percent of GDP are shown in red, those between 1.7 and 4.2 percent of GDP are shown in yellow, and those below 1.7 percent of GDP are shown in blue. For emerging market economies, cyclically adjusted deficits above 0.5 percent of GDP are shown in red, those between –1.6 and 0.5 percent of GDP are shown in yellow, and those below –1.6 percent of GDP are shown in blue.

[5] For advanced economies, gross debt above 72.2 percent of GDP is shown in red, that between 56.1 and 72.2 percent of GDP is shown in yellow, and that below 56.1 percent of GDP is shown in blue. For emerging market economies, gross debt above 42.8 percent of GDP is shown in red, that between 29.3 and 42.8 percent of GDP is shown in yellow, and that below 29.3 percent of GDP is shown in blue.

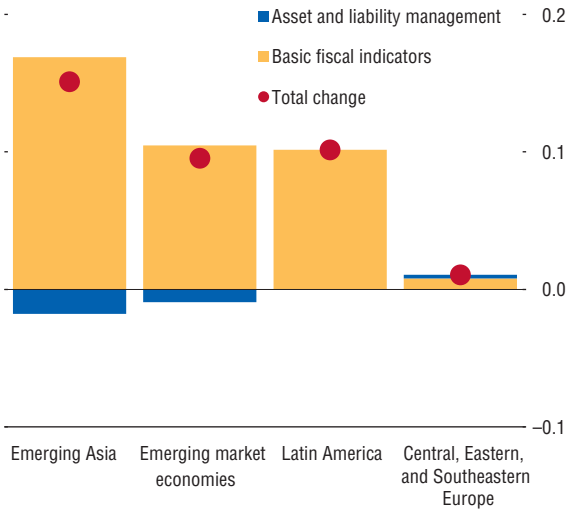
[6] For advanced economies, increases in spending above 3 percent of GDP are shown in red, those between 0.6 and 3 percent of GDP are shown in yellow, and those below 0.6 percent of GDP are shown in blue. For emerging market economies, increases in spending above 2 percent of GDP are shown in red, those between 0.3 and 2 percent of GDP are shown in yellow, and those below 0.3 percent of GDP are shown in blue.

[7] Risk to real GDP growth is measured as the ratio of the downside risk to the upside risk to growth, based on one-year-ahead real GDP growth forecasts by market analysts included in the Consensus Forecast. It is calculated as the standard deviation of market analysts' growth forecasts below the Consensus Forecast mean (downside risk, or DR), divided by the standard deviation of market analysts' growth forecasts above the Consensus Forecast mean (upside risk, or UR). This ratio is then averaged over the most recent three months. Cells are shown in red if downside risk is 25 percent or more higher than upside risk (DR/UR >= 1.25), in yellow if downside risk is less than 25 percent higher than upside risk (1 < DR/UR < 1.25), and in blue if downside risk is lower than or equal to upside risk (DR/UR <= 1).

[8] Risks to the financing cost underpinning the fiscal projection are measured as the difference between the current 10-year sovereign bond yield and the long-term bond yield (LTBY) assumption included in the *Fiscal Monitor* projections. Cells are shown in red if the current bond yield is above or equal to the LTBY, in yellow if the current bond yield is 100 basis points or less below the LTBY, and in blue if the current bond yield is more than 100 basis points below the LTBY.

[9] Fiscal contingent liabilities are proxied by banking sector uncertainty, measured as the conditional volatility of monthly bank stock returns, using an exponential generalized autoregressive conditional heteroskedastic (EGARCH) model which allows asymmetric volatility changes to positive versus negative shocks in stock returns. The rationale is as follows: bank stock returns capture market expectations of banks' future profitability and therefore—indirectly—banks' ability to maintain required capital. Higher volatility of bank returns can create uncertainty with respect to banks' ability to safeguard capital (see Sankaran, Saxena, and Erickson, 2011), increasing the probability that banks will need to be recapitalized, thereby resulting in contingent liabilities for the sovereign. Cells are shown in red if current volatility is more than two standard deviations above the historical average for January 2000–December 2007, in yellow if it is above the historical average by up to two standard deviations, and in blue if it is below or equal to the historical average.

Figure 6. Change in Fiscal Vulnerability Index, Fall 2013 Compared with Spring 2013



Sources: Baldacci, McHugh, and Petrova (2011); and IMF staff calculations.
Note: 2009 GDP weights at purchasing power parity are used to calculate weighted averages. Larger values of the index suggest higher levels of fiscal vulnerability.

Various factors contribute to increasing fiscal risks:

- *Interest rate risks* have increased, particularly in emerging market economies, in some of which uncertainty about the tapering off of U.S. monetary stimulus has contributed to higher bond fund outflows, raising the specter of sudden capital flow reversals. A simulated stress scenario suggests that 10-year bond yields could rise significantly—a jump of more than 150 basis points in countries where nonresident holdings of local-government debt are substantial, such as Indonesia, South Africa, and Turkey, if such risks were to materialize.[11] In the event, gross financing needs could increase sharply, particularly for those countries with short maturities and where the domestic investor base would be unwilling or unable to increase their holdings of government bonds to buffer against volatility (see the October 2013 *Global Financial Stability Report*). Interest rate risk has also gone up in the euro area in the face of renewed financial volatility.
- *Downside risks to growth* remain elevated in the euro area as fragmented financial markets, the need to repair private sector balance sheets, and uncertainty about policies could lead to a protracted period of stagnation. In some emerging market economies, the slow pace of structural reform is dragging down potential output growth—notably Brazil, India, and South Africa (October 2013 *World Economic Outlook*)—and weakening fiscal positions, particularly in cases in which debt levels are already high. Indeed, a 1 percentage point decline in growth in emerging market economies would result in a 0.3 percent of GDP deterioration in their fiscal balances on average.
- *Contingent liabilities* stemming from the banking sector, sometimes related to the expansion of public banks' balance sheets (e.g., in Brazil and India), are rising in several emerging market economies that experienced buoyant credit growth in recent years.[12] In some cases, nonfinancial state-owned enterprises are also a source of vulnerability (for example, in China and South Africa). In the euro area, the cleanup of banks is ongoing (Table 7) but strains are reemerging—for example, in Belgium and the Netherlands.

Strengthening fiscal balances and restoring confidence remain key policy priorities, although the degree of urgency differs across countries

In *advanced economies,* the challenge remains to advance fiscal consolidation at a pace that does not undermine the recovery and with tools that help raise potential growth.

- Consolidation should continue based on medium-term fiscal adjustment plans defined in cyclically adjusted terms, leaving room for automatic stabilizers to cushion unexpected shocks, if financing allows. The speed of adjustment should be consistent with the economic environment—so as not to unduly thwart the recovery—but also with debt levels and financing conditions. Deviations relative to these plans should be considered only if economic conditions deteriorate significantly relative to what is anticipated. Lower-than-expected growth has indeed led most countries to reset the pace of adjustment—in headline terms and often also in cyclical terms. However, the United States is adjusting too fast

[11] The scenario assumes that foreign holdings of local-currency government debt fall by 30 percent, U.S. Treasury note yield increases by 100 basis points, and the Chicago Board Options Exchange Market Volatility Index (VIX) is up by 10 percentage points. For more details, see the October 2013 *Global Financial Stability Report.*

[12] Data on guarantees and other contingent liabilities for emerging market economies are scant. For a discussion on the contingent liabilities in India and China, see the April 2013 *Fiscal Monitor.*

Table 5. Selected Advanced Economies: Gross Financing Needs, 2013–15
(Percent of GDP)

	2013			2014			2015		
	Maturing debt	Budget deficit	Total financing need	Maturing debt[1]	Budget deficit	Total financing need	Maturing debt[1]	Budget deficit	Total financing need
Japan	48.9	9.5	58.4	51.3	6.8	58.1	48.5	5.7	54.2
Italy	25.2	3.2	28.4	26.1	2.1	28.1	26.5	1.8	28.3
United States	18.1	5.8	23.9	19.6	4.6	24.3	19.1	3.9	23.0
Portugal[2]	17.8	5.5	23.3	18.1	4.0	22.1	18.0	2.5	20.5
Greece	17.0	4.1	21.1	21.8	3.3	25.1	16.5	2.1	18.6
Spain	13.5	6.7	20.2	14.8	5.8	20.6	15.7	5.0	20.7
Belgium	15.8	2.8	18.7	16.3	2.5	18.8	16.1	1.5	17.6
France	13.4	4.0	17.4	14.2	3.5	17.7	15.6	2.8	18.4
Canada	13.2	3.4	16.6	14.5	2.9	17.3	15.7	2.3	18.1
Ireland[3]	5.6	6.7	12.4	5.3	5.6	10.9	3.9	3.4	7.2
United Kingdom	5.9	6.1	12.1	6.4	5.8	12.2	8.2	4.9	13.1
Slovenia	5.0	7.0	12.0	5.7	3.8	9.5	9.3	3.9	13.2
Netherlands	8.6	3.0	11.6	9.1	3.2	12.3	12.3	4.8	17.0
Czech Republic	8.4	2.9	11.3	9.0	2.9	11.8	9.9	2.6	12.5
Slovak Republic	8.0	3.0	11.0	6.2	3.8	10.0	6.1	3.2	9.3
Iceland	6.7	2.7	9.4	7.0	1.8	8.8	1.6	1.3	2.9
Denmark	7.4	1.7	9.1	7.7	2.0	9.7	8.8	2.9	11.7
New Zealand	7.7	1.3	9.0	8.0	0.4	8.5	7.5	–0.2	7.3
Austria	6.3	2.6	9.0	6.6	2.4	9.0	6.0	1.9	7.9
Finland	6.0	2.8	8.8	6.3	2.1	8.4	6.8	1.6	8.4
Germany	7.9	0.4	8.3	7.9	0.1	8.1	5.5	0.0	5.5
Australia	3.1	3.1	6.2	3.6	2.3	5.9	4.1	0.8	4.9
Sweden	3.5	1.4	4.9	3.7	1.5	5.2	6.7	0.5	7.2
Switzerland	3.5	–0.2	3.3	3.5	–0.5	3.0	2.9	–0.7	2.3
Korea	3.1	–1.4	1.7	3.1	–1.7	1.5	3.1	–1.9	1.2
Norway	4.3	–12.4	–8.1	4.3	–11.6	–7.3	4.0	–10.2	–6.2
Average	17.6	4.6	22.3	18.8	3.7	22.5	18.4	3.0	21.4

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

Note: For most countries, data on maturing debt refer to central government securities. For some countries, general government deficits are reported on an accrual basis (see Table SA.1).

[1] Assumes that short-term debt outstanding in 2013 and 2014 will be refinanced with new short-term debt that will mature in 2014 and 2015, respectively. Countries that are projected to have budget deficits in 2013 or 2014 are assumed to issue new debt based on the maturity structure of debt outstanding at the end of 2012.

[2] Maturing debt is expressed on a nonconsolidated basis.

[3] Ireland's cash deficit includes exchequer deficit and other government cash needs and may differ from official numbers because of a different treatment of short-term debt in the forecast.

given the incipient recovery, relying on a crude tool, the sequester, with potentially undesirable effects on the composition of spending and long-term growth. A slower pace of fiscal adjustment could also be considered in some European countries, given substantial negative output gaps.

- In higher-debt countries, notably Japan and the United States, well-specified medium-term plans are urgently needed to put debt ratios firmly on a downward trajectory (and in Japan, to buttress the government's ambitious macroeconomic strategy). In the United States, in addition to entitlement reform, a fundamental tax reform aimed at simplifying the tax code and broadening the base by reducing exemptions and deductions, as well as at higher taxation of fossil fuels, could provide new revenue. In Japan, revenue efforts (notably the increase in the consumption tax to a final uniform level higher than currently envisaged) should be complemented with growth-friendly spending constraints, especially for social security. Overall, strengthening fiscal frameworks with medium-term rules to curb expenditure, tighter budget procedures, and greater independent oversight of the budget are critical to cement hard-won gains.
- In all countries, efforts should be stepped up to ensure that the composition of adjustment is more supportive of long-term growth—a critical factor for lowering debt ratios. In addition to accelerating structural reforms of labor and product markets, this would require changing the consolidation mix gradually toward tax and spending instruments that are less inimical to growth than is currently the case, while ensuring that equity goals are respected. With

Table 6. Selected Emerging Market Economies: Gross Financing Needs, 2013–14

(Percent of GDP)

	2013			2014		
	Maturing debt	Budget deficit	Total financing need	Maturing debt	Budget deficit	Total financing need
Egypt	28.1	14.7	42.8	26.7	13.2	39.9
Pakistan	25.5	8.5	34.0	29.9	5.5	35.4
Jordan	17.3	9.1	26.4	18.3	8.0	26.3
Hungary	18.1	2.7	20.8	17.3	2.8	20.1
Brazil	15.7	3.0	18.7	15.9	3.2	19.1
Morocco	9.7	5.5	15.2	9.9	4.8	14.7
South Africa	7.5	4.9	12.4	7.5	4.7	12.2
India	3.8	8.5	12.2	3.7	8.5	12.2
Mexico	7.9	3.8	11.7	7.7	4.1	11.8
Ukraine	7.4	4.3	11.7	5.2	5.1	10.3
Romania	8.6	2.3	10.9	8.4	2.0	10.4
Malaysia	6.1	4.3	10.4	5.9	4.4	10.3
Poland	5.5	4.6	10.1	5.9	3.4	9.3
Argentina[1, 2]	7.8	2.0	9.8	8.2	2.7	10.9
Turkey	7.2	2.3	9.5	8.7	2.3	11.0
Lithuania	5.5	2.9	8.4	4.0	2.7	6.7
Thailand	5.5	2.7	8.2	5.9	3.2	9.1
China[2]	5.3	2.5	7.8	4.2	2.1	6.3
Philippines	6.8	0.8	7.6	7.0	0.8	7.9
Colombia	3.9	1.0	4.9	3.2	0.7	4.0
Bulgaria	2.2	1.8	4.0	0.2	1.7	2.0
Indonesia	1.6	2.2	3.8	1.5	2.5	4.0
Latvia	1.5	1.4	2.9	6.8	0.5	7.3
Russia	1.7	0.7	2.4	2.1	0.3	2.4
Peru	2.1	–0.3	1.8	0.1	–0.3	–0.2
Chile	0.3	0.7	1.0	1.1	0.2	1.4
Kazakhstan	1.8	–4.8	–3.0	1.9	–4.1	–2.2
Average	6.5	3.1	9.6	6.1	2.8	8.9

Source: IMF staff estimates and projections.

Note: Data in table refer to general government. For some countries, general government deficits are reported on an accrual basis (see Table SA.2).

[1] Budget deficit on a cash basis, not an accrual basis as in Statistical Table 5. Total financing need takes into account only the authorities' scheduled payments.

[2] For details, see "Data and Conventions" in the Methodological and Statistical Appendix.

Table 7. Selected Advanced Economies: Financial Sector Support

(Percent of 2012 GDP, except where otherwise indicated)

	Impact on Gross Public Debt and Other Support	Recovery to Date	Impact on Gross Public Debt and Other Support after Recovery
Belgium	7.6	2.5	5.1
Cyprus	10.0	0.0	10.0
Germany[1]	12.8	1.9	10.9
Greece	21.8	6.4	15.4
Ireland[2]	40.4	5.7	34.7
Netherlands	15.6	10.7	4.9
Spain[3]	7.6	3.1	4.5
United Kingdom	6.6	2.2	4.4
United States	4.6	4.6	0.0
Average	6.9	4.1	2.9
$US billions	1,752	1,029	722

Sources: National authorities; and IMF staff estimates.

Note: Table shows fiscal outlays of the central government, except in the cases of Germany and Belgium, for which financial sector support by subnational governments is also included. Data are cumulative since the beginning of the global financial crisis—latest available data up to August 2013. Data do not include forthcoming support.

[1] Support includes here the estimated impact on public debt of liabilities transferred to newly created government sector entities (about 11 percent of GDP), taking into account operations from the central and subnational governments. As public debt is a gross concept, this neglects the simultaneous increase in government assets. With this effect taken into account, the net debt effect up to 2012 amounted to just 1.6 percent of GDP, which was recorded as deficit.

[2] The impact of the direct support measures is mainly on net debt, as significant recapitalization expenses were met from public assets. 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 total capital injections by the Fondo de Reestructuración Ordenada Bancaria (FROB) and liquidity support.

few exceptions, the scope to increase revenues is limited and preference should be given to broadening tax bases (by eliminating undue exemptions and preferential rates) and targeting negative externalities rather than raising rates (Section 2 discusses these issues in more detail). In European economies where spending ratios are already high, the bulk of fiscal savings should arise from cutting current spending while protecting (and in some cases front-loading) public investment, to the extent possible.

There is an increasing sense that the fiscal positions of a growing number of *emerging market economies* are more vulnerable than was earlier thought, as potential output may be less than previously estimated and contingent liabilities are building up.

- Countries with high levels of deficit and debt and large gross financing needs (including Egypt, Jordan, Morocco, and Pakistan) are exposed to shocks and swings in market sentiment and thus must take early decisive steps to safeguard against adverse debt dynamics and bolster credibility. In India, gradual fiscal consolidation is needed to reduce fiscal vulnerabilities arising from high debt levels and to free fiscal space for social spending. In Brazil, the authorities should place higher priority on fiscal consolidation so as to put the gross debt–to–GDP ratio on a firm downward path. Other countries with relatively low debt ratios and deficits could wait to rebuild policy space until the global economic environment allows it but, given uncertainty about potential output and contingent liabilities, should refrain from fiscal easing—except in case of a significant slowdown and provided funding conditions permit it.
- Commodity exporters should focus on increasing their resilience to commodity price shocks by mobilizing noncommodity sources of revenue and containing hard-to-reverse current expenditures.
- A reorientation of public spending (for example, through the reduction of subsidies and containment of wage spending, complemented with targeted measures to protect the poor) could facilitate faster consolidation while supporting growth and social conditions.
- Efforts to bring all spending into public accounts (while preserving the distinction between the general government and the broader public sector) should be stepped up, as quasi-fiscal operations undermine transparency and accountability, and often result in inefficient allocation of scarce resources.

In *low-income countries,* declining concessional financing and commodity-related revenues underscore the need to mobilize domestic revenue and improve the efficiency of government expenditure, including through reforms of energy subsidies. Commodity exporters should strengthen nonresource revenue and design fiscal frameworks that ensure a strong revenue benefit while maintaining an attractive environment for investors—a central challenge in exploiting new discoveries (IMF, 2012; Daniel, Keen, and McPherson, 2010).

Box 1. Constructing an Index of the Difficulty of Fiscal Adjustment

The difficulty of implementing fiscal consolidation can be measured along (at least) two related dimensions: first, that of reaching a given primary surplus over a given period; second, that of maintaining it for some time at about that level to achieve lasting debt reduction. The *Fiscal Monitor* illustrative adjustment scenarios have usually assumed that adjustment would take place over a 10-year period and then be maintained for another 10-year period. The Public Finances in Modern History Database[1] enables a look at the historical experience along both dimensions to gauge how demanding it would be to bring debt ratios down in advanced economies.

Specifically, the distributions of the size of primary adjustments (changes in fiscal positions) and of the maximum primary surpluses (in level) have been computed for a sample of 23 advanced economies over the period 1950–2011.[2] In terms of change in the fiscal position, the maximum 10-year primary balance adjustment ranges from 3¾ to 13 percent of GDP, with the median at 8¼ percent of GDP. However, given the consolidation that has already taken place since 2011, the distribution of adjustment over the last 7 years of the 10-year period might be more relevant for assessing current consolidation plans (because it measures the difficulty of keeping "running" for 7 more years after consolidation has been "running" for 3). In that case, the distribution ranges between –1¾ and 11¼ percent of GDP, with the median at 5 percent of GDP. The maximum 10-year average level of primary surpluses ranges across countries from 1 percent to 6¾ percent of GDP, with the median at 3¼ percent of GDP.

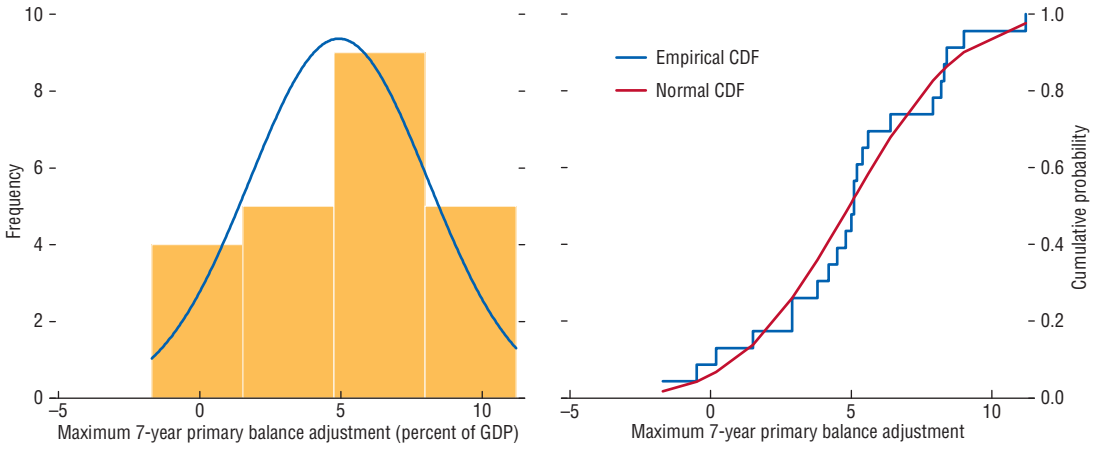
Cumulative distribution functions (CDFs) can be drawn (approximating the empirical distributions with a normal distribution)[3] for both the size of adjustment and the level of the primary surplus. These CDFs are bounded by 0 and 1 and indicate the probability that the primary surplus adjustment (or level) is at or below a given value. Indices of difficulty can then be constructed based on the CDFs (Figures 1.1 and 1.2). For instance, according to the historical evidence (depicted in Figure 1.1), achieving an adjustment of

[1] For a detailed description of the data, see Mauro and others (2013). The database is available at www.imf.org/external/np/FAD/histdb/.

[2] The historical comparison is only illustrative, as it does not take into account country-specific circumstances or the state of the global economic environment. See the April 2013 *Fiscal Monitor* for more details, including a discussion of how episodes of maximum primary balances and adjustment were identified as well as caveats in regard to using history as guide to infer the difficulty of current fiscal adjustment.

[3] Approximating the empirical distribution with a kernel density function yields a similar result.

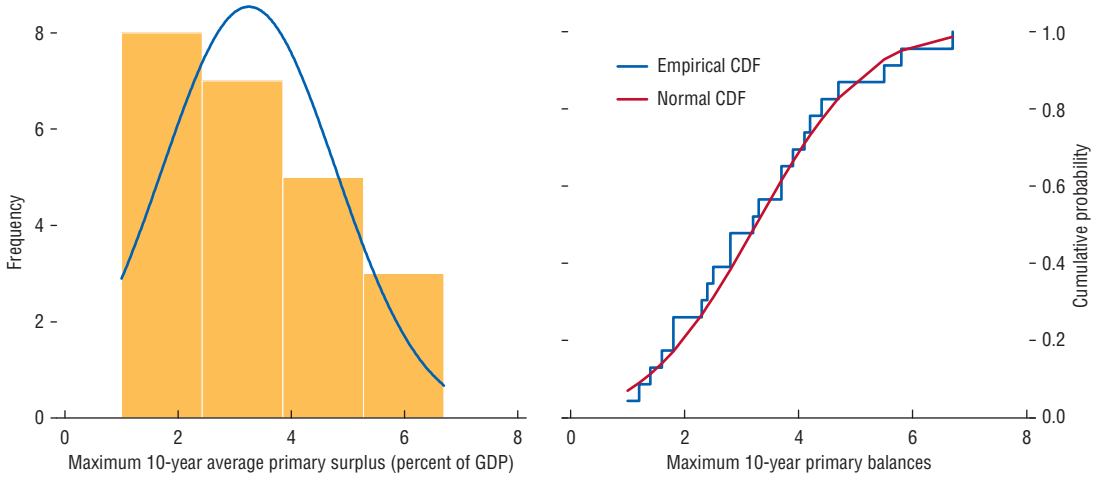
Figure 1.1. Distribution of Maximum 7-Year Improvement in Primary Balances



Sources: IMF, Public Finances in Modern History Database; and IMF staff estimates.
Note: CDF = cumulative distribution function.

Box 1 *(concluded)*

Figure 1.2. Distribution of Maximum 10-Year Primary Balances



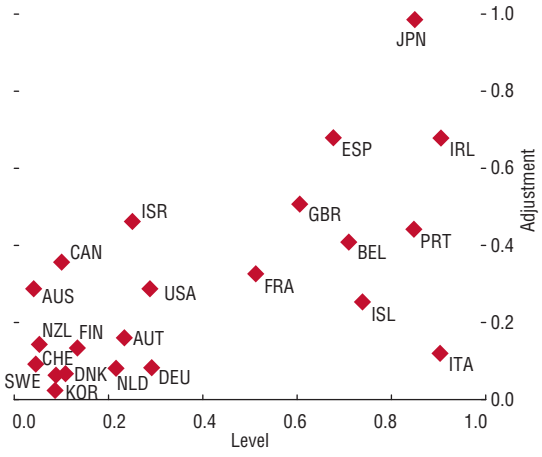
Sources: IMF, Public Finances in Modern History Database; and IMF staff estimates.
Note: CDF = cumulative distribution function.

5 percent of GDP over 7 years is associated with a cumulative probability of 0.5; the difficulty of such an adjustment can thus be considered to be median. Similarly, in Figure 1.2, maintaining a primary surplus of 6¾ percent for 10 years is associated with a cumulative probability of 1, so that any consolidation that involves maintaining the primary surplus at or above this level would be considered to be most or extremely difficult.

These indices can be used to gauge the relative difficulty entailed in the illustrative fiscal adjustment scenarios for advanced economies described in Statistical Table 13b; under these, countries consolidate gradually over a 7-year period (2014–20) to a structural budget balance consistent with the IMF staff's medium-term advice and then maintain it at this level for the next decade. Results are shown in Figure 1.3. Unsurprisingly, countries with the highest debt ratios are above the average on both dimensions of fiscal consolidation. Most points in the figure fall below a 45-degree line, suggesting that maintaining the target structural fiscal balance for an extended period of time is likely to be more challenging than adjusting to this level. Japan stands out as the country facing the most challenging consolidation, scoring a 1 on both dimensions. Ireland and Spain follow closely.

Figure 1.3. Difficulty of Long-Term Fiscal Consolidation

(Cumulative probability)



Source: IMF staff estimates and projections.
Note: Higher values indicate greater difficulty in achieving long-term fiscal consolidation.

Box 2. Fiscal Reforms to Unlock Economic Potential in the Arab Countries in Transition

Spending hikes in the aftermath of the Arab Spring raised already-high fiscal deficits and public debt (Figure 2.1). The Arab Spring caught all Arab Countries in Transition (ACTs)[1] (except Libya) with already high or rising debt levels, reflecting a combination of generalized food and fuel subsidies, high global commodities prices, low taxation, and in some cases countercyclical fiscal action.[2] During 2011–12, in response to social unrest, most ACT governments further expanded spending on subsidies and public wage bills. The increases were only partially offset by cuts in capital and other expenditures. As a result, the ACTs' public debt has grown by 12 percentage points of GDP over 2010–13.

In a difficult economic and sociopolitical environment, countries need to reorient fiscal policy to foster job creation while embarking on fiscal consolidation. Under current policies, the average public debt ratio would rise by about 20 percentage points of GDP over the next five years, to close to 90 percent of GDP (Figure 2.2). Moreover, current account deficits and financing needs are substantial in many ACTs. But consolidation, however urgent, needs to take into account the ACTs' delicate sociopolitical environment and minimize adverse impacts on growth and social outcomes. This calls for a careful choice of fiscal instruments, but also for complementary measures to address poverty and unemployment. In the fiscal area, the two main goals should be improved revenue collection and a radical reprioritization of expenditures away from universal subsidies toward growth-friendly and pro-poor spending, including targeted social assistance and infrastructure (Annex III of the October 2013 *Regional Economic Outlook: Middle East and Central Asia* elaborates on specific expenditure and revenue recommendations). Given the scope of the reforms, broad political consultation will be needed to build consensus and ensure successful implementation.

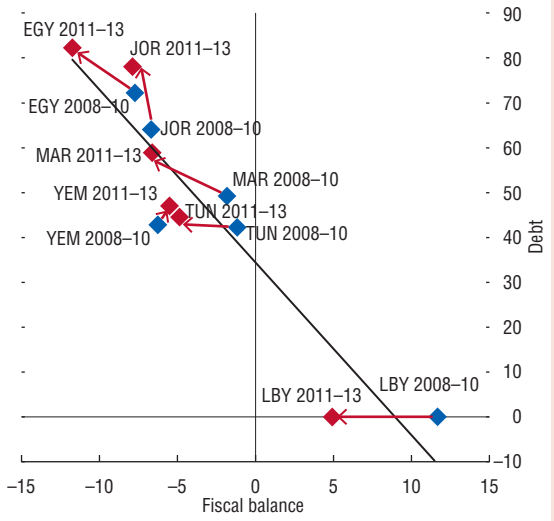
A reshuffling of public expenditure can support stronger and more robust growth while enhancing social conditions. In recent years, subsidies, especially for energy, have increased faster than any other component of public outlays (Figure 2.3). Yet they are inefficient in providing social protection, as they disproportionately benefit higher-income segments of the population, which consume more than the poor. All ACT govern-

[1] The ACTs are Egypt, Jordan, Libya, Morocco, Tunisia, and Yemen. Among these, the non-oil ACTs are Egypt, Jordan, Morocco, and Tunisia. For country-specific details, see "Data and Conventions" in the text and Tables SA.2 and SA.3.

[2] In some cases, the fiscal deficit worsened because of one-off expenditures, such as bank recapitalization costs.

Figure 2.1. Arab Countries in Transition: Average Gross Debt versus Average Overall Fiscal Balance

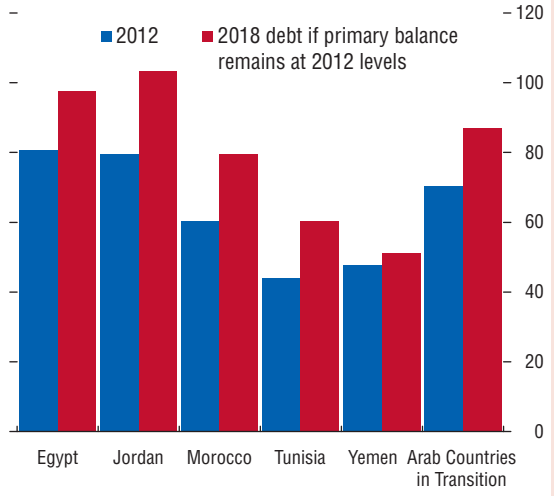
(Percent of GDP)



Sources: National authorities; and IMF staff estimates.

Figure 2.2. Arab Countries in Transition: Gross Debt

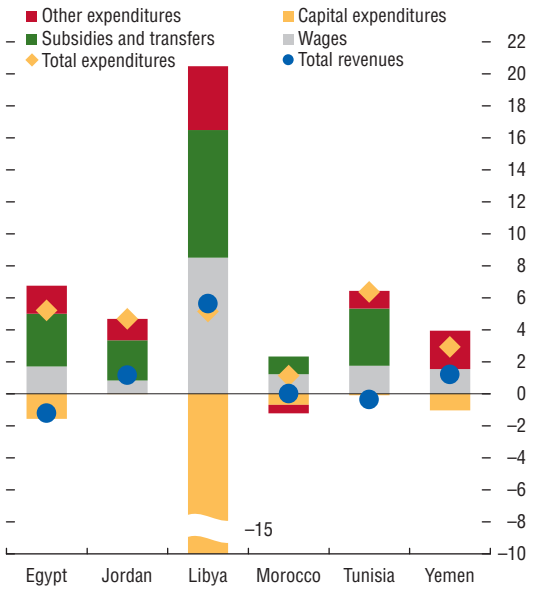
(Percent of GDP)



Sources: National authorities; and IMF staff estimates.

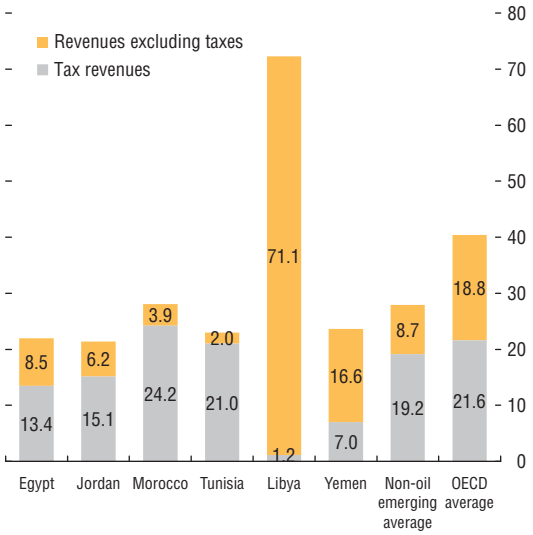
Box 2 *(continued)*

Figure 2.3. Arab Countries in Transition: Change in Revenue and Expenditure, 2010–13
(Percent of GDP)



Sources: National authorities; and IMF staff estimates.

Figure 2.4. Revenue, 2012
(Percent of GDP)



Sources: Organisation for Economic Co-operation and Development (OECD); and IMF staff estimates.

ments have embarked upon subsidy reform, although to varying degrees (October 2013 *Regional Economic Outlook: Middle East and Central Asia*).

To mitigate the social impact, part of the savings resulting from subsidy reform should be channeled toward better-targeted social safety nets or broader cash compensation schemes, and many ACTs are beginning to move in this direction. The growth of public wage bills needs to be contained, as using the public sector as employer of first and last resort is no longer an option where fiscal buffers are running low. Near-term efforts should aim at containing wage growth in real terms, complemented in the medium term by comprehensive reforms that review the size and structure of the civil service, while creating a skilled and efficient government workforce. Channeling part of the fiscal savings into growth-enhancing areas, including efficient capital spending (prioritization is important) and social outlays on education and health care, will create jobs and reduce inequities in the near term, while strengthening long-term growth prospects.

Enhancing revenue mobilization is equally important for fiscal sustainability. Tax collection is a persistent problem in non-oil ACTs, particularly in Egypt and Jordan. Tax revenue is significantly lower in oil-exporting ACTs, but nontax revenue related to oil production—which tends to be volatile—has supplemented tax receipts (Figure 2.4). Overall, the immediate challenge is to maintain macroeconomic stability, but governments should, at the same time, begin revenue reforms, seeking to strike a balance among supporting growth, enhancing equity, and strengthening revenue collection while preserving competiveness and improving the business environment. Tax policy measures to achieve such goals may include broadening the tax base through limiting exemptions and incentives, simplifying tax systems and reducing distortions, enhancing the progressivity of personal income taxes, and raising rates where appropriate. On the tax and customs administration side, enhancing compliance and strengthening administrative capacity will be critical. Furthermore, improving taxpayers' morale through enhanced transparency, improved access to information and taxpayer services, and better communication would support revenue mobilization

Box 2 *(concluded)*

efforts. For example, publishing, as does Morocco, an annual review of tax expenditures highlighting their costs can facilitate public buy-in for reforming tax incentives. More broadly, a clear communication strategy provides assurances to taxpayers on the use of public funds, as when part of the additional revenues are used to finance well-defined growth-enhancing capital spending and well-targeted social programs.

2. Taxing Our Way out of—or into?—Trouble

Taxation is rarely far from the news, but it has seldom been so central to public debate, in so many countries, as now. This section takes stock of developments on the revenue side since the onset of the global economic and financial crisis and explores whether and how tax reform can help strengthen public finances. It asks: Can countries tax more? Can they tax better? And what can they do to increase the legitimacy and sustainability of their tax systems?

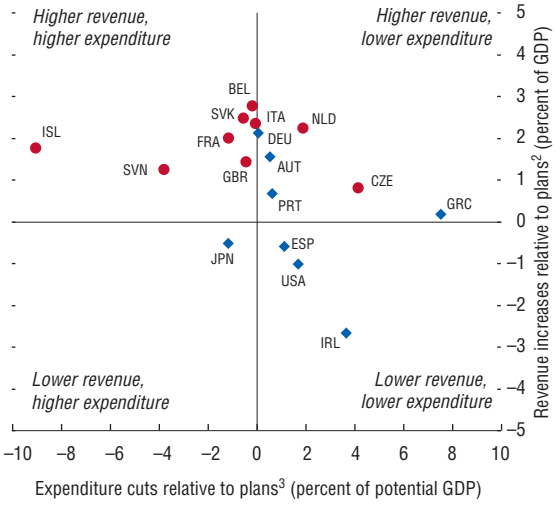
The revenue story until now: How (and what) are we doing?

Revenue developments

In *advanced economies,* revenues (relative to GDP) have rebounded to near precrisis levels—reflecting frequent recourse to tax measures to narrow fiscal deficits. Indeed, relative to initial plans in 2010, revenue increases have in many countries outpaced expenditure cuts by enough to shift the overall policy mix more toward the tax side (Figure 7). Ex ante, about 30 percent of large adjustment efforts were intended to come from the revenue side;[13] in the event, the increase in revenue was about twice as much as projected, so that ex post, this share has increased to about 40 percent.[14] In some cases (including France, Iceland, Slovenia, and the United Kingdom), tax measures made up for shortfalls or delays in expenditure measures. In only a handful of countries (for example, Japan, Spain, and the United States) have revenues underperformed relative to original plans, and there they were partly offset by a reduction in spending—except in Japan.[15]

Revenues in *emerging market economies* and *low-income countries* have also increased more than originally expected, partly because of favorable cyclical conditions and, in some cases, a commodity-related revenue bonanza. But in many cases, spending has also grown more rapidly than planned, outpacing revenue increases (Figure 8). This poses a challenge, as buoyant revenues may well largely reflect temporary factors, which cannot meet continued spending pressures. For developing economies, strengthening domestic tax systems is made more urgent by the expected declines in development assistance and commodity prices highlighted in Section 1. These revenues seem unlikely to be fully recovered from domestic sources: recent work suggests that a one-dollar cut in grants is generally associated with only a 9- to 24-cent increase in own revenues (Benedek and others, 2013), though country experiences vary widely (Moss, Pettersson, and van de Walle, 2006). Similarly, a one-dollar loss of hydrocarbon revenues might be offset by only about 20 cents more from other nonresource domestic revenues (Bornhorst, Gupta, and Thornton, 2009).

Figure 7. Advanced Economies: Change in Planned Measures, 2009–13[1]



Source: IMF staff estimates and projections.
Note: Countries depicted with red bullets are those for which the composition of adjustment has shifted more toward revenue.
[1] Estimates are calculated comparing the change in expenditure and revenue for the period 2009–13 in the October 2010 *Fiscal Monitor* with that in the October 2013 *Fiscal Monitor*.
[2] Change in revenue items assumes an elasticity of revenue to GDP of 1.
[3] Change in expenditure items assumes an elasticity of expenditure to GDP of 0. A positive value means cuts in expenditure were larger than originally planned.

Fiscal consolidation: Tax reform or tax grab?

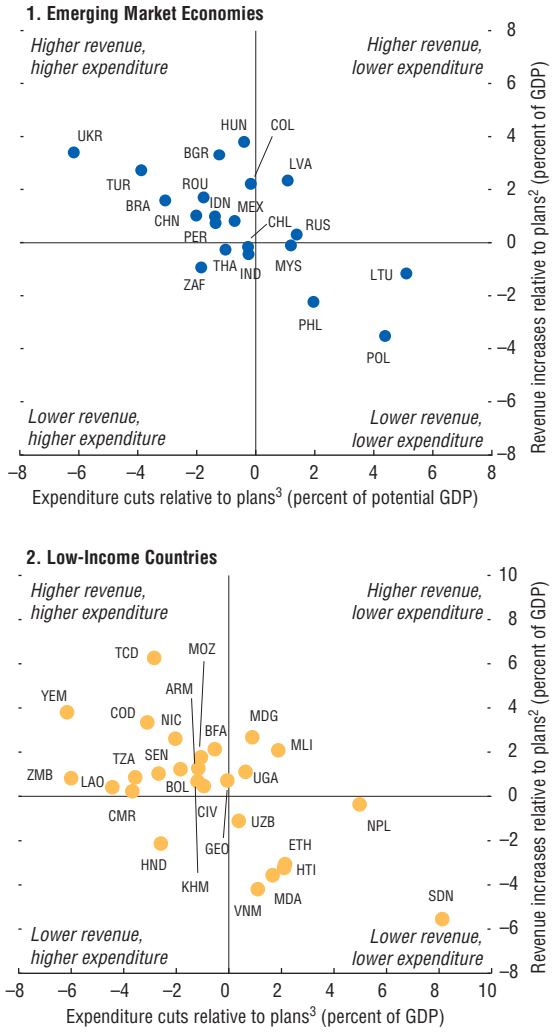
In the aftermath of the Great Recession, a broad consensus emerged on a set of measures that could strengthen revenue while making tax structures both more efficient and fairer (Table 8). With due consideration for countries' differing circumstances, preference was to be given to minimizing distortions (through, for instance, broadening the tax base by eliminating

[13] This is the unweighted average for advanced economies with debt-to-GDP ratios above 60 percent or cumulative fiscal adjustment higher than 3 percent of GDP.

[14] Greater-than-planned reliance on revenue measures partly reflects spending rigidities; it is also a feature of previous consolidations (Mauro, 2011).

[15] Earthquake-related reconstruction outlays explain the absence of spending offset in Japan.

Figure 8. Emerging Market Economies and Low-Income Countries: Change in Revenue and Expenditure, 2009–13[1]



Source: IMF staff estimates and projections.
[1] Estimates are calculated comparing the change in expenditure and revenue for the period 2009–13 in the October 2010 *Fiscal Monitor* with that in the October 2013 *Fiscal Monitor*.
[2] Change in revenue items assumes an elasticity of revenue to GDP of 1.
[3] Change in expenditure items is estimated in percentage points of potential GDP (except in the case of low-income countries, for which reliable estimates of potential output are not available), which assumes an elasticity of expenditure to GDP of 0.

inappropriate exemptions or tax expenditures[16] before increasing the rate), targeting negative externalities, and strengthening tax compliance. Has this advice been taken?

- Increases in *taxes on goods and services* have indeed been frequent in advanced and emerging market economies alike (Table 9). Excises, the first port of call for any cash-strapped government, were raised almost universally.[17] Value-added tax (VAT) increases have been both common and substantial—but with a noticeable inclination to raise rates (as in most EU countries since the crisis) rather than broaden the base.
- Many advanced economies have also looked for higher revenue from *personal income taxation*, often through increases in top marginal rates on labor income, and in some cases on capital income. In several countries, temporary surcharges or solidarity contributions have been introduced, particularly on high earners (though nothing, it has been noted, is as permanent as a temporary tax).[18] The focus on higher-income earners has stemmed or even reversed the precrisis trend of reducing the tax pressure at the top of the income distribution.[19] In emerging market economies, rate and base reduction have been quite common, in some cases along with increased progressivity (in China, for instance, the starting rate was reduced and the band over which the top rate applies widened).
- Many countries have increased *social contributions*—a surprising choice given pervasive unemployment challenges.[20] However, changes in rates of social contributions (especially those paid by employers) may not be very visible to workers, the increases have in any event generally been small, and in some cases they have been accompanied by targeted reductions intended to encourage the hiring of lower-skilled workers. Despite much discussion, no country has undertaken a substantial "fiscal devaluation" (a revenue-neutral shift from employers' social contributions toward consumption taxation), perhaps out of concerns regarding potential risks to revenue (to have a meaningful impact, the change in rates would have to be large) and the distributional implications of increasing the VAT rate.
- Rates of *corporate income taxation*, on the other hand, have been reduced more often than increased,

[16] The concept and measurement of tax expenditures, and experience in their elimination, were discussed in the April 2011 *Fiscal Monitor*.

[17] One would, of course, expect nominal increases simply to maintain the real value of excises levied as fixed monetary amounts.
[18] In Germany, for instance, the solidarity surcharge introduced in the wake of unification in 1991 is still in place.
[19] Some have expanded in-work tax credits, with effects similar to a rate cut on lower earnings.
[20] An important exception is Brazil, where the employers' contribution has been converted to a low rate and a sectorally differentiated turnover tax.

Table 8. Conventional Wisdom: Advice for the Revenue Side of Consolidation

Recommendation	Rationale
Exploit *consumption taxes* more fully, expanding the base of the value-added tax (VAT) before raising standard rates (using the transfer system to protect the most vulnerable as needed), and reviewing excise levels.	Most rate differentiation under the VAT is rationalized by distributional concerns that could be better achieved by direct transfers; excises better handle environmental and other concerns requiring differentially high tax rates.
Look for opportunities to broaden the base of the *personal income tax*—a first step being to quantify all tax expenditures—and, while recognizing that increased inequality might call for increased progressivity, avoid very high marginal effective tax rates.	Exemptions and deductions remain significant in many countries, and their cost should be transparent; raising effective rates can have strongly adverse effects on incentives, in terms of both real and avoidance activities.
Resist increasing *social contributions* and consider combining a cut in the employers' contribution with an increase in consumption taxation—*a fiscal devaluation.*	Unless increased contributions are perceived as carrying matching increased benefit entitlement, they can have strong incentive and employment effects. With a fixed exchange rate, a fiscal devaluation can boost net exports—temporarily—by reducing the foreign currency price of exports and increasing the domestic relative consumer price of imports.
For the *corporate income tax,* quantify and review tax expenditures, resisting further inappropriate base erosion and pressure to cut statutory rates; reduce the tax bias toward debt finance.	Intense international tax competition is likely to continue, and addressing it will require strong international cooperation; tax distortions can jeopardize financial stability by encouraging excess leverage.
Increase *property taxes,* especially recurrent charges on residential properties; scale back *transaction taxes.*	Property taxes appear to be relatively growth-friendly and can serve equity and accountability aims; transaction taxes impede efficient trades.
Implement effective *carbon pricing,* either by carbon taxation or by full auctioning under cap-and-trade schemes; eliminate *fossil fuel subsidies* and review environmental taxes more generally.	Pricing measures are essential to encourage efficient mitigation and so are a particularly efficient source of revenue; fuel subsidies are very poorly targeted to distributional aims.
In the *financial sector,* adopt tax measures to discourage volatile financing as well as financing improved resolution mechanisms; counteract the VAT exemption for financial services by adopting a financial activities tax (FAT).	These measures would ensure a "fair and substantial contribution" of financial institutions to the fiscal costs of their potential distress and failure; as a tax on the sum of wages and profits of financial institutions, a FAT would provide a fix, albeit an imperfect one, for a major distortion in the VAT.
Strengthen tax compliance by identifying and acting on compliance gaps, aggressive tax planning, and offshore tax abuse.	Improving tax compliance would promote fairness and reduce distortions.

Sources: de Mooij and Keen (2013); and IMF (2010a, 2010b).

continuing their downward trend. Reductions in the base have also been frequent, often targeted to new investment or research and development. Surcharges or levies on larger companies have sometimes been introduced.

- Few countries have yet significantly raised *property taxes* as part of consolidation efforts, though improving their structure, their yields, or both remains a focus of reform in Greece, Ireland, and Portugal.
- *Carbon pricing* and more generally environmentally related taxes have made little progress, except in Australia (and even there the future of carbon pricing is now in some doubt). Energy subsidies may even have become more pervasive (Clements, Coady, Fabrizio, and others, 2013). While there is a natural reluctance to raise energy prices when activity is depressed, the impact of moving toward a carbon charge of about US$35 per ton of CO_2[21] (equivalent to about 8 cents on a liter of gasoline) would be reasonably modest and cushioned by prospectively softened oil prices.[22]
- The taxation of the *financial sector* has attracted considerable attention. Significant progress has been made in developing *bank taxes* to reduce the tax bias toward debt finance that arises as a result of the deductibility of interest payments (but not the return to equity) against the corporate income tax.[23] But there is scope to do more (Box 3). *Financial transaction taxes* have been the focus of much discussion, particularly in the European Union, with variants adopted in France and Italy.[24] But few see the more general financial transaction taxes as greatly enhancing financial stability (market participants warn of significant disruption), and their incidence—who will really bear the burden?—is unclear (Matheson, 2012). The *financial activities tax* (similar to a value-added tax, but limited to financial activities) has been well received technically (Shaviro, 2012) but, beyond adoption of a variant in Iceland, has made little headway.
- Measures to *strengthen revenue administration* have been introduced in several countries, though in some cases revenue administrations themselves have suffered large cuts. Compliance took a hit in the

[21] The central estimate of U.S. IAWG (2013) for the social cost of carbon.

[22] On climate policies in hard macroeconomic times more generally, see Jones and Keen (2011).

[23] This bias affects all types of company but is especially troubling in regard to financial institutions, given the great damage that their excess leverage can cause.

[24] Including novel taxes on high-frequency trades. These taxes have appeal if such trades are seen as socially costly, although it remains unclear whether regulatory measures would be superior.

Table 9. Tax Measures in Selected Countries, 2010–13

Country	Personal Income Taxation		Corporate Income Taxation		Value-Added Tax		Social Security Contributions		Excises		Property	
	Rate	Base	Rate	Base	Rate	Base	Rate	Base	Rate	Base	Rate	Base
Advanced economies												
Australia		↑		↓				↓				
Austria		↑		↑		↑		↑	↑			
Belgium	↑	↑		↑		↑	↑		↑		↑	↑
Canada	↑	↑	↓						↑			
Czech Republic	↑	↑		↑	↑		↓	↓	↑			
Denmark	↑	↑		↑		↑			↓	↑		
Finland	↑	↑	↓		↑				↑			
France	↑	↑	↑		↑	↑	↑		↑			
Germany		↓					↓		↑			
Greece	↑	↑	↑		↑	↑	↑		↑		↑	
Hong Kong SAR												
Iceland		↑	↑			↑	↑		↑			
Ireland	↑	↓			↑	↓	↓	↑	↑		↑	
Israel	↑	↑		↓	↑		↑		↑			
Italy	↑			↓	↑				↑			↑
Japan			↓									
Korea	↑	↑	↑									
Netherlands	↑	↓	↓		↑				↑		↓	
New Zealand	↓		↓		↑				↑			
Norway												↑
Portugal	↑	↑	↑		↑	↑	↑		↑		↑	
Singapore			↓								↑	
Slovak Republic	↑	↑	↑		↑		↑	↑	↑			
Slovenia	↑		↓						↑			
Spain	↑	↑		↑	↑	↑			↑		↑	
Sweden		↓	↓						↑			
Switzerland		↓			↑							
United Kingdom	↓	↑	↓	↓	↑		↑		↑		↑	
United States	↑	↑					↑					
Emerging market economies												
Brazil						↑	↓	↓	↓			
Bulgaria					↑	↑	↑		↑			
Chile	↓		↑	↑								
China	↓	↓			↓	↑		↑			↑	↑
Estonia									↑	↑	↑	
Hungary	↓	↓	↓		↑		↑		↑			
Latvia	↓	↓		↓	↑	↑	↑		↑	↑	↑	↑
Lithuania	↓		↓	↓		↓		↑	↑		↑	↑
Mexico	↓		↓									
Philippines						↓			↑			
Poland					↑	↑	↑		↑	↑		
Romania					↑				↑			
South Africa				↑					↑	↑		
Turkey									↑		↑	

Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff.

Note: An upward (downward) arrow indicates a revenue-increasing (-decreasing) change.

crisis, as it usually does (Brondolo, 2009), but there are indications that it is rebounding.

Relative to the recommendations, the picture is thus mixed—though as discussed later in this section, if anything the weight of evidence in favor of these recommendations has increased since the beginning of the crisis.[25] Some of the options chosen may be storing up problems for the longer term, by magnifying distortions or condoning inefficiencies. Now that a large part of the adjustment lies behind for many countries, there is less need to come up with quick revenue fixes, but looking for ways to restore growth remains urgent. So the focus needs to be placed on the quality of measures, with a view to addressing long-standing distortions in ways that may bring some extra revenue but, no less important, could help buoy potential growth.

Assessments of the effect of revenue measures on inequality are scarce. Past evidence suggests that the tilt toward revenue-based consolidation should imply a smaller adverse impact (Ball and others, 2013; October 2012 *Fiscal Monitor*). Close analysis of measures in

[25] See especially Boxes 3 and 4.

nine consolidating EU countries (Paulus and others, 2012) finds that restructurings of tax transfer systems have increased progressivity (or left it unchanged).[26] In Spain and the United Kingdom, this is mostly due to changes in personal income taxation and employees' social contributions, though increased standard VAT rates act in the opposite direction. In many countries, and in contrast to previous experience, some measures of overall inequality may have actually declined (as, for instance, in Greece) (ISER, 2013). But aggregate inequality measures can obscure important aspects of distributional change,[27] and they take no account of levels of income: inequality may be lower even though many experience considerable hardship.

Finding, and minding, the gap

Making an effort: Can more be done?

Asking if more *can* be done is not the same as asking whether more *should* be done. The appropriate overall level of taxation in any country depends on its characteristics—economic (such as its level of development, revenue from other sources), political (including constitutional), and even geographical (revenue can be harder to raise when borders are long and porous). Unsurprisingly, we cannot rely on theory to identify an "optimal" size of government. It is useful, nonetheless, to have some broad sense of whether a country has some realistic possibility of doing more on the tax side. For this, two complementary approaches can be put to work (Appendix 2 elaborates on the technicalities and results).

The more common approach is to compare a country's tax receipts with the average of its peers, controlling for a range of characteristics likely to affect revenue raising (such as per capita income).[28] By construction, some countries will have revenue above this average, and others will have revenue below: the average revenue gap (what would be expected on the basis of the characteristics being controlled for, minus actual revenues) will be zero.

Figure 9 reports on one such exercise, extending previous work by identifying not only an overall gap, but its breakdown across instrument types.[29] In most advanced economies in Europe, actual tax receipts are larger than would be predicted (the gaps are negative), suggesting that their scope to raise revenues is limited—not surprisingly, as the tax ratio is already high in many of them (IMF, 2010a). But some advanced economies do show a positive revenue gap (Greece, Ireland, Japan, Korea, Switzerland, and the United States). Among low-income countries, the greatest scope for raising tax revenues seems to be in states in fragile situations—such as Haiti, Madagascar, and Yemen—and in the poorer African countries. Among emerging market economies, commodity producers (including Kazakhstan, Mexico, and Saudi Arabia) often have lower tax revenues than their peers, largely because commodity-related revenues tend to displace other revenue sources (Bornhorst, Gupta, and Thornton, 2009).

For most advanced economies the greatest potential lies in indirect taxes: among countries with revenue below that of their peers, these account for more than half of the overall gap (as, for example, in Ireland, Japan, Spain, Switzerland, and the United Kingdom). In contrast, in low-income countries, limited receipts from payroll and income taxes explain 70 percent of the revenue gaps. Emerging market economies lie somewhere in the middle.

A second way of benchmarking revenue performance—"stochastic frontier analysis"—compares a country's tax ratio not with the average, but with the maximum that others with similar characteristics have achieved. A country's revenue as a percentage of this maximum (lying between 0 and 100 percent) gives an indication of its "tax effort." Although there is no natural metric with which to measure "how hard" it is to increase effort,[30] simple comparisons are indicative.

[26] Meaning here that the proportionate fall in disposable income is higher at higher income levels.

[27] In Greece, for instance, although the loss of disposable income as a result of consolidation measures increased with income over the top nine deciles, the lowest income decile experienced a particularly large reduction.

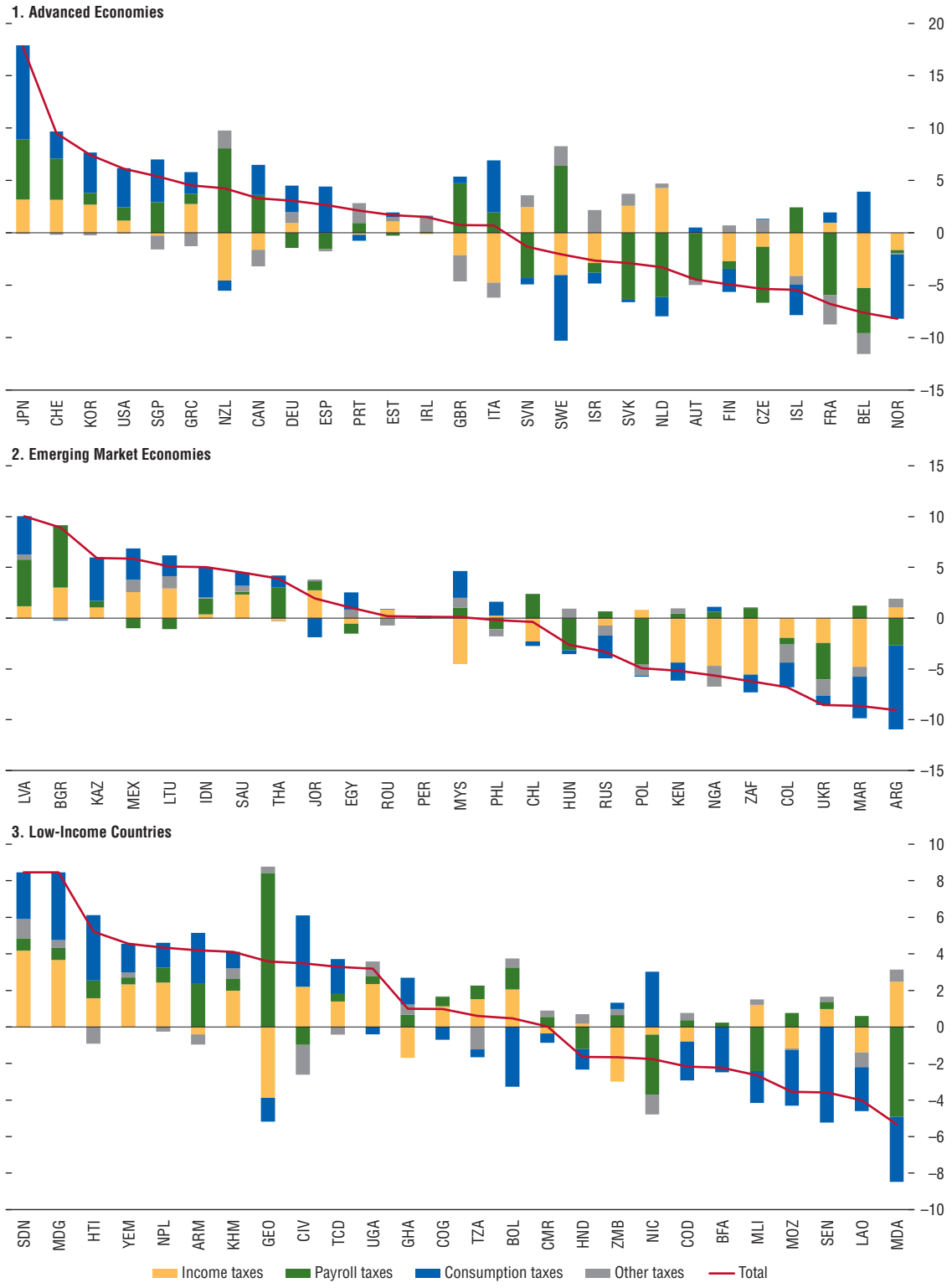
[28] Early examples include Tait and Heller (1982) and Tanzi (1992). See also Rodrik (1998) and Le, Moreno-Dodson, and Bayraktar (2012).

[29] The sample is a cross-section of 164 countries in 2012 (panel estimation would be preferable, but data limitations preclude it). Revenues exclude the proceeds from capital income, grants, natural resources, and taxes on international trade. Explanatory variables include per capita GDP, the old-age dependency ratio, population growth, net exports of oil and gas, and the political participation rate. For further details see Torres (2013).

[30] For instance, one cannot say that increasing effort from 30 percent to 40 percent is "easier" than increasing it from 80 percent to 90 percent, or that it would be equally easy for two countries with effort of 70 percent to raise it to 80 percent.

Figure 9. Peer Comparison of Revenues[1]

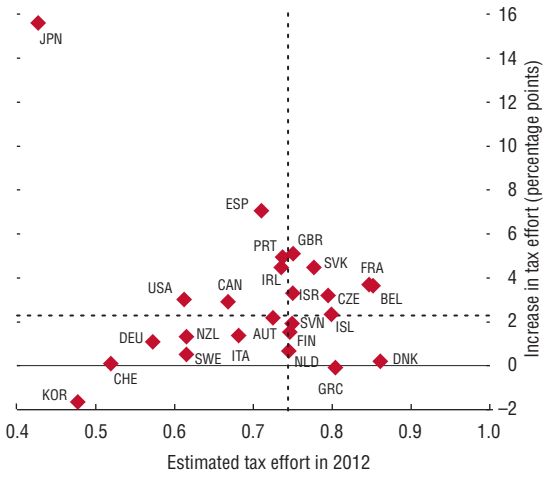
(Percent of GDP)



Source: Torres (2013).

[1] Numbers reported are the difference between the conditional average estimated by Torres (2013) and actual revenues. A positive value means a country's revenue collection is below that of its peers.

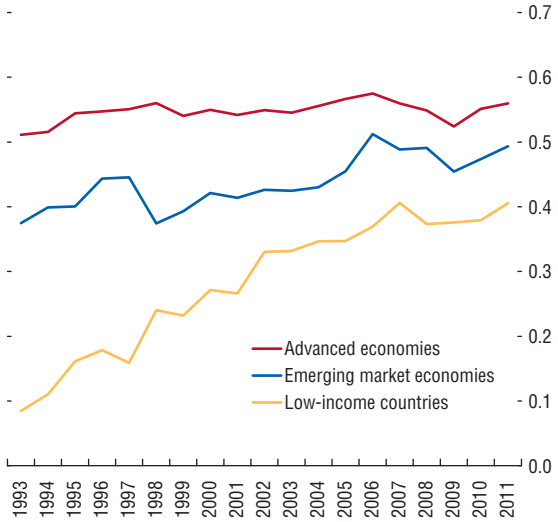
Figure 10. Increase in Tax Effort and Fiscal Adjustment Needs



Source: IMF staff estimates.
Note: The figure shows the increase in "tax effort" required for a country to meet half of its fiscal adjustment needs if it adjusts by 2020 to a prespecified structural medium-term budgetary objective. Tax effort is defined as the ratio of collected taxes to the notional maximum. Dashed lines represent median values.

Figure 11. Trends in C-Efficiency, 1993–2011

(Unweighted averages)



Sources: IMF, Revenue Mobilization database; and IMF staff estimates.
Note: The C-efficiency ratio is defined as value-added tax (VAT) revenue divided by the product of the standard VAT rate and the VAT base (proxied by final consumption).

- Figure 10 plots *advanced economies* according to both their current effort and the additional effort they would need to make to meet half the adjustment needs estimated in Section 1 (Statistical Table 13b).[31] Interestingly, those countries that would need the largest increase in effort are currently below the median, and those that score fairly high in terms of current effort generally need less of an increase. Nonetheless, the figure clearly suggests that pretty much every advanced economy would experience considerable difficulty if it looked for the bulk of the required adjustment to come on the revenue side.
- *Emerging market economies* and *low-income countries* seem to have more scope for revenue mobilization. For those low-income countries with effort below the median for their group, raising it to that level would generate about 3½ percent of GDP, a considerable amount relative to their needs.[32] And if low-income and emerging market economies were to raise their tax effort by 10 percentage points, their revenues would increase by 3 percent of GDP.

[31] The underlying assumptions about economic growth and interest rates follow *World Economic Outlook* projections until 2018 and are model determined thereafter. See Statistical Table 13b for more details.

[32] IMF (2011) discusses this potential in more detail.

Closing the gaps

How—if this is the course chosen—can revenue gaps be closed and effort increased? Most research in this area has focused on the VAT. This is partly because its potential base is relatively easy to quantify, but also because of its actual and potential importance: it accounts for about one-third of revenue on average in advanced economies (17 percent in emerging market economies). It was also just seen to be the main area of revenue shortfall in several advanced economies.

Revenue from the VAT depends on two factors that policymakers can hope to control: the standard rate (that applied to most items) and "C-efficiency" (the revenue from the VAT divided by the product of the standard rate and aggregate private consumption):[33] for a VAT with no exemptions, a single rate, and full compliance, C-efficiency would be 100 percent. In advanced economies, average C-efficiency has been flat over the last 20 years, at only about 60 percent (Figure 11). It has been increasing in emerging markets and low-income countries, in some cases quite substantially—in many respects an encouraging sign—but is still generally below 50 percent.

Table 10 offers some clues on how to increase C-efficiency. It reports, for a number of advanced and

[33] Issues in the measurement and interpretation of C-efficiency are discussed in Ebrill and others (2001), Keen (2013), and OECD (2008) (which refers to it as the "VAT revenue ratio").

Table 10. Measuring VAT Gaps

Country	VAT Revenue, 2006 (percent of GDP)	C-Efficiency	Compliance Gap	Policy Gap	Revenue Gain (percent of GDP) from Closing Half of	
					Compliance gap	Policy gap
Advanced economies						
Austria	7.6	59	14	31	0.6	1.7
Belgium	7.2	52	11	42	0.4	2.6
Denmark	10.3	64	4	33	0.2	2.5
Finland	8.7	61	5	36	0.2	2.4
France	7.3	51	7	45	0.3	3.0
Germany	6.4	57	10	37	0.4	1.9
Greece	7.1	47	30	33	1.5	1.7
Ireland	7.6	66	2	33	0.1	1.9
Italy	6.2	43	22	45	0.9	2.5
Luxembourg	5.8	87	1	12	0.0	0.4
Netherlands	7.4	60	3	38	0.1	2.3
Portugal	8.6	53	4	45	0.2	3.5
Spain	6.5	57	2	29	0.1	1.6
Sweden	9.0	56	3	42	0.1	3.3
United Kingdom	6.6	48	17	42	0.7	2.4
Emerging market economies						
Argentina	. . .	60	35	8	. . .	. . .
Colombia	4.5	45	46	16	1.9	0.4
Chile	7.0	68	28	6	1.4	0.2
Ecuador	0.0	74	9	19	0.0	0.0
Guatemala	5.4	47	23	37	0.8	1.6
Hungary	7.6	49	23	37	1.1	2.2
Latvia	8.4	49	22	38	1.2	2.5
Mexico	3.7	33	18	60	0.4	2.8
Peru	5.7	55	36	14	1.6	0.5
Dominican Republic	4.5	30	61	23	3.5	0.7
Uruguay	9.9	56	33	17	2.4	1.0

Sources: EU data as in Keen (2013), with policy gaps calculated as a residual from compliance gaps in Reckon LLP (2009) and C-efficiency from OECD (2008). Data for Latin American countries calculated using policy gaps and C-efficiency in Barreix and others (2013), with compliance as the residual; data for other emerging market economies from IMF (2010a). Data on VAT revenue are from the IMF's Revenue Mobilization database.

Note: C-efficiency (E^c) is related to the policy gaps (P) and compliance gaps (Γ) as $1 - E^c = (1 - P)(1 - \Gamma)$; see IMF (2010a) and Keen (2013). VAT = value-added tax.

emerging market economies, their C-inefficiency (the inverse of C-efficiency) and then decomposes it into a "policy gap" (0 if the VAT is applied at a single rate to all [and only] consumption) and a "compliance gap" (0 if implementation of the VAT is perfect).

- In European *advanced economies*, policy imperfections are generally much more marked than compliance problems, reflecting extensive exemptions and frequent use of multiple rates.[34] Halving the policy gap, all else equal, would on average raise a very substantial 2.3 percent of GDP. Adjusting social transfers to protect the poorest from the subsequent price increases would reduce the revenue gain, but by no means eliminate it. For the United Kingdom, for instance, Crawford, Keen, and Smith (2010) show that the revenue gain from applying the standard VAT rate to food and other sensitive items would be about halved if transfers were put in place to compensate the poorest 40 percent.[35] The compliance gap is not trivial in advanced economies; halving it would raise an average of 0.4 percent of GDP for the advanced economies in Table 10. But realizing such compliance gains would likely require decisive and sustained policy action, and in that sense could be even harder than closing policy gaps.
- The picture in *emerging market economies* is different, with compliance gaps generally larger both absolutely and relative to policy gaps. Significant VAT design issues remain, however: in both India and Brazil, for instance, the challenges of implementing subnational VATs have led to significant inefficiencies as a consequence of "cascading"—the levying of tax on business inputs, which distorts production decisions—and complexity.[36]

The decompositions in Table 10 require cautious interpretation, but analyses of this kind have much potential.[37] They tend to confirm the sense from the previous section: there is scope in advanced economies

[34] As Cnossen (2003) argues, the EU VAT, nearly 50 years old, is showing its age.

[35] A cost of means-tested compensation of this kind is that its withdrawal, as income increases, leads to higher marginal effective tax rates over some income range—as Apps and Rees (2013) stress in the Australian context—so that equity gains need to be traded against efficiency losses.

[36] On India, see Cnossen (2013); on Brazil, see Afonso, Soares, and de Castro (2013); more generally, see Perry (2010).

[37] It is possible, for instance, to decompose the policy gap further into components related to rate differentiation and exemptions, as Keen (2013) does for the EU countries above.

to close gaps in relation to traditional tax instruments, but this is unlikely to be easy or meet more than a fairly limited part of consolidation needs.

Growth effects: Short and long term

The effects of the tax mix on long-term growth have been widely studied. The literature suggests that corporate income taxes have the most negative effect, followed by labor income taxes, then consumption taxes, and finally property taxes.[38] In line with this "growth hierarchy," recent IMF work finds, for a wide set of countries, that a revenue-neutral rebalancing that reduces income taxes while increasing consumption and property taxes is associated with faster long-term growth (Acosta-Ormaechea and Yoo, 2012). It differs, however, in not finding the corporate income tax to be more harmful for growth than the personal income tax. But this literature remains contentious: the ranking of instruments is not robust to different specifications (Xing, 2012), and it implicitly assumes that tax design does not matter, which it manifestly does. For example, a corporate tax that falls only on rents—returns to investors in excess of the minimum they require—(such as the allowance for corporate equity described in Box 3 aims to do) would have no effect on marginal incentives to invest and so would have quite a different growth effect than one falling on total (intramarginal) returns. Box 4 reports new evidence that for the VAT, too, structure matters for growth.

In terms of short-term growth effects, whereas there has been extensive and heated debate on the level of overall tax multipliers, little attention has been given to how these might vary across tax instruments. Unsurprisingly, macroeconomic models typically imply the same hierarchy as for the long term (European Commission, 2010; Anderson and others, 2013). Empirically, it is hard to identify robust differences, but the few available studies point to a ranking of instruments quite different from the standard hierarchy: they suggest that the personal income tax is associated with larger multipliers than the corporate income tax (Table 11) and that increases in the VAT are associated with sizable short-term output losses. Such differences imply a new set of trade-offs in designing consolidation: balancing, for instance, the short-term pain of a VAT-based consolidation against the long-term gain. But the short-term hierarchy of taxes is even less firmly established than that for the long term. Much more is still to be learned before policy—in any event currently driven by the relatively long-term concerns that motivate consolidation itself—can reliably be shaped by the results of these studies.

[38] The research has focused on advanced economies. See, in particular, Arnold and others (2011). OECD (2013b) uses this and a similar hierarchy on the spending side as a starting point to assess alternative compositions along consolidation paths.

Fixing international taxation

One set of gaps that has received particular attention in the aftermath of the crisis—reinforced, as was the case with financial sector taxation earlier in the crisis, by a strong public sense of injustice[39]—are those in the international tax framework. There are broadly two sets of issues. One—discussed in the next subsection—is (illegal) evasion by individuals. The other is avoidance by multinationals—legal (or, cynics might say, not obviously illegal).

Google, Starbucks, and other household names have famously managed to pay very little corporate tax. But of course, they are far from alone in this. Importantly, the issue is not just one for advanced economies: indeed, it is likely an even greater concern for developing countries, typically more reliant on corporate tax receipts. Nor is the issue new: U.S. President John F. Kennedy argued for fundamental reform 50 years ago.[40] What is new is the attention.

Some of the strategies that multinationals use to reduce their tax liabilities—by base erosion and profit shifting, in the current jargon—are set out in Box 5, along with an example of how mind-bogglingly complex they can become. All this is symptomatic of an international tax order under stress—unsurprisingly, since it was built piecemeal on the basis of principles that have become increasingly outdated (as a result, among other things, of the increased importance of intrafirm trade, of services that can be delivered remotely, of the easing of capital movements, and of massively increased financial sophistication).

[39] The precise nature of the injustice in low tax rates on business income is rarely articulated. The implications for the distribution of income at the personal level are not as obvious as is often supposed: shareholders, including through pension funds, are not necessarily especially well off, the overall burden also depends on personal-level taxes on dividends and capital gains, and in some circumstances the benefits of low corporate tax rates may be passed on in part to workers—though this is less likely the more widely the low rates apply and the more they apply to profits in excess of normal, for reasons set out, for instance, in IMF (2010a). The implications of the devices now discussed for the distribution of tax revenue across countries are no less a concern, pointing to the deeper question of how rights to tax international activities should be allocated.

[40] In his "Special Message to the Congress on Taxation" on April 20, 1961; the text of the message is available at http://millercenter.org/president/speeches/detail/5669.

Table 11. Empirical Evidence on the Growth Effects of Different Taxes

	Tax Instrument					
	PIT	SSC	CIT	CT	PT	Details
Studies on long-term impact						
Arnold and others (2011)	–1.1		–2.0	0.7	1.5	21 OECD countries, 1974–2004; error correction model, pooled mean group (PMG) estimator. The coefficients measure the effect on long-run GDP per capita of a 1 percent increase in income taxes (consumption and property taxes) which is offset by a decrease in consumption and property taxes (income taxes).
Xing (2012)	–2.7		–2.9	–1.6		17 OECD countries, 1970–2004; methodologies include PMG, mean group, pooled ordinary least squares, and fixed effects. Top row of data relates to specification with five-year dummies, second row to that with alternative five-year dummies (covering different years), and third row to that with linear trends (all using PMG estimates). The coefficients measure the long-run effect on income per capita of a 1 percent shift in tax revenue away from property taxes and toward income or consumption taxes. The fourth row measures the effect on long-run GDP per capita of a 1 percent shift away from income and consumption taxes toward property taxes.
	–1.1		–0.9	–1.4		
	–1.6		–1.7	–1.4		
					1.6	
Acosta-Ormaechea and Yoo (2012)						69 countries, 1970–2009; PMG. The coefficients measure the effect on the growth rate of long-run GDP per capita of a 1 percent increase in income taxes (consumption and property taxes) which is offset by a decrease in consumption and property taxes (income taxes).
Full sample	–0.1	–0.2	0[1]	0[1]	0.2	
High-income countries	–0.2	–0.2	0	0.1	0.3	
Middle-income countries	–0.2	–0.2	–0.1	0[1]	0.4	
Low-income countries	0.1[1]	0.2[1]	0	0[1]	0.1[1]	
Gemmell, Kneller, and Sanz (2011)	"Distortionary"	"Nondistortionary"				17 OECD countries, early 1970s–2004; PMG. The coefficients measure the effect on long-run GDP per capita of a 1 percent decrease in the budget deficit financed by increases in distortionary or nondistortionary taxation.
	–0.1	0.2				
Studies on short-term impact						
Mertens and Ravn (2013)						Narrative data set on tax shocks, 1950–2006, structural vector autoregression (SVAR) estimation, quarterly data, United States. Impact of a 1 percent cut in the average tax rate on real GDP per capita.
Impact	1.4	0.4				
3–4 quarters	1.8	0.6				
Arin, Helles, and Reich (2010)						SVAR estimation, quarterly data, 1972–2008, United States. Impact of a 1 percent decrease in tax revenues on real GDP.
First year	0.2	0.05	0.2			
$t + 40$	0	0.04	–0.3			
Riera-Crichton, Veigh, and Vultein (2012)						14 advanced economies, 1980–2009; quarterly database on value-added tax rate changes. Effect of a one-unit shock decrease in value-added tax revenue collection on output.
Impact			1.0			
Max effect (3 quarters)			2.7			

Note: CIT = corporate income taxes; CT = consumption taxes; PIT = personal income taxes; PT = property taxes; SSC = social security contributions; Distortionary = income taxes, social security contributions, and property taxes; nondistortionary = consumption taxes.

[1] Not significant at 5 percent level.

Assessing how much revenue is at stake is hard. For the United States (where the issue has been most closely studied), an upper estimate of the loss from tax planning by multinationals is about US$60 billion each year—about one-quarter of all revenue from the corporate income tax (Gravelle, 2013). In some cases, the revenue at stake is very substantial: IMF technical assistance has come across cases in developing countries in which revenue lost through such devices is about 20 percent of all tax revenue.

With strong support from the Group of Eight (G8) and Group of Twenty (G20), the Organisation for Economic Co-operation and Development (OECD) has developed a two-year action plan (set out in OECD, 2013c) to address key aspects of base erosion and profit shifting. This is an important exercise—and a difficult one, both technically and politically.

The fundamental difficulty in this area is the lack of cooperation in setting tax policies—tax competition, in a broad sense. Many of the devices facilitating base erosion and profit shifting are not unintended loopholes; they are there to secure national advantage. (Examples would be invidious, since so many countries have something on offer.) The spillovers that arise from noncooperative tax setting mean that the gains to one country come at the expense of others—and the sum of the losses likely exceeds the gains.

Tax competition and spillover issues go far beyond the devices that are the focus of base erosion and profit shifting (IMF, 2013a). A number of advanced economies, for instance, have moved or have been urged to move away from a "residence-based" system for taxing active business income, under which they tax such income arising abroad but give a credit for foreign taxes paid, to a "territorial" one, under which they simply exempt such income from tax in the home country. Such a shift can have significant implications for host countries, since any tax they charge will now remain as a final burden for the investor rather than be offset by reduced taxation in the investor's home country. As a result, these countries, anxious to attract investment, may face greater pressure to offer tax incentives, lower tax rates, and take other measures that erode their revenue bases (Perry, Matheson, and Veung, 2013; Mullins, 2006). Likewise, even if countries have doubts about the effectiveness of tax incentives in attracting foreign direct investment—the evidence is that other factors are much more important[41]—they will hesitate to eliminate them unless their neighbors do the same. In the event, closing off just some loopholes may make competition through other means more intense.

Tax competition can simply result in tax rates' ending up too low. In the limit, all countries could be left with perfectly aligned tax rates and territorial base and no compliance problems. There would then be no revenue loss from base erosion or profit shifting and no distortion of real decisions—but there would still be a social loss suffered, since effective tax rates would be below the levels to which a collective decision would have led.

Achieving meaningful cooperation in identifying ways in which to beneficially constrain tax competition will not be easy, to put it mildly. National self-interest, of course, always looms very large. But deep technical issues need to be faced head on. For instance, a system in which countries can differentiate in their tax treatment between highly mobile and immobile activities—perhaps not far from the current situation—can lead to less-damaging outcomes than one in which they must treat all investments equally.[42] And formula apportionment of a multinational's taxable profits across jurisdictions can lead to more aggressive tax competition than the current arm's-length principle.[43] But the gains from closer cooperation may be considerable—strengthened corporate taxation, especially as it bears on rents, could be a much-needed efficient source of additional revenue. The chance to review international tax architecture seems to come about once a century; the fundamental issues should not be ducked.

[41] Klemm and van Parys (2009) find that tax measures have attracted foreign direct investment in lower-income countries, and van Parys and James (2010) find some effect in the Caribbean too. Kinda (2013), on the other hand, finds little impact on the foreign share of the capital stock, with other factors much more important.

[42] This is true even in terms of national self-interest: investment can be increased in high-tax countries if more-tax-sensitive firms can use low-tax jurisdictions to reduce their effective tax rate (Desai, Foley, and Hines, 2006).

[43] Instead of allocating a multinational's taxable profits across jurisdictions by the use of arm's-length (market-mimicking) prices, "formula apportionment" would allocate a multinational's global profit by reference to indicators of its activity in each jurisdiction (such as sales, payroll, or workforce). This alternative approach, used at the subnational level in both Canada and the United States, has attracted considerable interest from civil society organizations, and the European Commission has proposed a system of this kind—a Common Consolidated Corporate Tax Base—for the European Union. These and other efficiency aspects of coordination are reviewed in Keen and Konrad (2013).

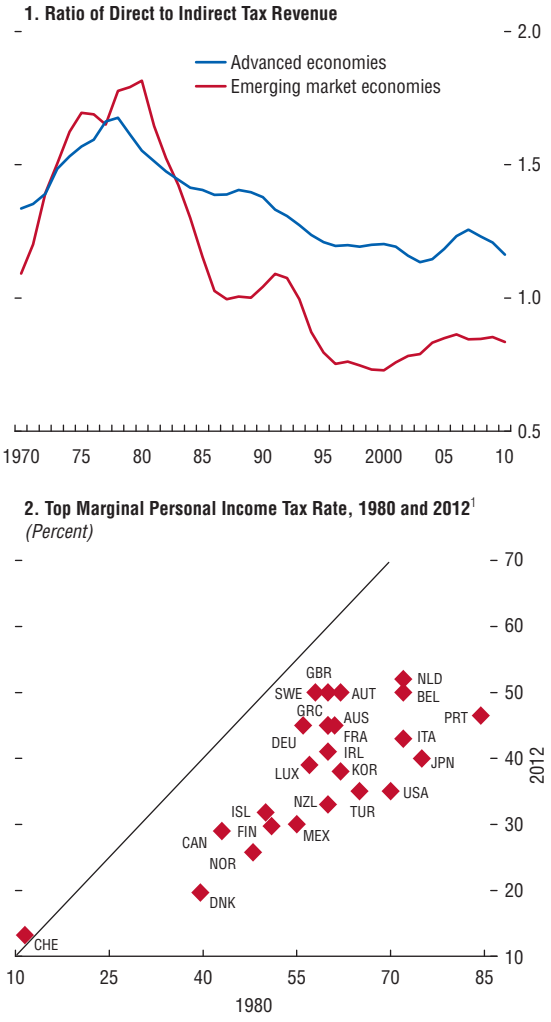
Room at the top?

Tax systems around the world have become steadily less progressive since the early 1980s. They now rely more on indirect taxes, which are generally less progressive than direct taxes, and within the latter, the progressivity of the personal income tax has declined, reflecting most notably steep cuts in top marginal tax rates (Figure 12).[44]

Taxation at the top has emerged with renewed force as a major concern in the last few years. The overall fairness of the fiscal system should be assessed in terms of taxes and spending combined, and most redistribution takes place through the latter (Figure 13). However, transfers (as well as in-work credits and the like) matter much less at the top end of the distribution, where it is taxation—the focus of this issue of the *Fiscal Monitor*—that drives fiscal fairness.

The backdrop to the debate is a marked increase in income inequality in many countries over the last few decades and a spectacular increase in the income share of the top 1 percent in particular, especially in the Anglo-Saxon world (Piketty and Saez, 2006; Atkinson, Piketty, and Saez, 2011). Whether the changes in tax rates have helped drive increases in underlying inequality remains unclear—though it is notable that those countries with the largest reductions in the top marginal income rate have experienced the greatest increase in inequality (Figure 14).[45] What has happened to the distribution of wealth is even less clear, but for the advanced economies that have been studied, there is more wealth around: ratios of private wealth to national income have more than doubled since about 1970 (Piketty and Zucman, 2013). Without entering into the question of whether the rich should pay more taxes—views on which will reflect ethical positions on which reasonable people can differ[46]—the aim here is to identify the trade-offs and practical issues that arise in taxing the rich. Is there room for those with the highest incomes and wealth to pay more without undue damage to efficiency?

Figure 12. Emblems of Lesser Progressivity



Sources: OECD central government statutory top personal income tax rates; and IMF staff estimates.
Note: Panel 1 depicts unweighted averages.
[1]Does not include taxation from state and local authorities. In countries with highly decentralized tax systems such as Switzerland, the combined top income tax rate can be significantly higher than shown in the figure.

Taxing high incomes

Figure 15 shows, for a range of advanced economies, that the richest 10 percent account for a strikingly large proportion, 30–50 percent, of all revenue from the personal income tax and social contributions, with the top 1 percent alone accounting, on average, for about 8 percent.[47] And

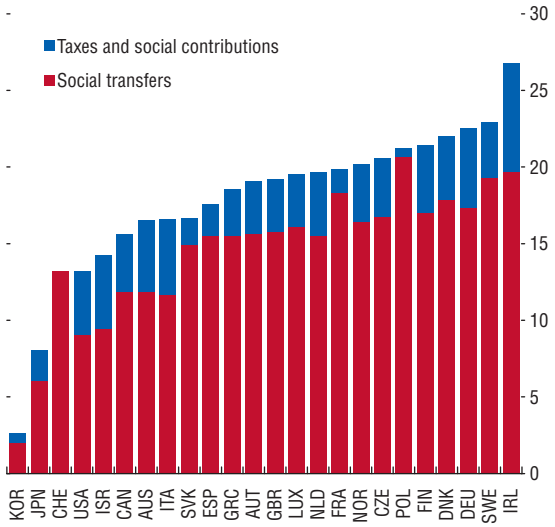
[44] Peter, Buttrick, and Duncan (2010) show that the trend toward lower top marginal personal income tax rates over the last 30 years has been worldwide and that the wider progressivity of the system—measured in terms of the distribution of tax liabilities over the full income range—has trended down in all but the lowest-income countries.

[45] Piketty, Saez, and Stantcheva (2011) note that the cuts in top marginal rates generally preceded increased income shares of the top 1 percent.

[46] The same is true of essentially all tax issues, of course, but is especially evident when, as here, the focus is explicitly on raising more from a particular group.

[47] The data underlying the figure are in the Statistical Appendix (Statistical Tables 15a and 15b).

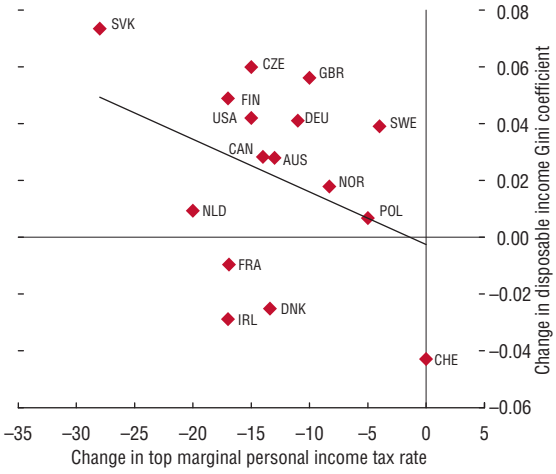
Figure 13. Redistribution through Direct Taxes and Social Transfers



Sources: IMF staff estimates using (equivalized) household-level data from the Luxembourg Income Study database.

Note: The figure breaks down, into effects due to direct taxes and social contributions paid and those due to social transfers received, the amount by which the Gini coefficient (a measure of inequality between 0 and 100, with higher values indicating more inequality) of market incomes exceeds that of final incomes. Non-means-tested transfers account for the bulk of redistribution on the spending side. (In-kind benefits, such as health care and education, are not included.)

Figure 14. Changes in Top Marginal Personal Income Tax Rate and Disposable Income Inequality between the Mid-1980s and the Late 2000s



Sources: Luxembourg Income Study database; OECD central government statutory top personal income tax rates; and IMF staff estimates.

Note: The figure does not include taxation from state and local authorities. In countries with highly decentralized tax systems, such as Switzerland, the combined top income tax rate can be significantly higher than is shown in the figure.

these are likely to be underestimates.[48] How these groups are taxed thus matters not just for perceived equity, but for sheer amounts of revenue. And increasingly so: in virtually all cases the proportions of all income taxes paid by these groups have increased over the last 20 years or so. The increase is noticeably greater where top marginal rates have been cut most (Figure 16).

In terms of their distributional impact, these tax systems have remained progressive in the minimal sense that the top 10 percent account for a larger proportion of taxes paid than they do of income received. The picture varies across countries, however, as to whether the increase in their tax share has exceeded that in their income share—which would mean an increase in progressivity of the personal income tax and social contributions at the very top of the income distribution—or not.

Whether those with the highest incomes could or should pay more has become a contentious political issue in many countries. Several, given large consolidation needs, have bucked the decades-long trend by increasing top personal income tax rates quite substantially: since 2008, Greece, Iceland, Ireland, Portugal, Spain, and the United Kingdom have all done so, on average by more than 8 percentage points.[49]

Assessing whether there is untapped revenue potential at the top of the income distribution requires comparing today's top marginal income tax rate with the marginal tax rate that would maximize the amount of tax paid by top income earners. The latter depends on two things: first, how responsive their taxable income is to that marginal rate—which in turn depends on both "real" decisions (on labor supply efforts and the like) and "paper" avoidance activities; and second, the distribution of income within that upper group. Ranges of revenue-maximizing top income tax rates can be calculated by combining existing estimates of the elasticity of taxable income with the data on income distribution used above. The average is about 60 percent. In several cases, current top marginal rates are toward the lower end of the range (Figure 17), implying that it might indeed be possible to raise more from those with the highest incomes.[50]

[48] Because the household surveys from which these figures are calculated underrepresent those with very high incomes.

[49] In April 2013 the United Kingdom reduced its top rate from 50 percent to 45 percent.

[50] The adoption of the "flat tax" in Russia in 2001 is a famous example of a reform that cut the top marginal rate (from 30 percent to 13 percent) and was followed by a large *increase* in personal income tax revenue. Close analysis has concluded, however, that this primarily reflected nontax developments (Ivanova, Keen, and Klemm, 2005; Gorodnichenko, Martinez-Vasquez, and Peter, 2009).

Figure 15. Selected Advanced Economies: Shares of Pretax and Transfer Income and Taxes Paid
(Percent of total)

Source: IMF staff estimates using household-level data (equivalized) from the Luxembourg Income Study database.

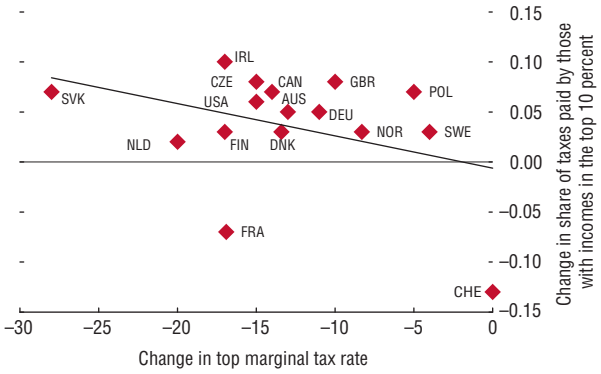
How much more? The implied revenue gain if top rates on only the top 1 percent were returned to their levels in the 1980s averages about 0.20 percent of GDP (Figure 18), but the gain could in some cases, such as that of the United States, be more significant. This would not make much of a dent in aggregate inequality,[51] for which, if that is the objective, more dramatic change would be needed.

There are limits to the scope for raising top marginal rates that are not fully captured in these calculations. The calculations ignore, for instance, the potential

These analyses also concluded that the reform did improve compliance, suggesting that the revenue-maximizing top personal income tax rate is likely to be lower where compliance is weak.

[51] This change alone would reduce Gini coefficients by less than 0.01 on average.

Figure 16. Changes in Top Marginal Personal Income Tax Rates and Shares of Taxes Paid by Top 10 Percent



Sources: Luxembourg Income Study database ; OECD central government statutory top personal income tax rates; and IMF staff estimates.

Note: The figure does not include taxation from state and local authorities. In countries with highly decentralized tax systems, such as Switzerland, the combined top income tax rate can be significantly higher than is shown in the figure.

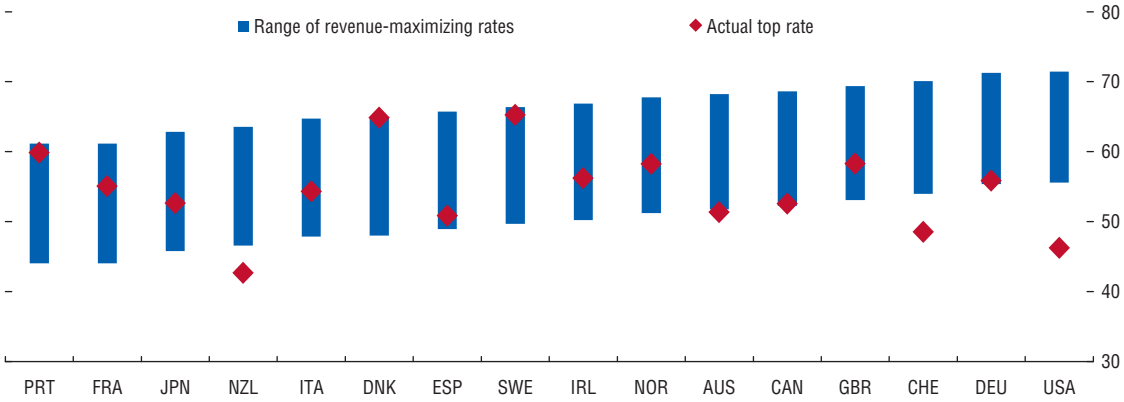
mobility of taxpayers across countries (although work on European soccer players—a mobile, highly paid group if ever there was one—suggests this may not be as great as one might suppose; Kleven, Landais, and Saez, 2010). Moreover, a revenue-maximizing approach to taxing the rich effectively puts a weight of zero on their well-being—contentious, to say the least.

What then if some weight is indeed attached to the well-being of the richest? Figure 19 provides a way to think about the trade-off between equity and efficiency considerations in setting the top marginal rate in that case. It shows (given the same behavioral assumptions as above) the relative social weight on the welfare of those with the highest income that is consistent with the current top rate.[52] Unsurprisingly, lower marginal rates are associated with a higher welfare weight on those with top incomes.[53] The figure provides a simple way of deciding whether one believes the top marginal rate should be higher or lower. If one attaches less weight to those with the highest incomes (relative to those with lower ones) than shown there, the vote would be to increase the top marginal rate; if more weight, the vote would be to cut the rate.

[52] More precisely, it shows what the weight attached to the welfare of those in the highest incomes (relative to that on those with lower incomes) must be if (given the assumption on behavioral responses in the figure) the current top marginal rate exactly balances the welfare loss to the richest (from a slight increase in the marginal rate they face) against the social value of the additional revenue they pay.

[53] By the same token, the trend toward lower top rates over the last three decades is consistent with an increase in the valuation of the welfare of those with the highest incomes relative to those with lower ones. It remains an open question whether social preferences are now reverting to their earlier pattern.

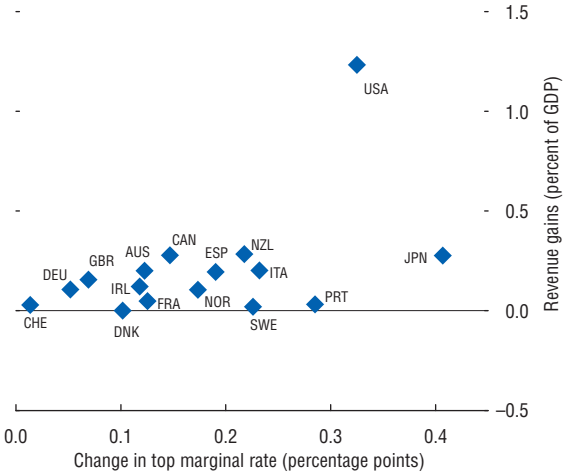
Figure 17. Top Marginal Rates and Revenue-Maximizing Rates, Late 2000s
(Percent)



Sources: OECD (2011); World Top Income Database (Alvaredo and others, 2013); and IMF staff estimates.

Note: Saez (2001) shows the optimal top marginal rate to be $T = (1 - \omega)/(1 - \omega + ae)$, where ω is the weight attached to the welfare of those in the top income group, a is the parameter of the Pareto distribution assumed to characterize the distribution of income in this group, and e is the average elasticity of taxable income (with respect to unity minus the marginal tax rate). The calculations here set ω equal to 0 (meaning that the changes in welfare of those with the top incomes are not valued by policymakers), set e to between 0.25 and 0.50 (based on the review of the evidence, which is mainly for the United States, in Saez, 2012; Mertens, 2013, using a narrative-based time series approach, finds higher values), and take a from the World Top Incomes Database. The actual marginal tax rate reflects the top combined federal and subnational statutory personal income tax rate, social contributions (taking account of any cap on the latter), and the value-added tax.

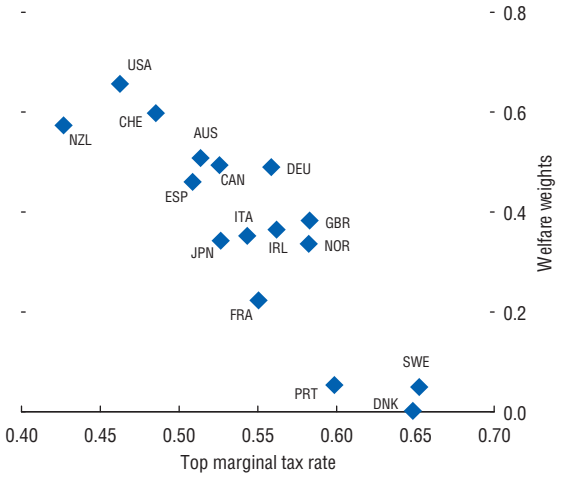
Figure 18. Revenue Gains from Returning Marginal Tax Rate on Top 1 Percent to 1980s Level



Sources: OECD (2011); World Top Incomes Database (Alvaredo and others, 2013); and IMF staff estimates.

Note: The revenue gains from a small tax reform are computed as $z \cdot d\tau \cdot [1/a - e \cdot \tau/(1-\tau)]$, where z is the average income of individuals in the top 1 percent, τ is the top marginal rate, $d\tau$ is the change in the top marginal rate, a is the Pareto parameter of the income distribution, and e is the elasticity of taxable income. The Pareto parameters are taken from the World Top Incomes Database, and an elasticity of taxable income of 0.25 is assumed. Note that revenue gains will be lower if the elasticity is higher at higher tax rates. The change in the top marginal tax rate reflects changes in the top combined federal and subnational statutory personal income tax rate, changes in social contributions (taking account of any cap on the latter), and the value-added tax.

Figure 19. Implied Welfare Weights for Top Incomes and Top Marginal Rates, Late 2000s, Low Elasticity of Taxable Income



Sources: OECD (2011); World Top Incomes Database (Alvaredo and others, 2013); and IMF staff estimates.

Note: The welfare weight measures the dollar value to society of increasing by one dollar the consumption of the average person in the top income bracket. An alternative interpretation is the answer to the question "How much government revenue would you be willing to forgo for a one-dollar increase in the income of the average person in the top income bracket?" It is calculated by replacing T in the formula in Figure 17 with the actual top marginal rate and solving for ω. Top marginal tax rates are calculated using the same parameters as in Figure 17.

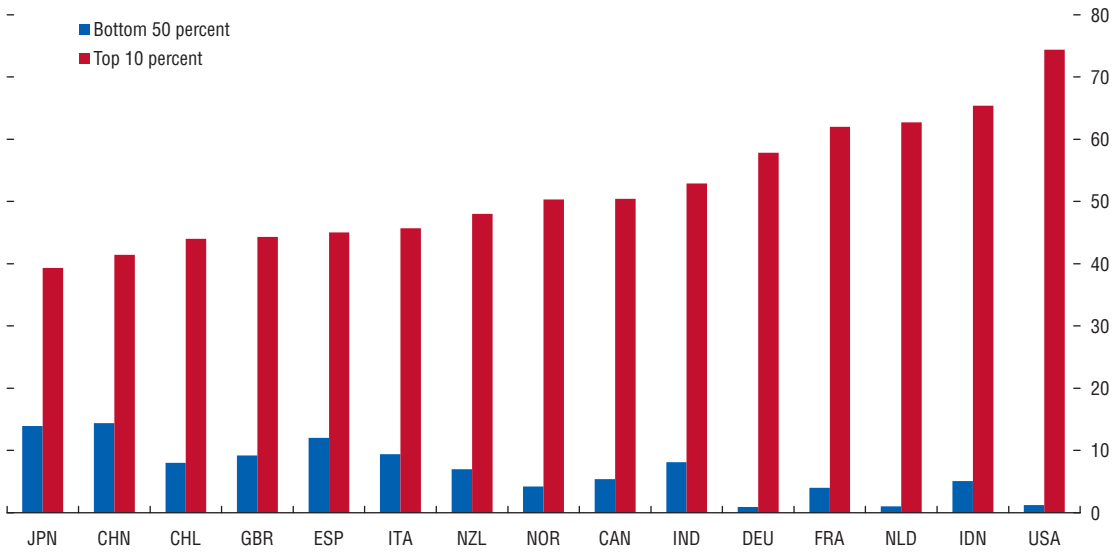
Taxing property and transfers

Household wealth is very unequally distributed (Figure 20)—even more so than income: in advanced economies, the top 10 percent own, on average, more than half of the wealth (up to 75 percent in the United States). It is, arguably, a better indicator of ability to pay than annual income—and indeed taxes on wealth and transfers have historically been a major source of revenue. Now, however, they yield very little (Figure 21)—slightly under 2 percent of GDP on average in the OECD. Is this a revenue source that could be tapped more?

There are, in fact, several quite different types of taxes on property and transfers:

- *Recurrent taxes on residential property*, which account for about one-half the revenue totals above, are widely seen as an attractive and underexploited revenue source: the base is fairly immobile and hard to hide, the tax comes at the top of the hierarchy of long-run growth-friendliness mentioned earlier, and it can be made progressive through a basic allowance or by varying the rate with the value of the property. It has particular appeal as a source of local-government finance, since property values will reflect the benefits of local public spending. Especially outside Anglo-Saxon countries, there is evident scope to raise more, though effective implementation of a property tax requires a sizable up-front investment in administrative infrastructure, particularly in emerging market economies (Appendix 3 provides a more detailed account of property tax issues).
- *Transaction taxes*—primarily on the sale of real estate, and financial instruments—typically account for one-quarter of the revenue above. They are administratively appealing, since transactions can often be fairly easily observed (stamp duty on the sale of shares in the United Kingdom, for instance, is one of the cheapest, per pound collected, of all taxes), and there are strong incentives for compliance when legal title is contingent on payment. But transaction taxes are inherently inefficient, in that they impede otherwise mutually beneficial trades; those on real estate transactions, for example, have been shown to adversely impact labor mobility (van Ommeren and

Figure 20. Shares of Net Wealth Held by Bottom 50 Percent and Top 10 Percent



Sources: Credit Suisse; Statistics Norway; Luxembourg Wealth Study database; and IMF staff estimates.

van Leuvensteijn, 2005). Though some argue that transaction taxes can help reduce asset price volatility, the effect is uncertain in both principle and practice (because the tax leads to a thinner market). In recent years they have in some cases been used deliberately to affect asset prices. But this risks further entrenching inefficiencies while pursuing purposes better served by macroprudential tools (IMF, 2013c).

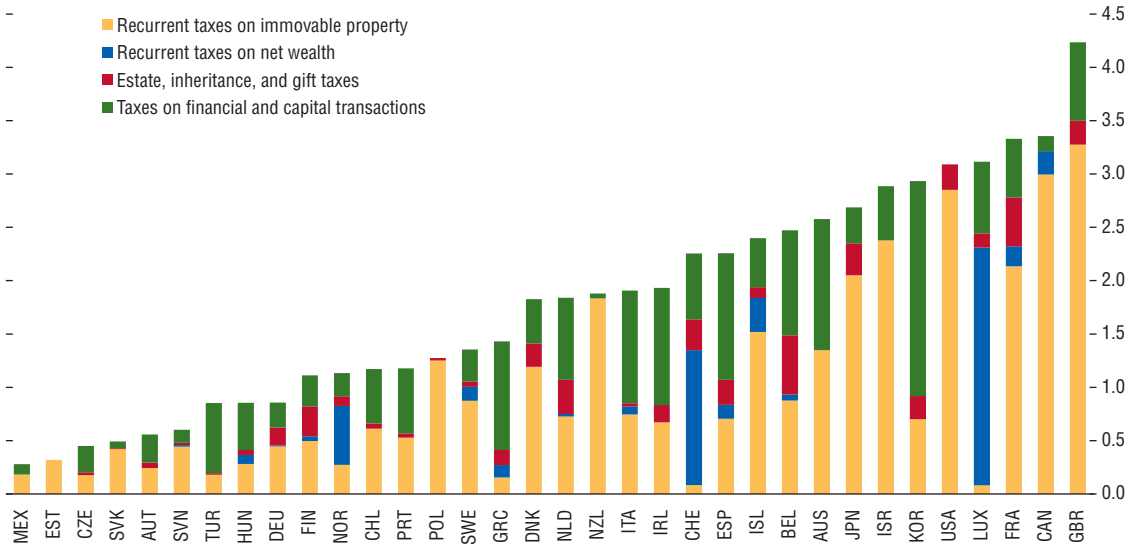
- *Taxes on wealth transfers—on estates, inheritances, and gifts*[54]—raise very little: rates are low, and exemptions and special arrangements create multiple avoidance opportunities (Figure 22). Their distortionary cost is hard to assess,[55] as it depends partly on the donor's motive. There will be no impact, for instance, on the behavior of donors who accumulate wealth simply for their own enjoyment and, failing to annuitize it, die before they have spent it all, or on the accumulation of wealth in excess of a normal rate of return. The primary appeal of inheritance taxes is in limiting the intergenerational transmission of inequality and perhaps also in reducing the consequent distortion of recipients' work effort. In revenue terms, the yield in the countries with highest returns, about ½ percent of GDP, suggests some potential.
- *Recurrent taxes on net wealth* (assets less liabilities) have been declining in Europe over the last 15 years (repealers include Austria, Denmark, Finland, Germany, the Netherlands, and Sweden). But this may be changing: Iceland and Spain reintroduced the tax during the crisis, and it is now actively discussed elsewhere. (There has been interest, too, in the possibility of a one-off wealth tax to restore debt sustainability, taken up in Box 6.) The revenue potential is subject to considerable uncertainty (related, for instance, to the valuation of real estate) but is in principle sizable. Based on Luxembourg Wealth Study data, a 1 percent tax on the net wealth of the top 10 percent of households could, in principle, raise about 1 percent of GDP per year (Table 12); calculations for 15 euro area countries using more recent data[56] point to broadly similar numbers. Little hard evidence is available on the likely behavioral impact, a primary risk being that of discouraging capital accumulation: if wealth earns

[54] An estate tax is one levied on the value of assets at death; an inheritance tax is levied on the recipients.

[55] Kopczuk (2013) reviews the evidence, which is more informative about shorter-term responses to incentives—one macabre distortion being to the timing of death (Kopzcuk and Slemrod, 2003)—than it is about longer-term effects on capital accumulation. Theoretical results on optimal bequest taxation differ widely. Fahri and Werning (2010) find that it is optimal to subsidize bequests (because donors do not take full account of the social benefit to the recipients). In a different setting, Piketty and Saez (2012) find the optimal rate to be positive, and in some cases substantial. For general discussion, with an eye to practicalities of implementation, see Boadway, Chamberlain, and Emmerson (2010).

[56] From the Eurosystem's Household Finance and Consumption Survey (Household Finance and Consumption Network, 2013).

Figure 21. Average Property Taxes in OECD Economies, 2000–11
(Percent of GDP)



Source: Organisation for Economic Co-operation and Development (OECD) Revenue Statistics.

a real return of, say, 3 percent, then a 1 percent tax on wealth is equivalent to a 33 percent tax on that return. This will be less of a concern to the extent that wealth accumulation derives from returns in excess of normal (and a tax on high levels of wealth could usefully supplement taxes on capital income now often imposed at low effective rates or evaded).

The modern history of recurrent wealth taxes, however, is not encouraging. Relief and exemptions—for land, for instance, and family-owned businesses—creep in, creating avoidance opportunities, as do ferociously complex aspects of the legalities (in dealing with trusts, for instance). Financial wealth is mobile, and so, ultimately, are people—generating tax competition that largely explains the erosion of these taxes. There may be a case for taxing different forms of wealth differently according to their mobility—meaning a higher rate on nonfinancial wealth (largely real estate) than financial. In fact, it appears that both forms of wealth are quite large (Figure 23) and, perhaps surprisingly, that nonfinancial assets are very important for the very wealthy (Table 13).

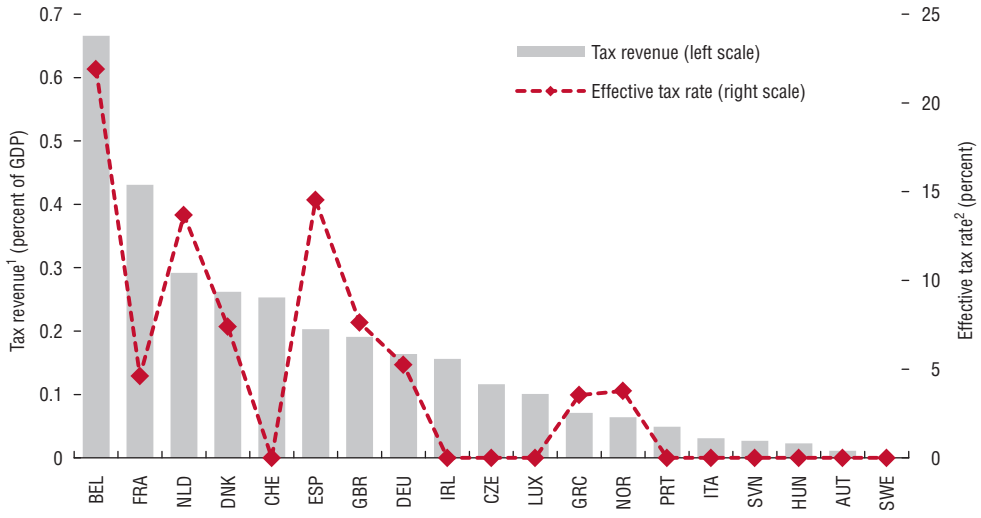
Substantial progress likely requires enhanced international cooperation to make it harder for the very well-off to evade taxation by placing funds elsewhere and simply failing to report as their own tax authorities in principle require. One careful estimate is that there is about US$4.5 trillion in unrecorded household assets located in tax havens (Zucman, 2013). Curbing the practice of relocating assets to avoid taxation requires that countries be able and willing to exchange information about the incomes and assets of one another's residents. There has been significant progress since the G20 reinvigorated efforts in this area, led by the OECD's Global Forum on Transparency and Information Exchange, to the point that 1,000 or so information exchange agreements are now in place, and with automatic exchange of information, rather than simply on request, now becoming the new global standard. Unilateral measures (offering reciprocal exchange of information) are also proceeding, notably the U.S. Foreign Account Tax Compliance Act (FATCA), with a similar EU measure expected: these, unlike work to date in the Global Forum, envisage penalties for noncompliance. Although these initiatives face difficulties that should not be underestimated,[57] over the longer term they have the potential to make much fairer tax systems.

Making tax reform happen

There is, then, quite a bit of scope to tax better: to increase the legitimacy of the consolidation effort while doing more to promote growth and bring some additional revenues along the way. A significant body

[57] There is evidence, for instance, that when some jurisdictions commit to exchange of information, deposits partly move to those that do not (Johannesen and Zucman, 2013).

Figure 22. Effective Inheritance Tax Rates in Europe, 2011



Sources: Accessing Global Knowledge International (2011); Organisation for Economic Co-operation and Development; and IMF staff estimates.
[1] For Greece, the Netherlands, and Portugal, tax revenues refer to 2010 data.
[2] Effective tax rates are based on taxes paid by the estate of a married individual who died on January 1, 2011, leaving a spouse and two children. Total estate value is assumed to be €2.6 million.

of literature has explored how the scope, timing, and objectives of tax reforms are influenced by their economic, political, and institutional setting (Table 14). On timing, the conventional wisdom is that tax reforms are easiest to undertake in good times, when buoyant revenues can be used to compensate losers.[58] So the problem is how to make reform happen now, when there are no resources to spare.

A related issue of current importance is whether political constraints are amplified during crises relative to "normal" times, or whether crisis times offer an opportunity for reform as the urgency facilitates political agreement among different actors (IDB, 2013).

[58] For example, in the Slovak Republic poorer households were compensated for the effect of income tax reform in 2004; in Chile, tax reform in the early 1990s, including reform of the VAT, was accompanied by an increase in social spending (Brys, 2011).

The empirical evidence increasingly supports the view that during crises, market or other pressures may push authorities into measures that risk damaging long-term efficiency and equity.[59] Part of the reason, no doubt, is speed and ease. But there is more to it: some countries have managed to introduce wholly new taxes in the aftermath of the crisis, and it is not clear, for instance, that it is technically any easier or even quicker to increase VAT revenue by raising the standard rate than by widening the base.

Long-lasting structural reforms are more frequently observed in "good" times. For example, the growth-friendly tax reform agenda that sought to boost com-

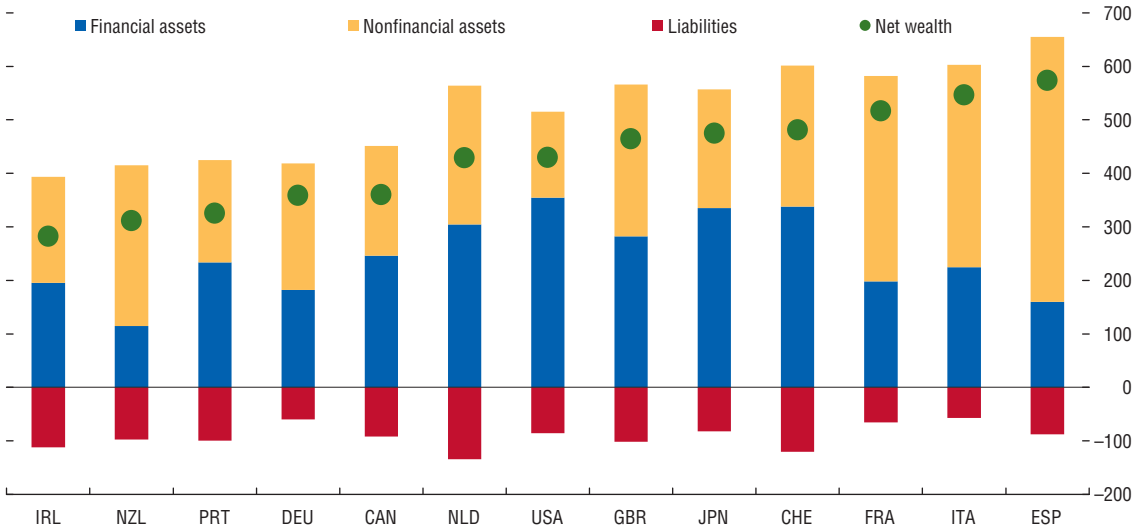
[59] In Latin American and Caribbean countries, for instance, the focus of reforms has shifted from simplification and the reduction of distortions in the early 1990s to revenue mobilization in later years, largely in response to crises (IDB, 2013).

Table 12. Potential Revenues from Recurrent Net Wealth Taxes
(Percent of GDP)

	Survey Year	1 Percent Tax on Wealthiest 10 Percent of Households[1]	Progressive Tax Rate Schedule: 1 Percent on Top 10 Percent and Additional 1 Percent on Top 5 Percent[1]
Canada	1999	0.6	1.1
Germany	2006	1.1	2.0
Italy	2004	1.0	1.7
Japan	2003	1.2	2.0
United Kingdom	2000	0.8	1.3
United States	2006	1.7	3.1
Unweighted average		1.1	1.9

Sources: Luxembourg Wealth Study database; Organisation for Economic Co-operation and Development; Eurostat; and IMF staff estimates.
[1] Tax applies only to the portion of wealth above the 90th percentile.

Figure 23. Selected Advanced Economies: Composition of Net Wealth
(Percent of GDP)



Sources: National data; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Figure shows latest data available for each country.

petitiveness in some European countries was delivered before the crisis. A 2001 Dutch reform reduced personal and corporate income tax rates while broadening their bases, as well as shifting the tax burden toward indirect taxation. Similarly, tax and social security insurance reforms implemented about a decade ago under the Agenda 2010 package in Germany played a large role in improving the German economy's competitiveness and the country's ability to weather recent economic crises. Good times are no guarantee of good tax reform—the persistence of inefficient tax arrangements remains something of a puzzle.[60] But they do seem to make it easier.

In a few cases, however, crises have paved the way for the introduction of long-lasting structural reforms. For instance, Portugal introduced important structural changes in the midst of a severe fiscal crisis, including a base-broadening VAT reform and a comprehensive property tax revaluation (concluded in 1½ years once the crisis hit, after being inactive for almost a decade). And Mexico was able to implement a sizable and lasting increase in its main VAT rate (from 10 to 15 percent) during the Tequila Crisis in 1995 (though the narrow base of the tax remains a concern).

[60] If all tax reforms produced clear winners and losers, policymakers could, in principle, implement the most efficient reform in conjunction with a compensation mechanism for losers. Weingast, Shepsle, and Johnsen (1981) explain the persistence of inefficiency as a divergence between economic and political costs and benefits.

Table 13. Average Composition of Gross Wealth Held by Top 10 Percent of Households
(Percent of gross wealth)

Country	Year	Financial Assets[1]	Nonfinancial Assets
Italy	2004	9.4	90.6
Finland	1998	20.2	79.8
United Kingdom	2000	23.4	76.6
Germany	2006	23.4	76.6
Japan	2003	24.1	75.9
United States	2006	42.4	57.6
Sweden	2002	46.1	53.9
Canada	1999	51.6	48.4
Norway	2002	67.8	32.2
Unweighted average		34.3	65.7

Sources: Luxembourg Wealth Study database; and IMF staff estimates.
[1] Pension claims are measured differently in countries with different pension systems, and in many cases these entitlements may not be counted as financial assets of households.

Table 14. Thinking about the Political Economy of Tax Reform

Effect of Political Economy on	Priors and Evidence from the Literature	Examples
Scope	Comprehensive reforms usually take longer to materialize and are very complex, leaving voters uncertain of how to evaluate them. Therefore, politicians tend to prefer highly visible ad hoc measures (Brys, 2011). Theory suggests that competition matters. In democracies, preelectoral competition could lead to preferences' being shaped by the median voter or swing voters. All things equal, higher electoral competition can result in targeting of reforms to specific groups. Moreover, the theory of yardstick competition posits that tax policies of other governments can induce tax reforms domestically, especially when voters can compare measures.	Martinez-Vazquez and McNab's (2000) review of experience of former transition economies suggests that yardstick competition was an important factor driving tax reform in countries such as the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, and Slovenia, which swiftly moved to implement comprehensive tax systems in line with those of other European countries prior to accession to the European Union.
Objective	Tax reforms differ and are shaped by their underlying objectives, depending on whether they aim at revenue mobilization or a revenue-neutral reform, or whether they have progrowth or efficiency goals or advance equity or distributional considerations. Meltzer and Richard (1981) argue that the median voter would tend to tilt policy toward redistribution given a skewed income distribution and require reforms to increase taxes for redistribution purposes. Empirical studies, however, do not entirely support this hypothesis. This could be explained by elites' blocking efforts to implement a redistributive tax policy (Acemoglu and Robinson, 2008).	De Souza (2013) argues that elite overrepresentation could explain why tax systems in Latin America have not become more progressive over time.
Timing and "quality"	The political business cycle literature (Rogoff and Sibert, 1988; Alesina, 2000) predicts that the timing and type of tax reforms is correlated with the electoral cycle and that politicians tend to wait until reelection to implement unpopular measures. Alesina and Drazen (1991) argue that stabilization with significant distributional implications—such as tax increases to reduce a budget deficit—may result in a "war of attrition" as competing socioeconomic groups attempt to shift the burden of stabilization onto one another. Stabilization finally occurs when one group concedes, typically in times of crisis, and bears a disproportionate share of the increased tax burden. Pursuing this line of reasoning, Brys (2011) argues that crises tend to be conducive for tax reforms because they can reduce opposition to such reforms.	IDB (2013) reviews the relationship between crisis and tax reform in Latin America. Various reforms in Argentina are explained as a reaction to multiple economic shocks. In the 1990s crisis, Colombia approved revenue-mobilizing reforms despite having a government without majority. In Brazil, crisis-related reforms were effective in boosting revenue but also reversed some efficiency-enhancing gains from previous reforms (Melo, Pereira, and Souza, 2010).
Timeframe for implementation	Dewatripont and Roland (1995) show that splitting reform and implementing the part with the highest expected payoff first may reduce opposition to subsequent measures. Martinelli and Tommasi (1997) argue, on the other hand, that this approach does not work well when many groups can veto the reform.	Russia's experience with its tax reforms in the 2000s is an example of the "big bang" approach, whereas China's experience with the property tax, which remains confined to Shangai and Chongqing, appears to be more of a gradualist approach to reforms. So too is the slow elimination of mortgage interest deductibility in the United Kingdom.
Size of government	Theory suggests that presidential democracies tend to have lower taxes than parliamentary systems because the devolution of powers results in budget allocations' being made by different agents. Politically fragmented governments have a harder time pushing through reforms, which results in larger governments.	IDB (2013) provides supporting evidence on some of these hypotheses for Latin America.

Source: IMF staff compilation.

Although each reform process is country specific, successful cases of reforms, crisis related or otherwise, have often involved the following elements:

- *Building consensus and negotiating reforms.* Successful reforms have generally been supported by extensive political consultation and a clear and broad communication strategy. The 1986 tax reform in the United States—the classic base-broadening, rate-cutting exercise—was built on extensive consensus building, built around simple and clear objectives that enabled powerful lobbies to be subdued. The 1984 VAT reform in New Zealand and the personal income tax reforms in the Netherlands (2001) and Denmark (2010) all relied on ample consultations with the business community, labor unions, and other stakeholders; an extensive public relations program and broad use of public media; and the appointment of a "champion" (OECD, 2010a, Annex A).[61] The risk, on the other hand, is that extensive consultation will simply give interest groups time to organize against the reform. Speed was seen as key, for instance, to passing the flat-tax reform in Russia. And opponents of reform can be effective communicators too, sometimes more so than governments, as with the failure, after both sides had spent millions of dollars, of the attempt to introduce a general tax on resource rents in Australia in 2010.
- *Adapting reforms to the institutional setting.* Reform efforts must also take into account the governmental structure in which a country operates, as well as its institutional capacity. The political system may

[61] On the other hand, as discussed in Table 14, sometimes a big-bang approach to implementation may be desirable to stem opposition.

generate strong status quo biases. Fiscal federalism can create obstacles to the implementation of tax reform, both through politics (given the large number of players with different interests at stake) and for technical reasons: the difficulty of operating subnational VATs (because it is hard to remove tax from interstate trades without border controls) has been a key obstacle to establishing coherent VATs in Brazil, India, and the United States. Constitutional constraints can reinforce the problems—restrictions dating back decades, and now making no economic sense, are key obstacles to developing the VAT in both India and Pakistan, for example. In developing countries, capacity constraints can be a major obstacle to revenue mobilization, and successful policy reforms need to go hand in hand with administrative modernization (as, for example, in Bangladesh and Tanzania). For all countries, the international implications of tax reform are an increasingly important consideration. In many of the areas touched on previously—financial sector taxation, carbon pricing, and, these days, all corporate taxation—improving national tax systems will mean finding more effective ways for countries to cooperate in tax matters.

There are no universal truths as to how to make tax reform happen. Countries' peculiarities—the idiosyncrasies of their electoral politics, third rails that no politician can safely touch—loom large. What is clear, however, is that tax systems in many countries, and the wider international setting in which they operate and interact, have been going through difficult and trying—taxing—times. Reviewing the performance of those systems, and the objectives they are intended to serve, must be a critical part of formulating and fleshing out medium- and longer-term fiscal plans.[62]

[62] From that perspective, fiscal councils could be helpful in assessing the implications of alternative tax proposals. This is one of their responsibilities, for example, in Australia and Korea.

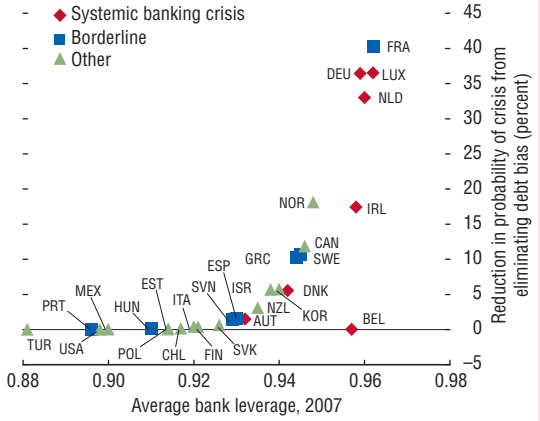
Box 3. Learning from the Crisis? Taxation and Financial Stability

The global economic and financial crisis brought substantial rethinking of the tax treatment of the financial sector, following public outrage at the extensive public support it received and a growing perception that some features of the tax system may have played a role in encouraging the high levels of leverage at the root of the crisis.

By allowing interest payments, but not the return on equity, as a deduction against the corporate income tax, most tax systems encourage the use of debt finance. This "debt bias" has long been known to be empirically important for nonfinancial companies, but recent work shows the effect is just as strong for banks (de Mooij and Keen, 2012; Hemmelgarn and Teichmann, 2013). The effect is small for the largest banks, most critical to financial stability, but this does not mean it is unimportant: these banks also tend to be very highly leveraged, and since the probability of crisis is a strongly convex function of overall bank leverage, even small tax-induced changes in leverage can have a large effect on the probability of crisis. Starting from the high levels of bank leverage just before the crisis, results of de Mooij, Keen, and Orihara (2013) imply that eliminating the debt bias would have reduced the probability of crisis by 20 percent or more in several countries (Figure 3.1).

A dozen or so advanced economies have introduced "bank levies" that go some way toward addressing these concerns (OECD, 2013a). The core of the base is typically uninsured bank borrowing, but there are wide differences in the rate, the definition of the base, and whether the resulting revenue is earmarked for resolution purposes. There is emerging evidence that while raising relatively little revenue, such levies have indeed reduced bank leverage (Devereux, Johannesen, and Vella, 2013). Key issues are whether to strengthen these taxes and whether to address problems of international coordination arising from differing structures and potential double taxation. A broader approach, in principle eliminating the debt bias entirely, would be to introduce an "allowance for corporate equity" (ACE) form of corporate tax, which provides a deduction for the notional cost of equity finance, along with that for interest—as Italy, for instance, has recently done.[1]

Figure 3.1. Debt Bias and Probability of Crisis



Sources: IMF staff calculations using results in de Mooij, Keen, and Orihara (2013) and identification of systemic banking crises of Laeven and Valencia (2010).

Note: Average bank leverage ratio is defined as the ratio of total leverage to total assets.

[1] de Mooij (2011) discusses ways in which debt bias might be addressed and assesses experience with the ACE.

Box 4. Taxation and Growth: Details Matter

The empirical literature from which the hierarchy of "growth friendliness" is drawn presumes that the only thing that matters for growth is how much revenue is raised by a given tax, not the details of its design. Results such as those in column (1) of Table 4.1 suggest, for instance, that increasing the proportion of all tax revenue raised from the value-added tax (VAT) by 1 percentage point and decreasing that from income taxes (the omitted revenue category) correspondingly will increase the growth rate by 0.167 percentage points on average. But VAT revenue can be increased in several ways—by raising the standard rate, for instance, or by widening the base (increasing C-efficiency). A common mantra is that base broadening is better for growth than rate increases. Is that correct?

Preliminary results provide some tentative signs that it is, at least for the VAT (Acosta-Ormachea, Keen, and Yoo, 2013). Adding to the fairly standard specification in column (1) two of the three drivers of VAT revenue (C-efficiency and the share of consumption in GDP), in column (2), enables rejection of the null hypothesis that only total VAT revenue matters, with the coefficient on C-efficiency indicating that it is significantly more associated with growth than is the third, omitted driver: the standard rate. Increasing the standard rate, moreover, may well reduce C-efficiency, by, for instance, encouraging evasion and avoidance (indeed, there is a strong negative correlation between the two). When allowance is made for this by removing C-efficiency from the estimating equation, in column (3), the impact of the standard rate on growth becomes nonsignificant. And columns (4) and (5) show that the standard rate remains nonsignificant when both other drivers are omitted, whereas C-efficiency retains a strongly positive impact on growth.

These results are preliminary. More needs to be done, for instance, to address potential endogeneity issues and to explore dynamics. Nonetheless, they provide a strong caution that looking only at broad categories of tax instruments is unlikely to be enough in thinking about taxation and growth: details matter.

Table 4.1. VAT Decomposition and Growth

Dependent variable: GDP per capita growth	(1)	(2)	(3)	(4)	(5)
Physical capital	0.290***	0.175***	0.178***	0.279***	0.224***
	(0.039)	(0.040)	(0.041)	(0.041)	(0.041)
Population growth	–1.342***	–1.638***	–1.666***	–1.303***	–1.246***
	(0.258)	(0.252)	(0.253)	(0.262)	(0.255)
Human capital	0.087***	0.100***	0.103***	0.087***	0.086***
	(0.023)	(0.022)	(0.022)	(0.023)	(0.023)
Year	–0.002***	–0.003***	–0.003***	–0.002***	–0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total tax as a share of GDP	0.256***	0.292***	0.365***	0.277***	0.168***
	(0.055)	(0.057)	(0.057)	(0.059)	(0.056)
Total tax excluding VAT and income taxes, as a share of total taxes	0.122***	0.157***	0.149***	0.125***	0.159***
	(0.030)	(0.030)	(0.029)	(0.031)	(0.031)
VAT as a share of total taxes	0.167***	0.153***	0.225***	0.180***	0.048
	(0.038)	(0.045)	(0.039)	(0.040)	(0.044)
log(C-efficiency ratio)		0.022**			0.051***
		(0.011)			(0.010)
log(Consumption as a share of GDP)		–0.202***	–0.225***		
		(0.028)	(0.026)		
log(VAT standard rate)			–0.014	–0.011	
			(0.011)	(0.012)	
Constant	4.333***	5.290***	5.180***	4.196***	4.419***
	(0.661)	(0.641)	(0.656)	(0.677)	(0.650)
Number of observations	797	797	797	797	797
R^2	0.17	0.25	0.25	0.17	0.20
Number of countries	49	49	49	49	49
Adjusted R^2	0.11	0.20	0.19	0.11	0.14
F-test		27.85	27.47		
Prob. > *F*		0.00	0.00		

Source: IMF staff.

Note: Standard errors in parentheses. VAT = value-added tax.

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Box 5. Tricks of the Trade

How It Is Done

The precise design of tax planning schemes reflects specifics of national tax systems, but common strategies include

- *Shifting profits to low-tax jurisdictions*—abusive transfer pricing is prominent in public debate, but there are many other devices that can be used to the same effect, like the direct provision of services from, and location of intellectual property rights in, low-tax jurisdictions;
- *Taking deductions in high-tax countries* . . . by, for example, borrowing there to lend to affiliates in low-tax jurisdictions;
- . . . *and as many times as possible*—passing on, through conduit companies, funds raised through loans may enable companies to take interest deductions several times (without offsetting tax on receipts);
- *Exploiting mismatches*—tax arbitrage opportunities can arise if different countries view the same entity or financial instrument differently;
- *"Treaty shopping"*—networks of double tax agreements can be exploited to route income so as to reduce taxes;
- *Delay repatriating earnings*—multinationals based in countries operating worldwide systems can defer the taxation of business income earned abroad until it is paid to the parent.

A wide range of countermeasures are also deployed by tax authorities. "Controlled foreign corporation" (CFC) rules, for instance, enable them to tax "passive" income retained abroad; general antiavoidance/abuse rules can be adopted; and "limitation of benefit" provisions aim to constrain treaty shopping. But these and other measures have not proved fully effective.

Food for Thought

So many companies exploit complex avoidance schemes, and so many countries offer devices that make them possible, that examples are invidious. Nonetheless, the "Double Irish Dutch Sandwich," an avoidance scheme popularly associated with Google, gives a useful flavor of the practical complexities. Here's how it works (Figure 5.1):

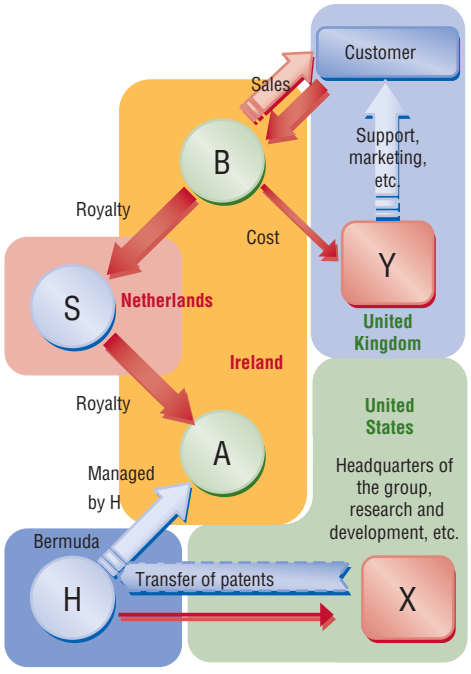
- Multinational Firm X, headquartered in the United States, has an opportunity to make profit in (say) the United Kingdom from a product that it can for the most part deliver remotely. But the tax rate in the United Kingdom is fairly high. So . . .
- It sells the product directly from Ireland through Firm B, with a United Kingdom firm Y providing services to customers and being reimbursed on a cost basis by B. This leaves little taxable profit in the United Kingdom.

Now the multinational's problem is to get taxable profit out of Ireland and into a still-lower-tax jurisdiction.

- For this, the first step is to transfer the patent from which the value of the service is derived to Firm H in (say) Bermuda, where the tax rate is zero. This transfer of intellectual property is made at an early stage in development, when its value is very low (so that no taxable gain arises in the United States).
- Two problems must be overcome in getting the money from B to H. First, the United States might use its CFC rules to bring H immediately into tax.[1] To avoid this, another company, A, is created in Ireland, managed by H, and headquarters "checks the box" on A and B for U.S. tax purposes. This means that, if properly arranged, the United States will treat A and B as a single Irish company, not

[1] The United States will charge tax when the money is paid as dividends to the parent—but that can be delayed by simply not paying any such dividends. At present, one estimate (cited in Kleinbard, 2013) is that nearly US$2 trillion is left overseas by U.S. companies.

Figure 5.1. Tricks of the Trade



Box 5 *(concluded)*

subject to CFC rules, while Ireland will treat A as resident in Bermuda, so that it will pay no corporation tax. The next problem is to get the money from B to H, while avoiding paying cross-border withholding taxes. This is fixed by setting up a conduit company S in the Netherlands: payments from B to S and from S to A benefit from the absence of withholding on nonportfolio payments between EU companies, and those from A to H benefit from the absence of withholding under domestic Dutch law.

This clever arrangement combines several of the tricks of the trade: direct sales, contract production, treaty shopping, hybrid mismatch, and transfer pricing rules.

Box 6. A One-Off Capital Levy?

The sharp deterioration of the public finances in many countries has revived interest in a "capital levy"—a one-off tax on private wealth—as an exceptional measure to restore debt sustainability.[1] The appeal is that such a tax, if it is implemented before avoidance is possible and there is a belief that it will never be repeated, does not distort behavior (and may be seen by some as fair). There have been illustrious supporters, including Pigou, Ricardo, Schumpeter, and—until he changed his mind—Keynes. The conditions for success are strong, but also need to be weighed against the risks of the alternatives, which include repudiating public debt or inflating it away (these, in turn, are a particular form of wealth tax—on bondholders—that also falls on nonresidents).

There is a surprisingly large amount of experience to draw on, as such levies were widely adopted in Europe after World War I and in Germany and Japan after World War II. Reviewed in Eichengreen (1990), this experience suggests that more notable than any loss of credibility was a simple failure to achieve debt reduction, largely because the delay in introduction gave space for extensive avoidance and capital flight—in turn spurring inflation.

The tax rates needed to bring down public debt to precrisis levels, moreover, are sizable: reducing debt ratios to end-2007 levels would require (for a sample of 15 euro area countries) a tax rate of about 10 percent on households with positive net wealth.[2]

[1] As for instance in Bach (2012).

[2] IMF staff calculation using the Eurosystem's Household Finance and Consumption Survey (Household Finance and Consumption Network, 2013); unweighted average.

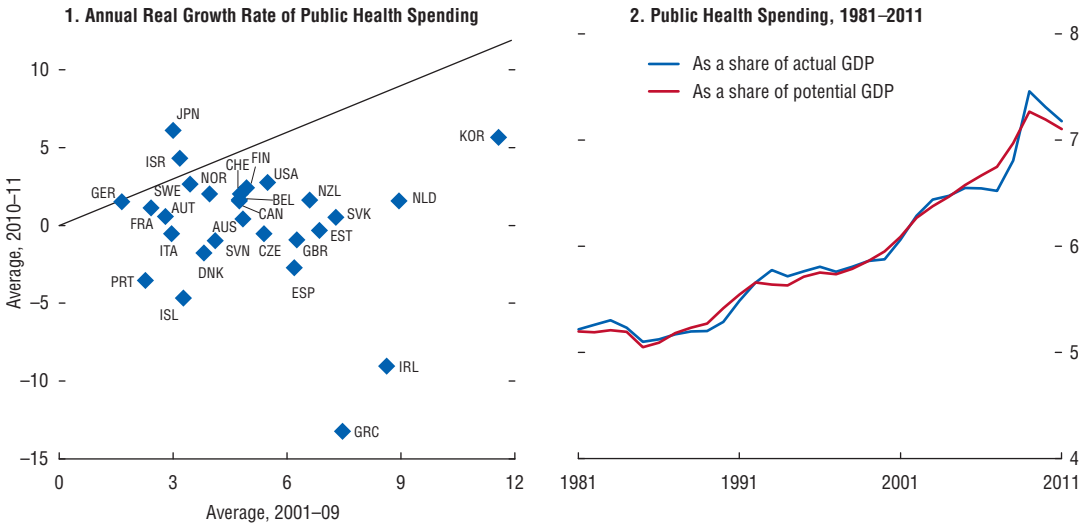
Appendix 1. Recent Developments in Public Health Spending and Outlook for the Future

The growth of public health spending has slowed significantly in advanced economies over the past three years. Nearly all advanced economies, except Israel and Japan, recorded a slowdown in real health spending growth in 2010 and 2011, compared with the period 2000–09 (Figure A.1.1, panel 1; Morgan and Astolfi, 2013). The economies experiencing the largest declines have also seen sharp drops in output and undertaken large fiscal adjustments in this period (Greece, Iceland, Ireland, Portugal, and Spain). Available data for eight economies indicate continued slow growth of public health spending in 2012. Public health spending has also dropped as a share of actual and potential GDP, after rapid growth in 2007–09 (Figure A.1.1, panel 2). The slowdown has touched nearly all categories of health spending, including inpatient, outpatient, pharmaceutical, and even prevention and public health (Morgan and Astolfi, 2013).

These spending decreases appear largely to reflect policies that reduce the *level* of spending in the short term, but there is little evidence that they will have an impact on long-term spending growth. Reforms introduced in many countries were mainly focused on generating immediate savings rather than on improving the efficiency and quality of health spending (European Commission, 2013). Many reforms have focused on cuts in national health budgets (Greece, Ireland, Italy, Portugal, and Spain), cuts in prices for pharmaceuticals and other medical goods (Austria, Belgium, Greece, Ireland, the Netherlands, Portugal, and Spain), reduced payments to providers (the Czech Republic, Estonia, Ireland, and Spain), and containing wages and salaries (the Czech Republic, Denmark, Greece, Ireland, Portugal, Slovenia, Spain, and the United Kingdom) (Mladovsky and others, 2012; Morgan and Astolfi, 2013). While these macro-level instruments could help reduce the level of spending in the short term, they are typically less effective in containing spending growth in the long term without accompanying micro-level reforms to enhance efficiency (Clements, Coady, and Gupta, 2012). Although some countries raised user charges (the Czech Republic, Denmark, Estonia, France, Greece, Ireland, Italy, the Netherlands, Portugal, and Switzerland),[63] these increases were relatively small and unlikely to alter the long-term growth of health spending significantly. In most cases, only marginal changes were made to benefit packages and the breadth of population coverage.

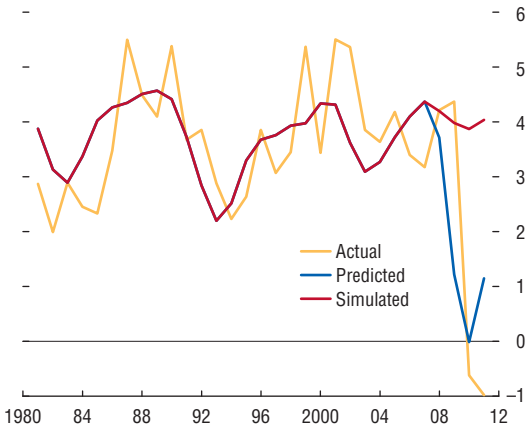
[63] User charges were raised for private health insurance in the United States (Ryu and others, 2013).

Figure A.1.1. Evolution of Public Health Spending in Advanced Economies
(Percent)



Sources: Organisation for Economic Co-operation and Development; and IMF staff estimates.

Figure A.1.2. Per Capita Public Health Spending, 1981–2011: Actual, Predicted, and Simulated Growth Rates
(Percent)



Sources: Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: "Predicted" denotes the predicted growth rates from an econometric model based on actual macroeconomic indicators. "Simulated" denotes the spending increase that would occur if health spending between 2008 and 2011 grew at rates that would be predicted using averages of macroeconomic indicators between 2000 and 2007.

Some measures attempted to improve efficiency, such as efforts to reduce administrative costs and restructure the hospital sector (Mladovsky and others, 2012). Their impact on long-term spending growth, however, is less clear. On the other hand, although they generated short-term savings, some of these measures could in fact raise public health spending in the long term because of deterioration in population health as essential health care services, such as health promotion and disease prevention, were cut (European Commission, 2013). Thus, there is a high degree of uncertainty regarding the impact of these reforms on the growth of public health spending in the long term.

Econometric analysis confirms that much of the recent slowdown in spending can be explained by deteriorating macroeconomic conditions and fiscal pressures. Such analysis also indicates that macroeconomic and fiscal indicators (including economic growth, unemployment, and gross government debt) are significant determinants of the growth in public health care spending.[64] Nearly the entire decline in the growth of spending between 2008 and 2010 can be explained by these factors (Figure A.1.2). Although the model does not predict the continued decline in spending growth in 2011 as well, half of the gap between the actual and predicted growth rate in 2011 can be attributed to four countries that have made large fiscal adjustments: Greece, Ireland, Portugal, and Spain.[65] Though far from conclusive, the findings suggest caution in assuming that the recent slowdown will translate into permanently lower long-term growth rates in the projections of future health care spending.

The slowdown could still have a persistent impact on public health spending in some countries over the medium term. This reflects two factors. First, when the historical growth rate of public health spending (in excess of GDP growth) resumes, the growth would apply to a lower base of public health spending as a percentage of GDP (because of the recent slowdown). Second, some of the macroeconomic and fiscal factors that dampen spending growth, such as high public debt ratios, may not return to precrisis levels in the near future and thus would put continued pressure on the growth of public health spending. IMF staff projections fully incorporate the lower spending levels due to recent reforms and assume that growth rates will only gradually return to their historical levels as economies recover.[66]

Rising public health spending–to–GDP ratios will, however, remain a key fiscal challenge in many advanced economies. On average (unweighted basis), public health spending is projected to increase by 1½ percentage points of GDP in 2013–30 (Figure A.1.3). This compares with earlier IMF staff projections of an increase of 2¼ percentage points of GDP in 2011–30 (Clements, Coady, and Gupta, 2012). The weighted averages are 2¾ and 3 percentage points, respectively. In the United States, public health spending is projected to increase by 4¾ percentage points of GDP, which is in line with the current projections of the U.S. Congressional Budget Office (2012, 2013) under the assumption that subnational spending grows at a similar rate as federal health spending.[67] Public health

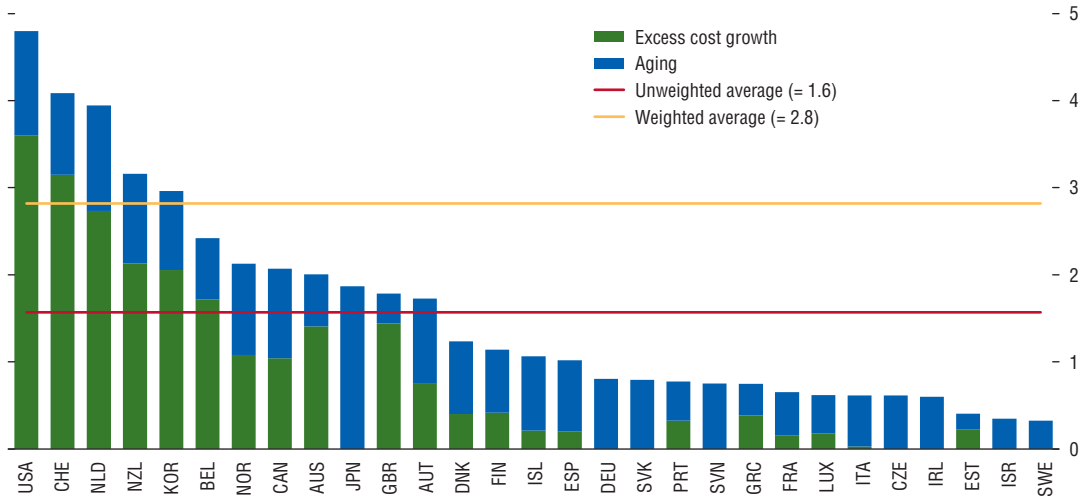
[64] See IMF (2013a) for a similar model.

[65] Two-thirds of the gap between actual and predicted growth rates in 2011 was driven by these four countries and Korea.

[66] The projections up to 2018 are based on the macroeconomic projections from the *World Economic Outlook* (economic growth, general government public debt–to–GDP ratios, and unemployment rate). Beyond 2018, the projections assume that excess cost growth (the difference between the growth of real health spending and GDP growth, after the effect of aging is adjusted for) will gradually return to its historical average by 2030.

[67] Some studies argue that part of the recent slowdown in health spending in the United States could reflect structural changes in the health care system that affect long-term spending growth, including those happening under the ongoing implementation of the country's health care reform act (Cutler and Sahni, 2013).

Figure A.1.3. Projected Increase in Public Health Spending, 2013–30
(Percentage points of GDP)



Sources: Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: *Excess cost growth* is defined as the growth of public health spending in excess of GDP growth after aging is controlled for.

spending in economies hit hard by the Great Recession (Greece, Iceland, Ireland, Portugal, and Spain) is projected to increase, on average, by only ¾ percent of GDP, about half the advanced economy average, reflecting likely continued fiscal pressure and weak macroeconomic conditions over the medium term in these economies.

Appendix 2. Assessing Potential Revenue: Two Approaches

The main text reports on two rather different ways of assessing revenue potential, giving complementary perspectives on the scope to raise more.

Peer analysis

Peer analysis, the most traditional approach, models revenue r_i in country i (in percent of GDP) as a function[68]

$$r_i = \alpha + \beta' x_i + \varepsilon_i \qquad (1)$$

of observable characteristics x_i (such as income per capita, with a very wide range of other variables explored in the literature). The "potential" for additional revenue is then the fitted residual, ε_i, which, by construction, averages to zero over the sample.

Torres (2013) extends this method by applying it to subcategories of revenue. For a cross-section of 164 countries, using data constructed from IMF reports (*World Economic Outlook*, Article IV staff reports, and revisions to ongoing programs), revenues are divided into those from income taxes, payroll taxes, other taxes, taxes on goods and services, taxes on international trade, grants, and nontax revenues. To calculate the revenue gaps, taxes on international trade, grants, and nontax revenues are excluded, as these are somewhat less under the government's direct control. Control variables include per capita income, the old-age dependency ratio, and political participation, with revenues increasing in all three.

Table A.2.1 reports the estimated potential for additional revenue for selected advanced and emerg-

[68] With obvious amendments when estimation is on panel data, which also has the advantage (among others) of providing fixed effects that could be interpreted as giving some indication of social preferences. Data limitations—the desire to apply both methods to the same data set—mean the analysis here is on a cross-section.

Table A.2.1. Revenue Gaps
(Percent of GDP)

	Total	Consumption Taxes	Income Taxes	Payroll Taxes	Other Taxes
Advanced economies					
Japan	17.8	9.0	3.2	5.8	–0.1
Switzerland	9.5	2.6	3.1	4.0	–0.2
Korea	7.4	3.9	2.7	1.1	–0.3
United States	6.1	3.7	1.2	1.3	–0.1
Singapore	5.4	4.1	–0.3	2.9	–1.3
Greece	4.5	2.0	2.8	1.0	–1.3
New Zealand	4.2	–1.0	–4.6	8.1	1.7
Canada	3.3	2.9	–1.6	3.6	–1.6
Germany	3.1	2.5	0.9	–1.4	1.0
Spain	2.7	4.4	0.0	–1.5	–0.2
Portugal	2.1	–0.6	–0.2	0.9	1.9
Estonia	1.7	0.4	1.1	–0.3	0.4
Ireland	1.5	0.1	–0.1	0.1	1.5
United Kingdom	0.7	0.7	–2.1	4.7	–2.5
Italy	0.7	4.9	–4.7	2.0	–1.5
Emerging market economies					
Latvia	10.1	3.8	1.2	4.6	0.5
Bulgaria	8.9	–0.1	3.0	6.1	–0.2
Kazakhstan	5.9	4.3	1.1	0.6	–0.1
Mexico	5.9	3.1	2.6	–1.0	1.2
Lithuania	5.1	2.1	2.9	–1.1	1.2
Indonesia	5.0	3.0	0.4	1.6	0.1
Saudi Arabia	4.5	1.3	2.3	0.3	0.6
Thailand	3.9	1.2	–0.3	3.0	0.0
Jordan	1.9	–1.9	2.8	0.9	0.2
Egypt	1.0	1.7	–0.5	–1.0	0.9
Low-income countries					
Sudan	8.5	2.6	4.2	0.7	1.1
Madagascar	8.5	3.7	3.7	0.7	0.4
Haiti	5.2	3.6	1.6	1.0	–0.9
Yemen	4.6	1.6	2.3	0.4	0.3
Nepal	4.3	1.3	2.4	0.8	–0.3
Armenia	4.2	2.8	–0.4	2.4	–0.6
Cambodia	4.1	0.9	2.0	0.6	0.6
Georgia	3.6	–1.3	–3.9	8.4	0.4
Côte d'Ivoire	3.5	3.9	2.2	–1.0	–1.6
Chad	3.3	1.9	1.4	0.4	–0.4
Uganda	3.2	–0.4	2.3	0.5	0.8
Ghana	1.0	1.5	–1.7	0.7	0.6
Congo, Rep. of	1.0	–0.7	1.1	0.5	0.0

Source: IMF staff estimates.

ing market economies and low-income countries; negative values indicate that observed revenues exceed predicted ones. There is quite a wide variation within each income group, with substantial implied scope to increase total revenue in some countries but little in others. The breakdown by tax category provides useful pointers as to where the most evident potential lies—generally consistent with the views in IMF (2010a). For example, in Germany and Mexico, VAT revenues could be enhanced by eliminating reduced VAT rates, and in Japan by increasing (as planned) the consumption tax rate. Along with Korea, Japan also raises less from the personal income tax than do its peers.

Stochastic frontier analysis

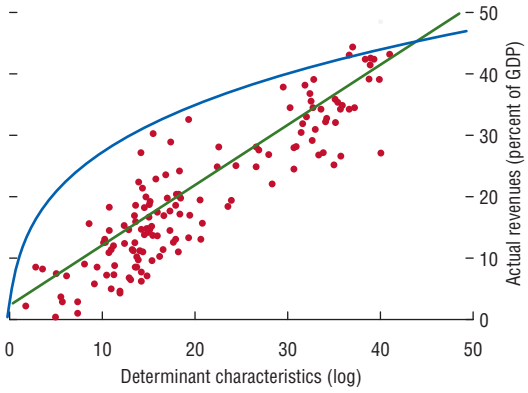
Stochastic frontier analysis[69] instead models revenue potential explicitly, taking revenue to be a function

$$R_i = U(z_i)M(x_i)e^{v_i}, \quad (2)$$

where M denotes maximum revenue, dependent on observables exogenous to policy, and U denotes "effort," lying between 0 and 1 and depending on variables z_i that are, to at least some degree, choice variables, as well as on wider social preferences. Put most simply, peer analysis finds the best fit to the observations, whereas stochastic frontier analysis aims to put a frontier around them (Figure A.2.1).[70] The stochastic frontier analysis approach has the considerable advantage of not inherently implying that some countries are raising more than their "potential" and fits neatly into the conceptual framework for gap assessment in "Finding, and Minding, the Gap" in Section 2 (with effort reflecting rate choices, policy gaps, and compliance gaps). A weakness in applications so far is that relatively little attention has been paid to the determinants of effort.

Results using the same data set and controls as Torres (2013) and—in the absence of good measures of, for instance, the breadth of tax bases—treating z_i as

Figure A.2.1. Peer and Stochastic Frontier Analysis Estimation of Tax Potential



Source: IMF staff estimates.

unobserved[71] are presented in Table A.2.2. With a few notable exceptions (such as Greece), results are in line with priors and previous estimates (IMF, 2011).[72] They are highly positively correlated to the peer analysis gap estimates presented previously (as in Cyan, Martinez-Vasquez, and Vulovic, 2013). These results show that

- Countries with similar revenue levels can have very different levels of effort. This is the case for Ireland and Switzerland, for example, and for Armenia, Nicaragua, and Mozambique.
- There are wide variations across countries, but average effort is fairly similar across advanced and emerging market economies and low-income countries.
- Estimated tax efforts are consistent with priors on social preferences: Denmark and Norway, for instance, figure among those with the highest effort.

What these results do not shed light on, however, is precisely how effort can be increased. The results in Torres (2013) are somewhat more informative on this point, but would require considering country specifics of both design and implementation.

[69] See for instance, Pessino and Fenochietto (2010), including on the econometrics involved. Note that equation (2) implies a bias in ordinary least squares estimation of equation (1) if, as one might expect, policy choices are correlated with the x_i.

[70] Though the presence of the error v_i means that actual revenue may exceed the estimated maximum.

[71] Estimation is by maximum likelihood, with $U(z_i)$ assumed to have a half-normal distribution and v_i to be normally distributed. See Grigoli and Muthoora (2013).

[72] Cross-section estimation techniques, whether in the context of the peer analysis or of stochastic frontier analysis, cannot fully capture the effects of country-specific circumstances and may bias estimates of the revenue gaps or tax effort. Given these and other data limitations, results should be interpreted with caution.

Table A.2.2. Estimated Tax Effort, 2012

	Tax Revenue[1]	Tax Effort[2]		Tax Revenue[1]	Tax Effort[2]		Tax Revenue[1]	Tax Effort[2]
Advanced economies			**Emerging market economies**			**Low-income countries**		
Switzerland	28.5	0.52	Saudi Arabia	1.1	0.05	Madagascar	10.9	0.33
Korea	19.3	0.48	Kazakhstan	12.4	0.39	Sudan	6.1	0.34
Estonia	32.8	0.55	Latvia	25.5	0.43	Cambodia	11.0	0.39
Singapore	13.9	0.55	Bulgaria	26.8	0.47	Chad	5.5	0.40
Germany	40.0	0.57	Lithuania	27.9	0.51	Haiti	12.7	0.40
Sweden	44.2	0.62	Mexico	15.7	0.50	Ghana	17.1	0.46
Ireland	27.8	0.74	Peru	18.0	0.63	Nepal	13.1	0.49
Japan	30.0	0.43	Jordan	15.0	0.64	Moldova	31.9	0.66
Israel	34.0	0.75	Philippines	15.3	0.69	Uganda	12.2	0.57
Slovak Republic	29.0	0.78	Thailand	17.9	0.63	Armenia	20.5	0.53
Netherlands	39.2	0.75	Malaysia	16.1	0.72	Tanzania	16.1	0.64
United States	25.1	0.61	Romania	28.3	0.72	Georgia	25.2	0.53
Austria	44.1	0.73	Poland	33.2	0.77	Cameroon	13.8	0.71
Iceland	36.3	0.80	Turkey	26.7	0.90	Nicaragua	21.4	0.72
Spain	33.1	0.71	Ukraine	40.0	0.76	Congo, Rep. of	8.7	0.70
Finland	43.8	0.75	Chile	21.6	0.69	Bolivia	20.6	0.71
New Zealand	29.5	0.62	Egypt	15.8	0.72	Zambia	17.8	0.74
Slovenia	36.6	0.75	Russia	35.0	0.85	Lao P.D.R.	16.2	0.78
United Kingdom	35.5	0.75	Hungary	38.4	0.79	Yemen	6.8	0.73
Czech Republic	35.0	0.79	South Africa	24.2	0.89	Congo, Dem. Rep. of the	16.7	0.77
Italy	44.2	0.68	Colombia	22.2	0.91	Honduras	17.6	0.76
Canada	30.2	0.67	Argentina	36.2	0.87	Côte d'Ivoire	17.6	0.75
Portugal	34.9	0.74	Morocco	24.1	0.93	Mozambique	21.0	0.78
Norway	43.2	0.91	Nigeria	16.4	0.94	Burkina Faso	14.9	0.81
Denmark	49.7	0.86	Brazil	29.6	0.96	Mali	17.3	0.88
France	44.7	0.85				Senegal	19.7	0.88
Belgium	46.2	0.85						
Greece	35.5	0.80						
Average	35.2	0.70		23.3	0.69		15.9	0.63

Source: IMF staff estimates.

[1] In percent of GDP. Tax ratios are estimates for 2012 based on the October 2012 *World Economic Outlook*, complemented in some cases with countries' Article IV staff reports. Tax ratios include social security contributions but exclude grants and nontax revenue.

[2] Defined as ratio of actual tax collection to potential tax revenue.

Appendix 3. Increasing Revenue from Real Property Taxes

Recent years have seen a dramatic increase in interest in boosting revenue from property taxes—the term being shorthand here for the recurrent taxation of immovable property—in places as diverse as Cambodia, China, Croatia, Egypt, Greece, Ireland, Liberia, and Namibia.[73] How much more revenue can property taxes contribute in the longer term? Why has there been this upsurge of interest? And what are the key challenges for reform?

Revenue potential

Recurrent taxes on immovable property now yield fairly modest amounts in most countries: the average revenue from recurrent property taxes in high-income countries is about 1.1 percent of GDP (5.5 percent of total taxes), and that is more than 2½ times the amount in middle-income countries (0.4 percent of GDP, 2.1 percent of total taxes). But there are huge variations in revenue raised within the two groups (Figure A.3.1).

These large disparities in tax yield doubtless reflect differing degrees of popular opposition to the use of such taxes and technical constraints in their administration—but they also signal a large potential for enhanced utilization. The highest level of revenue found in middle-income countries, which could be taken as an ambitious general revenue target for these countries, is about 1 percent of GDP, or 2½ times the current average. Among high-income countries, a number raise more than 2 percent of GDP from recurrent taxes on property (Canada, France, Israel, Japan, New Zealand, the United Kingdom, and the United States) and a few of these (Canada, the United Kingdom, and the United States) raise even more than 3 percent of GDP. For high-income countries, a target of 2–3 percent of GDP is a realistic long-term goal.

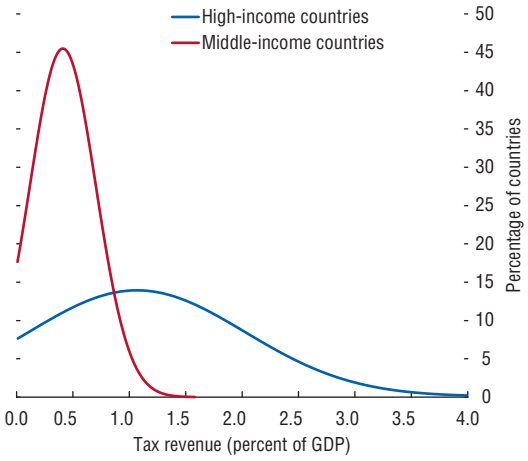
The rationale for increased use of property taxes

The impetus to reform is country specific, but in most cases reflects revenue needs as well as efficiency and fairness considerations. (A few countries, particularly in Asia, have recently increased property taxes[74] substantially in an attempt to quell strong property price appreciation).

Property taxes, in the form of recurrent taxes levied on land and buildings, are generally considered to be more efficient than most other taxes, primarily because of the immobility of the location-specific attributes reflected in property prices: a pleasant summer house by the lake is hard to put in an offshore bank account. Studies of the growth hierarchy, discussed in Section 2, have indeed generally found taxation of immovable property to be more benign for economic growth than other forms of taxation, in particular compared with direct taxes (OECD, 2010b). Importantly, however, the efficiency case is stronger for taxing residential property than that for taxing business property—consistent with the general principle of avoiding taxes on intermediate inputs—except insofar as this serves to correct externalities or as a rough form of payment for services. In all cases, of course, the timing of any property tax reform should take into account market conditions.

Intergovernmental issues commonly loom large in reforming property taxes. To the extent that the quality of publicly provided local services is reflected in property values, allocating the revenue and design of the tax to a subnational level of government—as is common and is widely recommended—can improve accountability and the effectiveness of political institutions. This may also call for some adjustment of intergovernmental transfers, as well perhaps as agreeing on

Figure A.3.1. Distribution of Yields from Real Property Taxes, 2009



Sources: IMF, *Government Finance Statistics*; Organisation for Economic Co-operation and Development; and IMF staff estimates.

[73] This appendix is based on Norregaard (2013).

[74] And sometimes transaction and/or capital gains taxes too.

minimum and maximum rates to limit tax competition (undercutting others) and tax exporting (shifting an undue part of the burden to nonresidents).

The incidence of the property tax—who bears the real burden—has been intensively debated, with a growing consensus that the tax burden is borne predominantly by those with middle and high incomes. The progressivity of the tax can be enhanced by a variety of measures intended to reduce or eliminate tax liabilities for low-income owners of property (for example, by taxing only properties valued at or above some threshold amount). To the extent that the property tax is truly a benefit tax, however, with the amount paid an accurate reflection of the value of services received, it would have no distributional impact.

Implementation challenges

Implementing a modern market-value-based recurrent tax on land and buildings is a challenging task, requiring substantial up-front investment in administrative infrastructure. Key requirements include establishing a comprehensive cadastre (fiscal property register) and recording physical coordinates in addition to ownership and property value data. This is a data-intensive exercise that typically requires extensive cooperation and exchange of information among a number of entities (including tax authorities, local governments, courts, and geodetic agencies). To ensure the buoyancy and fairness of the tax, an effective valuation system is required that accurately tracks market values through regular updates.[75] Although the development of effective computer-aided mass appraisal systems has facilitated the valuation process considerably, many practical issues remain, including lack of well-qualified property assessors in many countries. Finally, effective enforcement of the property tax is lacking in many countries, partly because the tax may be politically unpopular, but also because of historically low yields and the adverse incentive effects that may result from a mismatch between who is assigned the responsibility for tax collection and who ultimately receives the revenue.

Although there are strong economic arguments for strengthened immovable property taxation, careful planning and execution, combined with improvements to the basic administrative infrastructure—and, in many cases, strong political will—are essential for successful property tax reform.

[75] Theorists have shown interest in self-assessment schemes (an idea attributed to Sun Yat-sen) under which taxpayers declare a value but are then required to accept bids for some specified amount in excess. Practical experience is limited, however, though such a scheme has been used in Bogotá, Colombia.

METHODOLOGICAL AND STATISTICAL APPENDIX

This appendix comprises five sections: "Data and Conventions" provides a general description of the data and of the conventions used for calculating economy group composites. "Fiscal Policy Assumptions" summarizes the country-specific assumptions underlying the estimates and projections for 2013–18. "Definition and Coverage of Fiscal Data" provides details on the coverage and accounting practices underlying each country's *Fiscal Monitor* data. "Economy Groupings" summarizes the classification of countries in the various groups presented in the *Fiscal Monitor.* "Statistical Tables" on key fiscal variables complete the appendix. Data in these tables have been compiled on the basis of information available through the beginning of October 2013.

Data and conventions

Country-specific data and projections for key fiscal variables are based on the October 2013 World Economic Outlook database, unless indicated otherwise, and compiled by the IMF staff. Historical data and projections are based on the information gathered by IMF country desk officers in the context of their missions and through their ongoing analysis of the evolving situation in each country. They are updated on a continual basis as more information becomes available. Structural breaks in data may be adjusted to produce smooth series through splicing and other techniques. IMF staff estimates serve as proxies when complete information is unavailable. As a result, *Fiscal Monitor* data can differ from official data in other sources, including the IMF's *International Financial Statistics*.

Sources for fiscal data and projections not covered by the *World Economic Outlook* are listed in the respective tables and figures.

All fiscal data refer to the general government where available and to calendar years, except in the cases of Côte d'Ivoire, Egypt, Hong Kong Special Administrative Region, India, Lao P.D.R., Pakistan, Singapore, and Thailand, for which they refer to fiscal years.

Composite data for country groups are weighted averages of individual-country data, unless otherwise specified. Data are weighted by annual nominal GDP converted to U.S. dollars at average market exchange rates as a share of the group GDP.

For the purpose of data reporting in the *Fiscal Monitor*, the G20 member aggregate refers to the 19 country members and does not include the European Union.

For most countries, fiscal data follow the IMF's *Government Finance Statistics Manual* (*GFSM*) *2001*. The 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.

As used in the *Fiscal Monitor*, the term "country" does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

Argentina. Total expenditure and the overall balance account for cash interest and the IMF staff's estimate of accrued interest payments. The GDP and CPI (the Consumer Price Index for Greater Buenos Aires, or CPI-GBA) are officially reported data. The IMF has, however, issued a declaration of censure and called on Argentina to adopt remedial measures to address the quality of the official GDP and CPI-GBA data. Alternative data sources have shown significantly lower real growth and considerably higher inflation rates than the official data since 2008 and 2007, respectively. In this context, the IMF is also using alternative estimates of GDP growth and of CPI inflation for the surveillance of macroeconomic developments in Argentina.

Brazil. Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

Chile. Cyclically adjusted balances include adjustments for commodity price developments.

China. Fiscal data exclude allocation to the rainy-day fund. Up to 2009, public debt data include only central government debt as reported by the Ministry of Finance. For 2010, debt data include subnational debt identified in the 2011 *National Audit Report*. Information on new debt issuance by the

local governments and some government agencies in 2011 and 2012 is not yet available, hence debt data reflect only amortization plans as specified in the 2011 *National Audit Report*. Public debt projections beyond 2012 assume that about 60 percent of subnational debt will be amortized by 2014, 16 percent over 2015–16, and 24 percent beyond 2017, with no issuance of new debt or rollover of existing debt. Deficit numbers do not include some expenditure items, largely infrastructure investment financed off the budget through land sales and local-government financing vehicles.

Colombia. Gross public debt refers to the combined public sector, including Ecopetrol and excluding Banco de la República's outstanding external debt.

Côte d'Ivoire. Data are on a fiscal year basis.

Greece. General government gross debt includes short-term debt and loans of state-owned enterprises.

Hong Kong Special Administrative Region. Data are on a fiscal year basis. Cyclically adjusted balances include adjustments for land revenue and investment income. Since 2011, government debt also includes "insurance technical reserves," following the *GFSM 2001* definition.

Hungary. The cyclically adjusted and cyclically adjusted primary balances for 2011 exclude one-time revenues from asset transfers to the general government due to changes to the pension system.

India. Data are on a fiscal year basis.

Ireland. The general government balances between 2009 and 2016 reflect the impact of banking support. The fiscal balance estimates excluding these measures are –11.3 percent of GDP for 2009, –10.6 percent of GDP for 2010, –8.9 percent of GDP for 2011, –7.6 percent of GDP for 2012, –7.5 percent of GDP for 2013 (including exchequer outlays for guarantees paid out under the Eligible Liabilities Guarantee scheme in the context of the liquidation of the Irish Bank Resolution Corporation), –4.9 percent of GDP for 2014, –2.9 percent of GDP for 2015, and –2.4 percent of GDP for 2016. Cyclically adjusted balances reported in Statistical Table 2 exclude financial sector support and correct for real output, equity, house prices, and unemployment.

Jordan. General government balances and general government revenues include grants.

Lao P.D.R. Data are on a fiscal year basis.

Latvia. The fiscal deficit includes bank restructuring costs and thus is higher than the deficit in official statistics.

Mexico. General government refers to central government, social security, public enterprises, development banks, the national insurance corporation, and the National Infrastructure Fund, but excludes subnational governments.

Norway. Cyclically adjusted balances correspond to the cyclically adjusted non-oil overall or primary balance. These variables are in percent of non-oil potential GDP.

Pakistan. Data are on a fiscal year basis.

Peru. Cyclically adjusted balances include adjustments for commodity price developments.

Singapore. Data are on a fiscal year basis. Historical fiscal data have been revised to reflect the migration to *GFSM 2001*, which entailed some classification changes.

Spain. Overall and primary balances include financial sector support measures estimated at 0.5 percent of GDP for 2011 and 3.7 percent of GDP for 2012.

Sudan. Data for 2011 exclude South Sudan after July 9. Data for 2012 and onward pertain to the current Sudan.

Sweden. Cyclically adjusted balances take into account output and employment gaps.

Switzerland. Data submissions at the cantonal and commune level are received with a long and variable lag and are subject to sizable revisions. Cyclically adjusted balances include adjustments for extraordinary operations related to the banking sector.

Thailand. Data are on a fiscal year basis.

Turkey. Information on the general government balance, primary balance, and cyclically adjusted primary balance differs from that in the authorities' official statistics or country reports, which include net lending and privatization receipts.

United States. Cyclically adjusted balances exclude financial sector support estimated at 0.8 percent of GDP in 2008, 2.2 percent of GDP in 2009, 0.2 percent of GDP in 2010, and 0.1 percent of GDP in 2011.

Fiscal policy assumptions

Historical data and projections of key fiscal aggregates are in line with those of the October 2013 *World Economic Outlook*, unless highlighted. For underlying assumptions, other than on fiscal policy, see the October 2013 *World Economic Outlook*.

Short-term fiscal policy assumptions are based on officially announced budgets, adjusted for differences between the national authorities and the IMF staff regarding macroeconomic assumptions and projected fiscal

outturns. Medium-term fiscal projections incorporate policy measures that are judged likely to be implemented. When 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.

Argentina. The 2012 estimates are based on actual data on outturns and IMF staff estimates. For the outer years, the fiscal balance is projected to remain roughly at the current level.

Australia. Fiscal projections are based on the Pre-election Economic and Fiscal Outlook, Australian Bureau of Statistics data, and IMF staff projections.

Austria. Projections take into account the authorities' medium-term fiscal framework as well as associated further implementation needs and risks.

Belgium. IMF staff projections for 2013 and beyond are based on unchanged policies.

Brazil. For 2013, the projections are based on the budget approved in March 2013, subsequent revisions to the budget (the last of which was in July 2013), and fiscal outturns up until July 2013. Projections for 2014 take into account the draft budget submitted in August 2013. In outer years, the IMF staff assumes adherence to the announced primary target.

Burkina Faso. Estimates are based on discussions with the authorities, past trends, and the impact of ongoing structural reforms.

Cambodia. Historical data are from the Cambodian authorities. Projections are based on the IMF staff's assumptions following discussions with the authorities.

Canada. Projections use the baseline forecasts in the Economic Action Plan 2013, "Jobs, Growth and Long-Term Prosperity" (March 21, 2013; the fiscal year 2013/14 budget) and 2013 provincial budgets. The IMF staff makes adjustments to these forecasts for differences in macroeconomic projections. IMF staff forecasts also incorporate the most recent data releases from Statistics Canada's Canadian System of National Economic Accounts, including federal, provincial, and territorial budgetary outturns through the end of the second quarter of 2013.

Chile. Projections are based on the authorities' budget projections and include adjustments to reflect the IMF staff's projections for GDP and copper price.

China. Impulse is likely to be mildly expansionary during 2013.

Czech Republic. Projections are based on the authorities' budget forecast for 2012–13, with adjustments for macroeconomic projections of the IMF staff. Projections for 2014 onward are based on unchanged policies.

Denmark. Projections for 2012–14 are aligned with the latest official budget estimates and the underlying economic projections, adjusted where appropriate for the IMF staff's macroeconomic assumptions. For 2015–18, the projections incorporate key features of the medium-term fiscal plan as embodied in the authorities' 2013 Convergence Programme submitted to the European Union.

Egypt. Fiscal projections are based mainly on budget sector operations and discussions with the authorities.

Estonia. The forecast, which is cash and not accrual based, incorporates the authorities' 2013 budget, adjusted for newly available information and for the IMF staff's macroeconomic scenario.

Finland. Estimates are based on policies announced by the authorities, adjusted for the IMF staff's macroeconomic scenario.

France. Projections for 2014 and beyond reflect the authorities' 2012–17 multiyear budget and April 2013 stability plan, adjusted for fiscal packages and differences in assumptions on macro and financial variables, and revenue projections. The fiscal data for 2011 were revised following a May 15, 2013, revision by the statistical institute of both national accounts and fiscal accounts. Fiscal data for 2012 reflect the preliminary outturn published by the statistical institute in May 2013. The underlying assumptions for 2013 remain unchanged, as the 2013 budget has not been revised and thus there is no new fiscal measure announced for 2013. However, projections for 2013 reflect discussion with the authorities on monthly developments on spending and revenue.

Germany. The estimates for 2012 are preliminary estimates from the Federal Statistical Office. The IMF staff's projections for 2013 and beyond reflect the authorities' adopted core federal government budget plan adjusted for the differences in the IMF staff's macroeconomic framework and assumptions about fiscal developments in state and local governments, the social insurance system, and special funds. The estimate of gross debt includes portfolios of impaired assets and noncore business transferred to institutions that are winding up, as well as other financial sector and EU support operations.

Greece. Fiscal projections for 2013 and the medium term are consistent with the policies discussed between the IMF staff and the authorities in the context of the Extended Fund Facility. Public debt projections assume

an additional haircut (official sector involvement) to bring the debt ratio to 124 percent of GDP by 2020.

Hong Kong Special Administrative Region. Projections are based on the authorities' medium-term fiscal projections.

Hungary. Fiscal projections include IMF staff projections of the macroeconomic framework and of the impact of existing legislated measures, as well as fiscal policy plans announced as of end-June 2013.

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

Indonesia. IMF projections for 2013–18 are based on a gradual increase in administrative fuel prices, introduction from 2014 of new social protections, and moderate tax policy and administration reforms.

Ireland. Fiscal projections are based on the 2013 budget and the "Medium-Term Fiscal Statement" (November 2012), which commits to a €8.6 billion consolidation over 2013–15. It also includes the estimated fiscal impact of the February 2013 promissory note transaction. The fiscal projections are adjusted for differences between the IMF staff's macroeconomic projections and those of the Irish authorities.

Israel. Historical data are based on government finance statistics submitted by the Ministry of Finance. The historical data, together with the announced fiscal consolidation plan by the authorities, form the basis for the IMF staff's medium-term fiscal projections.

Italy. Fiscal projections incorporate the government's announced fiscal policy, as outlined in the April 2013 update to the government's "Economic and Financial Document," adjusted for different growth outlooks. The 2013 deficit also incorporates the impact of repealing the December property tax payment (offsetting financial measures are to be announced with the publication of the 2014 budget). After 2014, the IMF staff projects a constant structural balance in line with Italy's fiscal rule, which implies small corrective measures in some years, as yet unidentified in the "Economic and Financial Document."

Japan. Projections are based on fiscal measures already announced by the government, including consumption tax increases, earthquake reconstruction spending, and the stimulus package (the FY2012 supplementary budget). Medium-term projections assume that expenditure and revenue of the general government develop in line with current underlying demographic and economic trends and recent fiscal stimulus.

Kazakhstan. Fiscal projections are based on budget numbers, discussions with the authorities, and IMF staff projections.

Korea. Fiscal projections assume that fiscal policies will be implemented in 2013 in line with the budget. The medium-term projections assume that the government will continue with fiscal consolidation, coming close to eliminating the budget deficit (excluding social security funds) toward the end of the medium term.

Lithuania. Fiscal projections for 2013 are based on the authorities' 2013 budget after differences in macroeconomic assumptions, and performance so far, are adjusted for. Projections for 2014 onward are passive projections, as measures to underpin the authorities' public commitment to further consolidation have not yet been specified.

Malaysia. Fiscal year 2013 projections for the federal government are based on preliminary outturn for the first half and IMF staff projections taking into account original budget numbers. For the remainder of the projection period, the IMF staff assumes that the authorities undertake subsidy reform and introduce the goods and services tax in 2015. Projections for general government are based on budget numbers and IMF staff projections.

Mali. Estimates reflect approved budget and agreed-upon program budget for the current year, authorities' medium-term fiscal framework, and IMF staff estimates for outer years.

Mexico. Fiscal projections for 2013 are broadly in line with the approved budget; projections for 2014 onward assume compliance with the balanced-budget rule.

Moldova. Fiscal projections are based on the IMF staff's forecast for GDP, consumption, imports, wages, energy prices, and demographic changes, according to data available for the first quarter of 2013.

Mozambique. Fiscal projections assume a moderate increase in revenue in percent of GDP and a commensurate increase in domestic primary spending. They account for a lower aid flow, with the grants contribution declining. The projections were discussed with the authorities during the Policy Support Instrument review missions in October 2012.

Myanmar. Fiscal projections are based on budget numbers, discussions with the authorities, and IMF staff adjustments.

Netherlands. Fiscal projections for 2012–18 are based on the authorities' Bureau for Economic Policy Analysis budget projections, after adjustments for differences in macroeconomic assumptions.

New Zealand. Fiscal projections are based on the authorities' 2013 budget and IMF staff estimates.

Nigeria. Estimates reflect historical data series, the annual budget, and the medium-term expenditure framework at the general government level and additional data from the authorities.

Norway. Fiscal projections are based on the authorities' 2013 revised budget.

Philippines. Fiscal projections assume that the authorities' fiscal deficit target will be achieved in 2013 and beyond. Revenue projections reflect the IMF staff's macroeconomic assumptions and incorporate anticipated improvements in tax administration. Expenditure projections are based on budgeted figures, institutional arrangements, and fiscal space in each year.

Poland. Data are on a European System of Accounts 1995 (ESA-95) (accrual) basis. Projections are based on the 2013 budget and its execution up to the first quarter of 2013, and a budget revision announced in July 2013. The projections also take into account the effects of pension reform announced in September 2013.

Portugal. Projections reflect the authorities' commitments under the EU/IMF-supported program for 2013–14 and the IMF staff's projections thereafter.

Romania. The 2013 fiscal projections reflect the authorities' midterm budget review. The 2014 deficit projection is based on discussions with the authorities.

Russia. Projections for 2013–18 are based on the oil-price-based fiscal rule introduced in December 2012, with adjustments for the IMF staff's revenue forecast, and for public spending already budgeted for 2013–15.

Saudi Arabia. The authorities base their budget on a conservative assumption for oil prices, with adjustments to expenditure allocations considered in the event that revenues exceed budgeted amounts. IMF staff projections of oil revenues are based on *World Economic Outlook* baseline oil prices. On the expenditure side, wage bill estimates incorporate 13th-month pay awards every three years in accordance with the lunar calendar, and capital spending over the medium term is in line with the authorities' priorities established in National Development Plans.

Senegal. Estimates are based on program targets for 2013–14 and mostly debt sustainability analysis considerations thereafter. Fiscal accounts are shown in accordance with the *GFSM 2001* methodology.

Singapore. Projections are based on budget numbers for fiscal year 2013/14 and unchanged policies thereafter.

Slovak Republic. Estimates are based on the IMF staff's revenue projections and on expenditures in the 2012–15 budget, including unbudgeted expenditure in 2012. Projections for 2013 are based on the authorities' plans to reduce the overall deficit to 2.9 percent of GDP.

South Africa. Fiscal projections are based on the authorities' 2013 Budget Review released on February 27, 2013.

Spain. For 2013 and beyond, fiscal projections are based on the measures specified in the Stability Programme Update 2013–16, the revised fiscal policy recommendations by the European Council in June 2013, and the 2013 budget approved in December 2012.

Sweden. Fiscal projections are based on the authorities' 2014 budget bill. The impact of cyclical developments on the fiscal accounts is calculated using the Organisation for Economic Co-operation and Development's latest semielasticity.

Switzerland. Projections for 2012–18 are based on IMF staff calculations, which incorporate measures to restore balance in the federal accounts and strengthen social security finances.

Thailand. Fiscal projections are based on IMF staff estimates from the latest Article IV consultation, adjusted for changes in macroeconomic assumptions as well as in the classification method.

Turkey. Fiscal projections assume that both current expenditures and capital spending will be in line with the authorities' 2013–15 Medium-Term Programme, based on current trends and policies.

Ukraine. Projections are based on IMF staff estimates.

United Kingdom. Fiscal projections are based on the Treasury's 2013 budget, published in March 2013. The authorities' revenue projections are adjusted for differences in forecasts of macroeconomic variables (such as GDP growth). The IMF staff's projections also exclude the temporary effects of financial sector interventions and the effect on public sector net investment in 2012–13 of transferring assets from the Royal Mail Pension Plan to the public sector. Real government consumption

and investment are part of the real GDP path and may or may not be the same as those projected by the Office for Budget Responsibility. Transfers of profits from the Bank of England's Asset Purchases Facility affect general government net interest payments. The timing of these payments can create differences between fiscal year primary balances published by the authorities and calendar year balances shown in the *Fiscal Monitor*.

United States. Fiscal projections are based on the May 2013 Congressional Budget Office baseline, adjusted for the IMF staff's policy and macroeconomic assumptions. This baseline incorporates the provisions of the American Taxpayer Relief Act signed into law on January 2, 2013. Key near-term policy assumptions include replacement of automatic spending cuts (sequester) with back-loaded consolidation measures from fiscal year 2015 onward (the sequester is assumed to be in full effect from March 1, 2013, to September 30, 2014). Over the medium term, the IMF staff assumes that Congress will continue to make regular adjustments to Medicare payments (DocFix) and will extend certain traditional programs (such as the research and development tax credit). Fiscal projections are adjusted to reflect the IMF staff's forecasts for key macroeconomic and financial variables and different accounting treatment of financial sector support and are converted to a general government basis.

Vietnam. Revenues and financing projections reflect the information and measures in the approved budget and the IMF staff's macro framework assumptions.

Table SA.1. Advanced Economies: Definition and Coverage of *Fiscal Monitor* Data

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting	Coverage		Accounting	Coverage		Accounting
Country	Aggregate	Subsectors	practice	Aggregate	Subsectors	practice	Aggregate	Subsectors	practice
Australia	GG	CG, LG, SG	A	GG	CG, LG, SG	A	GG	CG, LG, SG	A
Austria	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Belgium	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Canada	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Czech Republic	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Denmark	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Estonia	GG	CG, LG, SS	C	–	–	–	GG	CG, LG, SS	C
Finland	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
France	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Germany	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Greece	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Hong Kong SAR	CG	CG	C	CG	CG	C	CG	CG	C
Iceland	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Ireland	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Israel	GG	CG, SS	A	GG	CG, SS	A	GG	CG, SS	A
Italy	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Japan	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Korea	CG	CG	C	CG	CG	C	GG	CG, LG	C
Netherlands	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
New Zealand	CG	CG	A	CG	CG	A	CG	CG	A
Norway	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Portugal	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Singapore	CG	CG	C	CG	CG	C	CG	CG	C
Slovak Republic	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Slovenia	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Spain	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Sweden	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Switzerland	GG	CG, SS	A	GG	CG, SS	A	GG	CG, SS	A
United Kingdom	GG	CG, LG	A	GG	CG, LG	A	GG	CG, LG	A
United States	GG	CG, LG, SG	A	GG	CG, LG, SG	A	GG	CG, LG, SG	A

Note: Coverage: BA = budgetary central government, CG = central government, EA = extrabudgetary units, FC = financial public corporations, GG = general government, LG = local governments, NFC = nonfinancial public corporations, NFPS = nonfinancial public sector, PS = public sector, SG = state governments, SS = social security funds. Accounting standard: A = accrual, C = cash.

[1] For most countries, fiscal data follow the IMF's *Government Finance Statistics Manual (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.

Table SA.2. Emerging Market Economies: Definition and Coverage of *Fiscal Monitor* Data

Country	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting practice	Coverage		Accounting practice	Coverage		Accounting practice
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Argentina[2]	GG	CG, SG, LG, SS	C	CG	CG	C	GG	CG, SG, LG, SS	C
Brazil[3]	NFPS	CG, SG, LG, SS, NFC	C	NFPS	CG, SG, LG, SS, NFC	C	NFPS	CG, SG, LG, SS, NFC	C
Bulgaria	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Chile	GG	CG, SG, LG, SS	A	CG	CG	A	GG	CG, SG, LG, SS	A
China	GG	CG, SG, LG	C	GG	CG, SG, LG	C	GG	CG, SG, LG	C
Colombia[4]	NFPS	CG, SG, LG, NFC	C/A	NFPS	CG, SG, LG, NFC	C/A	NFPS	CG, SG, LG, NFC	C/A
Egypt	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Hungary	NFPS	CG, LG, SS, NFC	A	NFPS	CG, LG, SS, NFC	A	NFPS	CG, LG, SS, NFC	A
India	GG	CG, SG	A	GG	CG, SG	A	GG	CG, SG	A
Indonesia	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Jordan	CG	CG	C	CG	CG	C	PS	CG, LG, NFC	C
Kazakhstan	GG	CG, LG	A	-	-	-	GG	CG, LG	A
Kenya	CG	CG	A	-	-	-	CG	CG	A
Latvia	GG	CG, LG, SS, NFC	C	GG	CG, LG, SS, NFC	C	GG	CG, LG, SS, NFC	C
Lithuania	GG	SG, EA, SS, LG	A	GG	SG, EA, SS, LG	A	GG	SG, EA, SS, LG	A
Malaysia	GG	CG, SG, LG	C	GG	CG	C	GG	CG, SG, LG	C
Mexico	PS	CG, SS, NFC, FC	C	CG	CG	C	PS	CG, SS, NFC, FC	C
Morocco	CG	CG	A	-	-	-	CG	CG	A
Nigeria	GG	GG	C	-	-	-	GG	GG	C
Pakistan	GG	CG,LG,SG	C	-	-	-	GG	CG,LG,SG	C
Peru	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Philippines	GG	CG,LG,SS	C	CG	CG	C	GG	CG,LG,SS	C
Poland	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Romania	GG	CG, SS, NFC	C	GG	CG, SS, NFC	C	GG	CG, SS, NFC	C
Russia	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Saudi Arabia	GG	CG, Other	C	-	-	-	GG	CG, Other	C
South Africa	GG	CG, SG, SS	C	GG	CG, SG, SS	C	GG	CG, SG, SS	C
Thailand	GG	CG, LG	A	GG	CG, LG	A	GG	CG, LG	A
Turkey	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Ukraine	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C

Note: Coverage: BA = budgetary central government, CG = central government, EA = extrabudgetary units, FC = financial public corporations, GG = general government, LG = local governments, NFC = nonfinancial public corporations, NFPS = nonfinancial public sector, PS = public sector, SG = state governments, SS = social security funds. Accounting standard: A = accrual, C = cash.

[1] For most countries, fiscal data follow the IMF's *Government Finance Statistics Manual (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.

[2] Total expenditure and the overall balance account for cash interest and the IMF staff's estimate of accrued interest payments.

[3] Gross public debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

[4] Revenue is recorded on a cash basis and expenditure on an accrual basis.

Table SA.3. Low-Income Countries: Definition and Coverage of *Fiscal Monitor* Data

	Overall Fiscal Balance[1]			Cyclically Adjusted Balance			Gross Debt		
	Coverage		Accounting	Coverage		Accounting	Coverage		Accounting
Country	Aggregate	Subsectors	practice	Aggregate	Subsectors	practice	Aggregate	Subsectors	practice
Armenia	CG	CG	C	CG	CG	C	CG	CG	C
Bolivia	NFPS	CG, LG, SS, NFC	C	NFPS	CG, LG, SS, NFC	C	NFPS	CG, LG, SS, NFC	C
Burkina Faso	CG	CG	C	—	—	—	CG	CG	C
Cambodia	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Cameroon	NFPS	CG, NFC	C	—	—	—	NFPS	CG, NFC	C
Chad	NFPS	CG, NFC	C	—	—	—	NFPS	CG, NFC	C
Congo, Dem. Rep. of the	CG	CG	C	—	—	—	CG	CG	C
Congo, Rep. of	CG	CG	C	—	—	—	CG	CG	C
Côte d'Ivoire	CG	CG	A	—	—	—	CG	CG	A
Ethiopia	CG	CG	C	—	—	—	CG	CG	C
Georgia	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Ghana	CG	CG	C	—	—	—	CG	CG	C
Haiti	CG	CG	C	CG	CG	C	CG	CG	C
Honduras	NFPS	CG, LG, SS, NFC	A	NFPS	CG, LG, SS, NFC	A	NFPS	CG, LG, SS, NFC	A
Lao P.D.R.[2]	CG	CG	C	CG	CG	C	CG	CG	C
Madagascar	CG	CG	C	—	—	—	CG	CG	C
Mali	CG	CG	C/A	—	—	—	CG	CG	C/A
Moldova	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Mozambique	CG	CG	C	CG	CG	C	CG	CG	C
Myanmar	NFPS	NFPS	C	—	—	—	NFPS	NFPS	C
Nepal	CG	CG	C	CG	CG	C	CG	CG	C
Nicaragua	NFPS	CG, SG, LG, SS, NFC	C	NFPS	CG, SG, LG, SS, NFC	C	NFPS	CG, SG, LG, SS, NFC	C
Senegal	CG	CG	C	—	—	—	CG	CG	C
Sudan	CG	CG	A	—	—	—	CG	CG	A
Tanzania	CG	CG	C	—	—	—	CG	CG	C
Uganda	CG	CG	C	—	—	—	CG	CG	C
Uzbekistan[3]	GG	CG, SG, LG, SS, FC	C	GG	CG, SG, LG, SS, FC	C	GG	CG, SG, LG, SS, FC	C
Vietnam	GG	CG, SG, LG, FC	C	GG	CG, SG, LG, FC	C	GG	CG, SG, LG, FC	C
Yemen	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Zambia	CG	CG	C	—	—	—	CG	CG	C

Note: Coverage: BA = budgetary central government, CG = central government, EA = extrabudgetary units, FC = financial public corporations, GG = general government, LG = local governments, NFC = nonfinancial public corporations, NFPS = nonfinancial public sector, PS = public sector, SG = state governments, SS = social security funds. Accounting standard: A = accrual, C = cash.

[1] For most countries, fiscal data follow the IMF's *Government Finance Statistics Manual (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.

[2] Lao P.D.R.'s fiscal spending includes capital spending by local governments financed by loans provided by the central bank.

[3] Includes the Fund for Reconstruction and Development.

Definition and coverage of fiscal data

Economy groupings

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

Advanced economies	Emerging market economies	Low-income countries	G7	G20[1]	Advanced G20[1]	Emerging G20
Australia	Argentina	Armenia	Canada	Argentina	Australia	Argentina
Austria	Brazil	Bolivia	France	Australia	Canada	Brazil
Belgium	Bulgaria	Burkina Faso	Germany	Brazil	France	China
Canada	Chile	Cambodia	Italy	Canada	Germany	India
Czech Republic	China	Cameroon	Japan	China	Italy	Indonesia
Denmark	Colombia	Chad	United Kingdom	France	Japan	Mexico
Estonia	Egypt	Congo, Dem. Rep. of the	United States	Germany	Korea	Russia
Finland	Hungary	Congo, Rep. of		India	United Kingdom	Saudi Arabia
France	India	Côte d'Ivoire		Indonesia	United States	South Africa
Germany	Indonesia	Ethiopia		Italy		Turkey
Greece	Jordan	Georgia		Japan		
Hong Kong SAR	Kazakhstan	Ghana		Korea		
Iceland	Kenya	Haiti		Mexico		
Ireland	Latvia	Honduras		Russia		
Israel	Lithuania	Lao P.D.R.		Saudi Arabia		
Italy	Malaysia	Madagascar		South Africa		
Japan	Mexico	Mali		Turkey		
Korea	Morocco	Moldova		United Kingdom		
Netherlands	Nigeria	Mozambique		United States		
New Zealand	Pakistan	Myanmar				
Norway	Peru	Nepal				
Portugal	Philippines	Nicaragua				
Singapore	Poland	Senegal				
Slovak Republic	Romania	Sudan				
Slovenia	Russia	Tanzania				
Spain	Saudi Arabia	Uganda				
Sweden	South Africa	Uzbekistan				
Switzerland	Thailand	Vietnam				
United Kingdom	Turkey	Yemen				
United States	Ukraine	Zambia				

[1]Does not include European Union aggregate.

Economy groupings *(continued)*

Euro area	Emerging Asia	Emerging Europe	Emerging Latin America	Emerging Middle East and North Africa	Low-income Asia	Low-income Latin America
Austria	China	Bulgaria	Argentina	Egypt	Cambodia	Bolivia
Belgium	India	Hungary	Brazil	Jordan	Lao P.D.R.	Haiti
Cyprus	Indonesia	Kazakhstan	Chile	Morocco	Myanmar	Honduras
Estonia	Malaysia	Latvia	Colombia		Nepal	Nicaragua
Finland	Pakistan	Lithuania	Mexico		Vietnam	
France	Philippines	Poland	Peru			
Germany	Thailand	Romania				
Greece		Russia				
Ireland		Turkey				
Italy		Ukraine				
Luxembourg						
Malta						
Netherlands						
Portugal						
Slovak Republic						
Slovenia						
Spain						

Low-income sub-Saharan Africa	Low-income others	Low-income oil producers	Oil producers
Burkina Faso	Armenia	Cameroon	Algeria
Cameroon	Georgia	Chad	Angola
Chad	Moldova	Congo, Rep. of	Azerbaijan
Congo, Dem. Rep. of the	Sudan	Sudan	Bahrain
Congo, Rep. of	Uzbekistan	Vietnam	Brunei Darussalam
Côte d'Ivoire	Yemen	Yemen	Cameroon
Ethiopia			Chad
Ghana			Congo, Rep. of
Madagascar			Ecuador
Mali			Equatorial Guinea
Mozambique			Gabon
Senegal			Indonesia
Tanzania			Iran
Uganda			Kazakhstan
Zambia			Kuwait
			Libya
			Mexico
			Nigeria
			Norway
			Oman
			Qatar
			Saudi Arabia
			Sudan
			Syria
			Timor-Leste
			Trinidad and Tobago
			United Arab Emirates
			Venezuela
			Vietnam
			Yemen

Statistical Table 1. Advanced Economies: General Government Overall Balance and Primary Balance

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Balance													
Australia	1.8	1.5	–1.1	–4.6	–5.1	–4.5	–3.7	–3.1	–2.3	–0.8	0.3	0.6	0.7
Austria	–1.7	–1.0	–1.0	–4.1	–4.5	–2.5	–2.5	–2.6	–2.4	–1.9	–1.5	–1.4	–1.4
Belgium	0.3	–0.1	–1.1	–5.6	–3.9	–3.9	–4.0	–2.8	–2.5	–1.5	–0.5	0.1	0.7
Canada	1.8	1.5	–0.3	–4.5	–4.9	–3.7	–3.4	–3.4	–2.9	–2.3	–1.8	–1.4	–1.4
Czech Republic	–2.4	–0.7	–2.2	–5.8	–4.8	–3.3	–4.4	–2.9	–2.9	–2.6	–2.4	–2.4	–2.4
Denmark	5.0	4.8	3.3	–2.8	–2.7	–2.0	–4.2	–1.7	–2.0	–2.9	–2.2	–1.0	–0.4
Estonia	3.2	2.8	–2.3	–2.0	0.4	1.7	–0.2	0.3	0.2	0.1	0.1	0.1	0.1
Finland	4.1	5.3	4.3	–2.7	–2.8	–1.1	–2.3	–2.8	–2.1	–1.6	–1.3	–1.0	–0.9
France	–2.4	–2.8	–3.3	–7.6	–7.1	–5.3	–4.9	–4.0	–3.5	–2.8	–2.0	–1.2	–0.4
Germany	–1.7	0.2	–0.1	–3.1	–4.2	–0.8	0.1	–0.4	–0.1	0.0	0.1	0.2	0.3
Greece	–6.0	–6.8	–9.9	–15.6	–10.8	–9.6	–6.3	–4.1	–3.3	–2.1	–0.7	–0.6	–0.8
Hong Kong SAR	4.1	7.8	0.1	1.5	4.2	3.9	3.2	2.6	3.3	3.7	4.7	4.7	4.7
Iceland	6.3	5.4	–0.5	–8.6	–6.4	–5.0	–3.8	–2.7	–1.8	–1.3	–0.7	–0.1	0.2
Ireland[1]	2.9	0.1	–7.3	–13.8	–30.5	–13.1	–7.6	–7.6	–5.0	–2.9	–2.4	–2.0	–1.7
Israel	–2.6	–1.5	–3.7	–6.3	–4.6	–4.2	–4.9	–5.1	–3.3	–3.0	–3.0	–3.0	–3.1
Italy	–3.4	–1.6	–2.7	–5.4	–4.3	–3.7	–2.9	–3.2	–2.1	–1.8	–1.1	–0.5	–0.2
Japan	–3.7	–2.1	–4.1	–10.4	–9.3	–9.9	–10.1	–9.5	–6.8	–5.7	–5.0	–5.1	–5.6
Korea	1.1	2.3	1.6	0.0	1.7	1.8	1.9	1.4	1.7	1.9	2.2	2.5	2.7
Netherlands	0.5	0.2	0.5	–5.6	–5.1	–4.4	–4.1	–3.0	–3.2	–4.8	–4.9	–4.7	–4.4
New Zealand	4.1	3.2	1.5	–1.5	–5.1	–4.9	–2.0	–1.3	–0.4	0.2	0.6	0.9	0.9
Norway	18.3	17.3	18.8	10.5	11.1	13.4	13.8	12.4	11.6	10.2	9.2	8.2	7.4
Portugal	–3.8	–3.2	–3.7	–10.2	–9.9	–4.4	–6.4	–5.5	–4.0	–2.5	–2.0	–1.7	–1.4
Singapore	7.1	12.0	6.5	–0.5	7.4	9.6	7.4	5.3	4.8	4.6	4.6	4.5	4.2
Slovak Republic	–2.6	–1.6	–2.0	–8.0	–7.7	–5.1	–4.3	–3.0	–3.8	–3.2	–3.2	–3.2	–3.2
Slovenia	–0.8	0.3	–0.3	–5.5	–5.4	–5.6	–3.2	–7.0	–3.8	–3.9	–3.7	–3.0	–2.4
Spain[1]	2.4	1.9	–4.5	–11.2	–9.7	–9.6	–10.8	–6.7	–5.8	–5.0	–4.0	–3.0	–2.0
Sweden	2.2	3.5	2.2	–1.0	0.0	0.0	–0.7	–1.4	–1.5	–0.5	–0.2	0.3	0.6
Switzerland	0.9	1.3	1.8	0.5	0.2	0.3	0.3	0.2	0.5	0.7	0.9	0.9	0.9
United Kingdom	–2.8	–2.8	–5.0	–11.3	–10.0	–7.8	–7.9	–6.1	–5.8	–4.9	–3.7	–2.7	–2.0
United States	–2.0	–2.7	–6.5	–12.9	–10.8	–9.7	–8.3	–5.8	–4.6	–3.9	–3.9	–3.8	–3.8
Average	–1.3	–1.1	–3.5	–8.9	–7.7	–6.5	–5.9	–4.5	–3.6	–2.9	–2.5	–2.3	–2.2
Euro area	–1.3	–0.7	–2.1	–6.4	–6.2	–4.2	–3.7	–3.1	–2.5	–2.1	–1.6	–1.2	–0.8
G7	–2.2	–2.0	–4.5	–10.0	–8.8	–7.6	–6.9	–5.4	–4.2	–3.5	–3.2	–3.0	–2.9
G20 advanced	–2.0	–1.8	–4.2	–9.6	–8.4	–7.2	–6.5	–5.1	–4.0	–3.3	–2.9	–2.7	–2.6
Primary Balance													
Australia	1.5	1.3	–1.1	–4.5	–4.8	–3.9	–3.0	–2.4	–1.6	–0.1	1.0	1.2	1.2
Austria	0.5	1.0	1.1	–1.9	–2.3	–0.3	–0.3	–0.6	–0.5	0.1	0.4	0.5	0.5
Belgium	4.1	3.6	2.5	–2.2	–0.6	–0.6	–0.7	0.4	0.9	2.0	2.8	3.3	3.8
Canada	2.4	2.0	–0.2	–3.7	–4.3	–3.3	–2.8	–2.8	–2.4	–1.9	–1.5	–1.1	–1.0
Czech Republic	–1.7	0.0	–1.5	–4.8	–3.6	–2.0	–3.1	–1.5	–1.5	–1.1	–0.9	–0.7	–0.7
Denmark	5.8	5.3	3.4	–2.4	–2.2	–1.5	–3.8	–1.4	–1.8	–2.4	–1.8	–0.8	–0.2
Estonia	3.3	2.9	–2.4	–2.2	0.3	1.6	–0.2	0.3	0.3	0.3	0.2	0.2	0.2
Finland	3.7	4.7	3.4	–3.3	–3.0	–1.4	–2.3	–2.7	–2.1	–1.8	–1.5	–1.4	–1.2
France	0.0	–0.3	–0.7	–5.4	–4.8	–2.8	–2.5	–2.0	–1.5	–0.7	0.1	0.9	1.7
Germany	0.8	2.7	2.3	–0.8	–2.0	1.1	2.3	1.7	1.8	1.9	1.9	2.0	2.0
Greece	–1.3	–2.0	–4.8	–10.5	–4.9	–2.4	–1.3	0.0	1.4	3.0	4.5	4.5	4.2
Hong Kong SAR	3.8	7.6	–0.3	1.3	4.0	3.7	3.0	2.4	3.1	3.6	4.6	4.6	4.6
Iceland	6.7	5.7	–0.5	–6.5	–2.7	–0.8	0.6	1.1	2.2	2.7	3.2	3.7	4.0
Ireland[1]	3.7	0.7	–6.6	–12.4	–27.9	–10.4	–4.6	–3.3	–0.7	1.4	1.9	2.4	2.7
Israel	2.7	3.2	0.5	–2.4	–0.6	–0.3	–1.8	–2.4	–0.4	–0.1	0.5	0.5	0.4
Italy	1.0	3.1	2.2	–1.0	0.0	1.0	2.3	2.0	3.1	3.5	4.4	5.0	5.4
Japan	–3.7	–2.1	–3.8	–9.9	–8.6	–9.1	–9.3	–8.8	–6.1	–4.9	–3.9	–3.5	–3.4
Korea	2.5	1.5	1.2	–0.7	0.9	1.0	1.2	0.5	1.1	1.3	1.5	2.1	2.1
Netherlands	2.1	1.8	2.1	–4.1	–3.8	–3.0	–2.9	–1.8	–2.0	–3.3	–3.3	–3.0	–2.6
New Zealand	3.7	3.0	1.2	–2.0	–5.5	–4.8	–1.8	–1.3	–0.5	0.2	0.6	0.9	0.9
Norway	16.1	14.4	15.8	8.1	9.0	11.3	11.9	10.5	9.6	8.2	7.1	6.2	5.3
Portugal	–1.3	–0.6	–1.0	–7.5	–7.1	–0.6	–2.5	–1.4	0.1	1.6	2.1	2.5	2.8
Singapore	5.7	10.5	5.0	–1.9	5.9	8.1	5.9	3.8	3.4	3.1	3.1	3.0	2.7
Slovak Republic	–1.8	–0.8	–1.2	–6.9	–6.5	–3.7	–2.7	–1.3	–2.0	–1.2	–1.1	–0.9	–1.0
Slovenia	0.3	1.2	0.5	–4.7	–4.1	–4.3	–1.5	–4.7	–0.5	–0.5	0.0	0.8	1.5
Spain[1]	3.7	3.0	–3.4	–9.9	–8.3	–7.6	–8.3	–3.7	–2.6	–1.7	–0.6	0.4	1.4
Sweden	3.0	4.2	2.7	–0.7	0.2	0.3	–0.7	–1.3	–1.4	–0.5	–0.1	0.3	0.6
Switzerland	1.9	2.1	2.4	1.1	0.8	0.8	0.7	0.7	1.0	1.2	1.5	1.5	1.6
United Kingdom	–1.3	–1.3	–3.4	–9.8	–7.4	–5.0	–5.6	–4.7	–3.7	–2.7	–1.1	0.3	1.0
United States	–0.2	–0.8	–4.6	–11.2	–8.9	–7.6	–6.1	–3.6	–2.6	–1.9	–1.9	–1.6	–1.3
Average	0.2	0.5	–1.8	–7.3	–6.1	–4.7	–4.1	–2.7	–1.8	–1.1	–0.7	–0.3	0.0
Euro area	1.2	1.9	0.5	–3.9	–3.7	–1.5	–0.9	–0.4	0.2	0.6	1.2	1.6	2.0
G7	–0.5	–0.2	–2.6	–8.3	–7.0	–5.6	–4.9	–3.4	–2.3	–1.6	–1.2	–0.8	–0.5
G20 advanced	–0.4	–0.1	–2.4	–8.0	–6.6	–5.3	–4.6	–3.2	–2.1	–1.4	–1.0	–0.6	–0.3

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. For country-specific details, see "Data and Conventions" in text and Table SA.1.

[1] Including financial sector support, estimated for Spain at 0.5 percent of GDP in 2011 and 3.7 percent of GDP in 2012.

Statistical Table 2. Advanced Economies: General Government Cyclically Adjusted Balance and Cyclically Adjusted Primary Balance

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Cyclically Adjusted Balance													
Australia	1.8	1.2	–1.3	–4.5	–4.9	–4.4	–3.7	–3.1	–2.3	–0.8	0.3	0.6	0.8
Austria	–2.3	–2.6	–2.6	–3.0	–3.6	–2.3	–2.1	–1.8	–1.8	–1.6	–1.4	–1.4	–1.4
Belgium	0.1	–1.0	–1.9	–4.7	–3.7	–4.1	–3.8	–2.3	–2.1	–1.1	–0.2	0.3	0.8
Canada	1.0	0.8	–0.6	–3.1	–4.2	–3.4	–3.0	–2.8	–2.3	–1.9	–1.5	–1.3	–1.3
Czech Republic	–4.0	–3.1	–4.5	–5.7	–4.9	–3.4	–3.6	–1.7	–1.7	–1.7	–1.8	–2.1	0.0
Denmark	3.4	3.2	1.9	–1.0	–1.5	–0.6	–2.2	0.5	–0.1	–1.3	–1.1	–0.9	–0.3
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	2.3	2.1	1.8	–0.1	–1.7	–1.2	–1.4	–1.1	–0.6	–0.6	–0.7	–0.9	–0.9
France	–3.2	–4.0	–3.9	–5.9	–5.9	–4.8	–4.0	–2.8	–2.3	–1.8	–1.3	–0.7	–0.2
Germany	–2.2	–1.2	–1.3	–1.1	–3.4	–1.1	0.0	–0.1	0.0	0.0	0.1	0.1	0.2
Greece	–8.7	–10.8	–14.3	–19.1	–12.3	–8.3	–2.6	0.6	1.1	0.9	1.2	0.5	–0.4
Hong Kong SAR[1]	0.2	1.3	–0.6	–2.4	–1.6	–2.5	–1.6	–0.8	–0.5	–0.3	0.7	0.9	1.1
Iceland	4.9	3.2	–17.8	–9.6	–7.4	–4.8	–3.3	–2.4	–2.0	–1.6	0.0	–0.2	0.1
Ireland[1]	–4.2	–8.7	–11.9	–9.9	–8.3	–7.0	–5.9	–5.1	–3.6	–2.1	–2.1	–2.0	–2.0
Israel	–0.5	–1.7	–3.9	–5.3	–4.3	–4.3	–4.8	–5.1	–3.4	–3.0	–3.0	–3.1	–3.1
Italy	–4.7	–3.3	–3.6	–3.5	–3.4	–2.8	–1.2	–0.7	0.1	–0.1	0.1	0.1	0.1
Japan	–3.6	–2.2	–3.6	–7.5	–7.9	–8.5	–9.2	–9.2	–6.7	–5.7	–5.0	–5.1	–5.6
Korea	1.1	2.3	1.8	0.7	1.7	1.8	2.2	1.7	1.7	1.9	2.2	2.5	2.7
Netherlands	–0.1	–1.4	–1.1	–4.8	–4.4	–3.7	–2.3	0.1	0.1	–1.9	–2.6	–3.0	–3.1
New Zealand	3.1	2.4	1.3	–1.0	–4.5	–4.4	–1.9	–1.2	–0.5	0.2	0.6	0.9	1.0
Norway[1]	–3.5	–3.3	–3.5	–5.5	–5.4	–4.7	–5.2	–5.7	–5.9	–5.8	–5.8	–5.8	–5.7
Portugal[1]	–3.8	–4.0	–4.3	–9.4	–9.7	–3.6	–4.6	–3.3	–2.2	–1.3	–1.4	–1.5	–1.4
Singapore	7.1	11.6	6.6	1.0	6.7	9.1	7.5	5.1	4.8	4.4	4.4	4.3	4.0
Slovak Republic	–2.5	–2.6	–3.0	–6.6	–7.3	–4.9	–3.9	–2.2	–3.1	–2.7	–2.9	–3.0	–3.2
Slovenia	–2.4	–2.8	–3.6	–4.7	–4.9	–4.0	–1.6	–0.5	–0.7	–1.2	–1.8	–2.0	–2.2
Spain[1]	1.3	0.5	–5.6	–10.0	–8.4	–7.9	–5.4	–4.6	–4.1	–3.5	–2.8	–2.1	–1.4
Sweden[1]	1.3	1.6	1.0	–0.1	0.6	–0.1	–0.7	–1.2	–1.3	–0.4	–0.1	0.3	0.6
Switzerland[1]	0.9	0.7	1.1	0.8	0.1	0.1	0.3	0.4	0.6	0.8	0.9	0.9	0.9
United Kingdom	–4.6	–5.3	–6.6	–10.3	–8.4	–6.0	–5.8	–4.0	–3.9	–3.2	–2.3	–1.5	–1.2
United States[1]	–2.5	–2.9	–5.0	–7.8	–8.0	–7.3	–6.3	–3.9	–3.2	–2.7	–3.2	–3.5	–3.7
Average	–2.2	–2.2	–3.7	–6.2	–6.2	–5.4	–4.8	–3.4	–2.7	–2.3	–2.2	–2.2	–2.2
Euro area	–2.2	–2.2	–3.3	–4.8	–5.0	–3.7	–2.7	–1.6	–1.2	–1.1	–0.9	–0.7	–0.5
G7	–2.8	–2.8	–4.1	–6.5	–6.9	–6.0	–5.5	–4.0	–3.1	–2.6	–2.6	–2.7	–2.8
G20 advanced	–2.6	–2.5	–3.8	–6.3	–6.6	–5.7	–5.2	–3.7	–2.9	–2.4	–2.3	–2.3	–2.4
Cyclically Adjusted Primary Balance													
Australia	1.4	1.0	–1.4	–4.4	–4.6	–3.9	–3.1	–2.4	–1.6	–0.1	1.0	1.2	1.2
Austria	–0.1	–0.5	–0.5	–0.9	–1.5	–0.1	0.0	0.1	0.1	0.4	0.6	0.6	0.5
Belgium	3.9	2.7	1.7	–1.3	–0.4	–0.8	–0.5	0.9	1.3	2.3	3.1	3.5	3.9
Canada	1.6	1.4	–0.6	–2.3	–3.6	–3.0	–2.4	–2.2	–1.8	–1.4	–1.2	–1.0	–1.0
Czech Republic	–3.3	–2.3	–3.7	–4.7	–3.7	–2.2	–2.4	–0.3	–0.3	–0.3	–0.3	–0.4	1.7
Denmark	4.2	3.6	1.9	–0.7	–1.0	–0.1	–1.8	0.8	0.1	–0.8	–0.7	–0.7	–0.1
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	1.9	1.4	0.8	–0.7	–1.9	–1.4	–1.3	–1.0	–0.6	–0.8	–1.0	–1.2	–1.2
France	–0.8	–1.4	–1.2	–3.8	–3.7	–2.4	–1.6	–0.8	–0.3	0.2	0.8	1.4	1.9
Germany	0.3	1.4	1.1	1.1	–1.3	0.8	2.2	2.0	2.0	2.0	1.9	1.9	1.9
Greece	–3.7	–5.6	–8.7	–13.6	–6.2	–1.3	2.0	4.2	5.4	5.6	6.1	5.5	4.6
Hong Kong SAR[1]	–0.2	1.0	–1.0	–2.6	–1.8	–2.7	–1.8	–1.0	–0.7	–0.4	0.6	0.8	1.0
Iceland	5.3	3.6	–17.8	–7.6	–3.9	–0.7	1.1	1.4	2.1	2.5	3.9	3.6	3.8
Ireland[1]	–3.4	–8.0	–11.1	–8.5	–5.8	–4.3	–3.0	–1.0	0.7	2.2	2.2	2.4	2.4
Israel	4.6	3.1	0.4	–1.4	–0.4	–0.4	–1.7	–2.5	–0.5	–0.1	0.5	0.5	0.3
Italy	–0.2	1.6	1.4	0.7	0.8	1.7	3.8	4.3	5.0	5.0	5.4	5.5	5.6
Japan	–3.7	–2.3	–3.3	–7.0	–7.3	–7.7	–8.4	–8.5	–6.0	–4.8	–3.9	–3.5	–3.4
Korea	2.5	1.5	1.4	0.0	1.0	1.0	1.6	0.8	1.1	1.3	1.5	2.1	2.1
Netherlands	1.5	0.3	0.6	–3.3	–3.1	–2.4	–1.2	1.2	1.2	–0.4	–1.0	–1.3	–1.4
New Zealand	2.7	2.1	1.0	–1.5	–4.8	–4.3	–1.6	–1.2	–0.5	0.2	0.6	0.8	1.0
Norway[1]	–6.5	–7.2	–7.8	–8.5	–8.1	–7.5	–7.6	–8.3	–8.4	–8.3	–8.3	–8.3	–8.2
Portugal[1]	–1.3	–1.4	–1.6	–6.8	–7.0	0.1	–0.8	0.6	1.7	2.7	2.7	2.8	2.8
Singapore	5.6	10.1	5.1	–0.4	5.2	7.5	6.0	3.6	3.3	3.0	3.0	2.8	2.6
Slovak Republic	–1.8	–1.7	–2.1	–5.5	–6.2	–3.5	–2.3	–0.5	–1.3	–0.8	–0.8	–0.8	–1.0
Slovenia	–1.2	–1.8	–2.8	–3.8	–3.6	–2.6	0.1	1.6	2.4	2.0	1.7	1.7	1.7
Spain[1]	2.6	1.6	–4.5	–8.7	–7.0	–6.0	–3.0	–1.8	–1.0	–0.3	0.5	1.2	2.0
Sweden[1]	2.1	2.4	1.5	0.1	0.8	0.2	–0.7	–1.1	–1.2	–0.4	–0.1	0.3	0.6
Switzerland[1]	1.8	1.4	1.7	1.5	0.7	0.6	0.8	0.8	1.2	1.3	1.5	1.6	1.5
United Kingdom	–3.1	–3.7	–5.1	–8.8	–5.9	–3.3	–3.5	–2.6	–1.8	–1.1	0.2	1.4	1.8
United States[1]	–0.7	–1.0	–3.1	–6.1	–6.3	–5.3	–4.2	–1.9	–1.2	–0.8	–1.2	–1.3	–1.2
Average	–0.6	–0.6	–2.1	–4.7	–4.6	–3.6	–3.0	–1.7	–1.0	–0.5	–0.4	–0.2	0.0
Euro area	0.4	0.5	–0.6	–2.4	–2.6	–1.1	0.0	1.1	1.4	1.6	1.9	2.1	2.3
G7	–1.1	–0.9	–2.2	–4.9	–5.1	–4.1	–3.5	–2.0	–1.2	–0.7	–0.6	–0.5	–0.3
G20 advanced	–0.9	–0.8	–2.1	–4.7	–4.9	–3.9	–3.3	–2.0	–1.1	–0.6	–0.5	–0.3	–0.2

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

Note: Cyclically adjusted primary balance is defined as the cyclically adjusted balance excluding net interest payments.

[1] Including adjustments beyond the output cycle. For country-specific details, see "Data and Conventions" in text and Table SA.1.

Statistical Table 3. Advanced Economies: General Government Revenue and Expenditure

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue													
Australia	36.6	36.0	34.1	33.5	32.1	32.3	33.3	33.9	34.4	34.9	35.3	35.4	35.4
Austria	47.5	47.6	48.3	48.5	48.3	48.3	49.1	49.1	48.7	48.7	48.7	48.7	48.7
Belgium	48.8	48.1	48.7	48.1	48.7	49.5	50.9	51.1	51.1	51.7	52.1	52.1	52.1
Canada	40.6	40.1	38.7	38.8	38.2	38.1	37.8	37.6	37.8	38.1	38.3	38.5	38.4
Czech Republic	39.6	40.3	38.9	38.9	39.1	40.0	40.3	40.2	40.1	40.0	39.9	39.8	39.8
Denmark	56.8	55.7	54.9	55.2	54.8	55.5	55.1	56.6	55.9	53.9	54.1	54.4	54.4
Estonia	37.8	37.7	38.9	45.2	44.9	43.5	43.8	44.3	43.1	42.6	42.1	41.3	40.5
Finland	53.3	52.7	53.6	53.4	53.0	54.1	54.3	55.1	55.1	55.2	55.4	55.3	55.3
France	50.6	49.9	49.9	49.2	49.5	50.6	51.8	52.9	52.9	52.9	52.9	52.9	52.9
Germany	43.7	43.7	44.0	45.1	43.6	44.3	44.8	44.4	44.3	44.1	44.0	44.1	44.1
Greece	39.2	40.7	40.7	38.3	40.6	42.4	44.1	42.9	43.6	42.4	42.0	42.0	42.0
Hong Kong SAR	19.4	22.7	17.8	18.0	21.1	23.0	21.7	21.2	21.6	22.0	22.4	22.4	22.5
Iceland	48.0	47.7	44.1	41.0	41.5	41.7	43.1	43.8	43.8	43.0	42.9	42.8	42.5
Ireland	37.3	36.7	35.4	34.5	34.9	34.1	34.5	35.2	35.2	35.0	34.8	34.5	34.4
Israel	43.1	42.4	39.5	36.7	37.6	37.7	36.2	36.3	37.1	37.5	37.5	37.6	37.5
Italy	45.0	46.0	45.9	46.5	46.1	46.2	47.7	47.9	48.0	48.0	48.1	48.2	48.3
Japan	30.8	31.2	31.6	29.6	29.6	30.8	31.1	31.6	33.3	33.9	35.0	35.1	35.1
Korea	22.7	24.2	24.0	23.0	22.7	23.3	23.3	23.2	23.3	23.4	23.6	23.7	23.9
Netherlands	46.1	45.4	46.7	45.2	45.8	45.3	46.1	47.4	46.5	46.2	46.0	45.9	45.9
New Zealand	38.7	37.3	36.8	35.7	35.0	35.1	34.8	34.4	34.0	33.9	33.8	33.7	33.7
Norway	58.2	57.5	58.4	56.5	56.0	57.1	56.9	55.8	55.3	54.6	54.1	53.7	53.4
Portugal	40.6	41.1	41.1	39.6	41.6	45.0	41.0	43.1	42.7	42.2	42.2	41.9	41.8
Singapore	20.1	24.0	24.2	17.7	21.6	24.2	22.4	21.7	22.5	22.5	22.4	22.2	22.1
Slovak Republic	27.0	28.9	31.6	33.5	32.3	33.3	33.1	34.3	32.7	32.5	32.0	31.9	31.8
Slovenia	41.7	40.5	41.2	40.7	41.7	41.4	42.5	42.5	43.8	43.8	43.9	44.0	44.0
Spain	40.7	41.1	37.0	35.1	36.7	36.3	37.1	37.7	38.2	38.3	38.6	38.9	39.2
Sweden	54.9	54.5	53.9	54.0	52.3	51.5	51.4	51.9	51.2	51.1	50.9	51.0	51.0
Switzerland	35.4	34.7	33.1	33.7	32.9	33.5	33.0	33.1	33.1	33.2	33.2	33.2	33.2
United Kingdom	37.3	37.0	37.4	35.5	36.1	36.9	36.9	38.0	37.2	37.4	37.4	37.5	37.6
United States	32.6	32.9	31.6	29.9	30.3	30.5	30.4	32.5	33.0	33.8	33.6	33.4	33.3
Average	37.2	37.6	37.2	35.8	35.6	36.2	36.2	37.3	37.7	38.0	38.1	38.0	37.9
Euro area	45.3	45.3	45.1	44.9	44.8	45.4	46.3	46.7	46.6	46.6	46.6	46.7	46.7
G7	36.4	36.8	36.4	35.0	34.9	35.5	35.4	36.8	37.3	37.7	37.8	37.7	37.7
G20 advanced	36.0	36.4	36.0	34.7	34.4	35.0	35.0	36.3	36.7	37.1	37.2	37.1	37.1
Expenditure													
Australia	34.8	34.5	35.2	38.1	37.2	36.8	37.1	37.0	36.7	35.7	35.0	34.7	34.7
Austria	49.1	48.6	49.3	52.6	52.8	50.7	51.7	51.8	51.1	50.6	50.2	50.1	50.1
Belgium	48.5	48.2	49.8	53.7	52.6	53.4	54.9	53.9	53.6	53.2	52.6	52.0	51.4
Canada	38.8	38.6	39.0	43.4	43.1	41.8	41.1	41.0	40.6	40.4	40.1	39.9	39.8
Czech Republic	42.0	41.0	41.1	44.7	43.8	43.2	44.6	43.1	43.0	42.6	42.4	42.2	42.2
Denmark	51.7	50.9	51.6	58.0	57.5	57.4	59.3	58.3	57.9	56.7	56.2	55.3	54.7
Estonia	34.6	34.9	41.2	47.2	44.5	41.8	44.1	43.9	42.9	42.5	42.0	41.2	40.5
Finland	49.2	47.4	49.2	56.1	55.8	55.3	56.6	57.9	57.2	56.8	56.6	56.4	56.2
France	53.0	52.6	53.3	56.8	56.6	55.9	56.6	56.9	56.4	55.7	54.9	54.1	53.3
Germany	45.3	43.5	44.1	48.2	47.7	45.0	44.6	44.8	44.4	44.1	43.9	43.9	43.9
Greece	45.3	47.5	50.6	54.0	51.4	52.0	50.4	47.0	46.9	44.5	42.7	42.6	42.8
Hong Kong SAR	15.3	14.9	17.7	16.5	16.9	19.1	18.5	18.6	18.4	18.3	17.7	17.7	17.8
Iceland	41.6	42.3	44.7	49.6	47.9	46.7	46.9	46.4	45.6	44.3	43.6	42.9	42.3
Ireland	34.4	36.7	42.7	48.3	65.4	47.2	42.1	42.8	40.2	37.9	37.3	36.5	36.1
Israel	45.7	44.0	43.2	43.1	42.2	41.9	41.0	41.3	40.4	40.5	40.6	40.6	40.6
Italy	48.5	47.6	48.6	51.9	50.4	49.9	50.6	51.1	50.0	49.8	49.2	48.8	48.5
Japan	34.5	33.3	35.7	40.0	38.9	40.8	41.3	41.1	40.1	39.6	40.0	40.3	40.7
Korea	21.5	21.9	22.4	23.0	21.0	21.4	21.4	21.8	21.6	21.6	21.4	21.2	21.2
Netherlands	45.5	45.3	46.2	50.8	50.9	49.6	50.2	50.4	49.7	51.0	50.9	50.6	50.4
New Zealand	34.6	34.1	35.3	37.3	40.1	39.9	36.8	35.7	34.5	33.7	33.2	32.9	32.8
Norway	39.9	40.2	39.6	45.9	44.9	43.7	43.1	43.4	43.8	44.4	44.9	45.4	45.9
Portugal	44.3	44.4	44.8	49.8	51.5	49.4	47.5	48.6	46.7	44.7	44.2	43.6	43.2
Singapore	12.9	12.1	17.7	18.2	14.2	14.6	15.0	16.4	17.7	17.9	17.8	17.8	18.0
Slovak Republic	29.5	30.5	33.6	41.6	40.0	38.3	37.4	37.3	36.5	35.7	35.2	35.1	35.0
Slovenia	42.5	40.2	41.5	46.2	47.0	47.1	45.7	49.5	47.6	47.7	47.6	47.0	46.4
Spain	38.4	39.2	41.5	46.3	46.4	45.9	48.0	44.4	44.0	43.3	42.6	41.9	41.2
Sweden	52.7	51.0	51.7	54.9	52.3	51.5	52.1	53.3	52.7	51.7	51.1	50.7	50.4
Switzerland	34.4	33.4	31.3	33.2	32.8	33.2	32.8	32.9	32.6	32.5	32.3	32.3	32.3
United Kingdom	40.1	39.8	42.4	46.8	46.1	44.7	44.8	44.1	43.0	42.3	41.2	40.2	39.5
United States	34.6	35.5	38.1	42.8	41.1	40.2	38.8	38.3	37.7	37.7	37.5	37.2	37.2
Average	38.6	38.7	40.6	44.6	43.3	42.7	42.1	41.8	41.2	40.9	40.6	40.2	40.1
Euro area	46.6	46.0	47.2	51.2	51.0	49.5	50.0	49.8	49.2	48.7	48.2	47.8	47.5
G7	38.6	38.8	40.9	45.0	43.7	43.1	42.4	42.2	41.5	41.3	41.0	40.7	40.6
G20 advanced	38.0	38.2	40.2	44.3	42.8	42.2	41.5	41.3	40.7	40.4	40.1	39.7	39.7

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.1.

Statistical Table 4. Advanced Economies: General Government Gross Debt and Net Debt

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Debt													
Australia	10.0	9.7	11.8	16.8	20.5	24.4	27.9	29.1	29.1	28.2	26.8	24.7	21.9
Austria	62.3	60.2	63.8	69.2	72.3	72.8	74.1	74.4	74.8	74.2	73.6	72.6	71.8
Belgium	88.0	84.0	89.2	95.7	95.6	97.8	99.8	100.9	101.2	100.2	98.1	95.4	92.1
Canada	70.3	66.5	71.3	81.3	83.1	83.5	85.3	87.1	85.6	84.9	84.0	82.8	81.7
Czech Republic	28.3	27.9	28.7	34.2	37.9	41.0	45.9	47.6	48.9	49.6	49.9	50.1	50.4
Denmark	32.1	27.1	33.4	40.7	42.7	46.4	45.6	47.1	47.8	49.2	49.9	49.2	48.0
Estonia	4.4	3.7	4.5	7.1	6.7	6.0	9.7	11.0	10.4	9.8	9.2	8.6	8.1
Finland	39.6	35.2	33.9	43.5	48.7	49.2	53.6	58.0	59.8	60.5	59.8	59.1	58.9
France	64.1	64.2	68.2	79.2	82.4	85.8	90.2	93.5	94.8	94.8	93.7	91.7	88.8
Germany	67.9	65.4	66.8	74.5	82.4	80.4	81.9	80.4	78.1	75.2	71.9	69.8	67.7
Greece	107.5	107.2	112.9	129.7	148.3	170.3	156.9	175.7	174.0	168.6	160.2	151.0	142.6
Hong Kong SAR[1]	31.0	30.8	28.7	31.2	35.5	34.8	34.1	33.0	32.0	31.0	30.0	29.0	28.2
Iceland	30.1	29.1	70.4	88.0	90.6	102.3	99.1	93.2	90.9	87.2	84.2	80.7	77.0
Ireland	24.6	24.9	44.2	64.4	91.2	104.1	117.4	123.3	121.0	118.3	116.2	113.6	109.8
Israel	81.6	74.6	72.9	75.3	71.5	69.7	68.2	70.4	69.6	69.1	68.4	67.7	67.1
Italy	106.3	103.3	106.1	116.4	119.3	120.8	127.0	132.3	133.1	131.8	129.3	126.2	123.0
Japan	186.0	183.0	191.8	210.2	216.0	230.3	238.0	243.5	242.3	242.4	242.3	241.4	241.1
Korea	31.1	30.7	30.1	33.8	33.4	34.2	35.0	35.7	35.3	34.5	33.4	31.7	29.8
Netherlands	47.4	45.3	58.5	60.8	63.4	65.7	71.3	74.4	75.6	76.7	79.2	81.3	83.2
New Zealand	19.3	17.2	20.1	25.9	32.0	37.2	37.8	37.2	35.9	34.4	35.1	34.3	32.0
Norway	58.7	56.6	55.2	49.0	49.2	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1
Portugal	63.7	68.4	71.7	83.7	94.0	108.4	123.8	123.6	125.3	124.2	121.6	118.8	116.0
Singapore	86.4	85.6	96.3	101.5	99.3	105.2	111.0	107.8	106.2	103.9	101.7	99.4	97.3
Slovak Republic	30.5	29.4	27.9	35.6	41.0	43.3	52.1	55.3	57.5	58.2	58.6	58.8	59.1
Slovenia	26.4	23.1	22.0	35.1	38.7	46.9	52.8	71.5	75.3	77.6	78.6	78.5	77.8
Spain	39.7	36.3	40.2	54.0	61.7	70.4	85.9	93.7	99.1	102.5	104.6	105.5	105.1
Sweden	45.3	40.2	38.8	42.6	39.4	38.6	38.3	42.2	42.2	40.5	38.7	36.6	34.2
Switzerland	62.4	55.6	50.5	49.8	48.9	49.1	49.2	48.2	46.6	45.6	45.2	44.9	44.5
United Kingdom	42.8	43.7	51.9	67.1	78.5	84.3	88.8	92.1	95.3	97.9	98.5	98.2	96.7
United States	63.8	64.4	73.3	86.3	95.2	99.4	102.7	106.0	107.3	107.0	106.5	106.0	105.7
Average	75.8	73.3	80.4	93.7	100.3	104.4	108.7	108.5	109.2	108.6	107.6	106.4	105.1
Euro area	68.6	66.5	70.3	80.1	85.7	88.2	93.0	95.7	96.1	95.3	93.8	92.0	89.9
G7	83.8	81.9	90.2	105.0	113.1	118.3	122.5	121.9	122.4	121.7	120.7	119.4	118.2
G20 advanced	80.3	78.2	86.2	100.5	107.5	111.9	116.0	115.4	116.1	115.3	114.2	112.8	111.5
Net Debt													
Australia	–6.3	–7.3	–5.3	–0.6	3.9	8.1	11.9	13.7	14.5	14.3	13.7	12.2	10.1
Austria	43.1	40.9	42.0	49.2	52.8	52.2	53.3	53.6	54.0	53.4	52.9	51.8	51.0
Belgium	77.0	73.1	73.3	79.5	79.7	81.1	82.0	83.4	84.1	83.5	81.8	79.6	76.7
Canada	26.3	22.9	22.4	27.6	29.7	32.4	34.7	36.5	38.0	38.8	38.9	38.6	38.4
Czech Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Denmark	1.9	–3.8	–6.1	–4.5	–1.6	3.3	3.3	5.0	6.8	9.5	11.4	12.0	11.9
Estonia	–2.5	–4.0	–4.7	–2.2	–2.8	–0.3	3.9	5.5	5.4	5.0	4.7	4.5	4.2
Finland	–69.4	–72.5	–52.3	–62.8	–65.6	–54.3	–55.4	–51.6	–47.7	–44.4	–41.3	–38.6	–36.2
France	59.6	59.6	62.3	72.0	76.1	78.6	84.0	87.2	88.5	88.5	87.5	85.4	82.5
Germany	53.0	50.6	50.1	56.7	56.2	55.3	57.4	56.3	54.6	53.1	51.2	50.8	50.4
Greece	107.3	106.9	112.4	129.3	147.4	168.0	154.8	172.6	172.6	165.5	158.2	148.2	139.9
Hong Kong SAR	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland	7.8	10.8	41.8	55.7	59.9	66.7	68.2	64.1	63.6	62.4	60.3	58.3	56.2
Ireland	11.5	10.5	21.2	38.6	70.4	85.1	92.8	105.5	107.9	107.0	105.3	103.0	99.6
Israel	74.8	69.2	69.1	70.8	69.1	68.0	67.4	70.2	69.6	69.1	68.5	67.9	67.4
Italy	89.6	87.1	89.3	97.9	100.0	102.6	106.1	110.5	111.2	110.1	108.0	105.4	102.8
Japan	81.0	80.5	95.3	106.2	113.1	127.4	133.5	139.9	141.8	144.0	145.9	147.2	147.8
Korea	29.4	28.7	28.8	32.3	32.1	33.0	33.0	32.0	30.3	28.6	26.8	24.8	22.9
Netherlands	24.5	21.6	20.6	22.8	26.1	28.4	32.4	35.2	37.7	41.7	45.4	48.7	51.6
New Zealand	8.8	6.5	7.4	11.7	17.0	22.2	25.9	27.5	28.0	27.8	27.1	25.6	23.6
Norway	–133.5	–138.8	–123.7	–154.8	–163.8	–157.8	–167.0	–183.2	–188.1	–192.9	–195.8	–196.6	–195.9
Portugal	58.6	63.7	67.5	79.7	89.6	97.9	112.4	117.5	119.3	118.4	116.0	113.4	110.8
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovenia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Spain	30.7	26.7	30.8	42.5	50.1	58.6	73.5	80.8	85.8	88.9	90.8	91.9	91.8
Sweden	–13.8	–17.4	–12.5	–19.5	–20.7	–18.2	–21.2	–19.4	–17.2	–15.9	–15.0	–14.7	–14.7
Switzerland	39.7	32.0	29.4	28.7	28.1	28.3	28.3	27.7	26.8	26.2	26.0	25.8	25.6
United Kingdom	38.0	38.4	48.0	62.4	72.2	76.8	81.6	84.8	88.0	90.6	91.2	90.9	89.4
United States	46.7	46.5	52.4	64.6	72.8	79.9	84.1	87.4	88.3	87.7	87.1	86.6	86.4
Average	47.6	45.8	51.4	61.7	66.7	71.9	76.0	77.5	78.7	78.7	78.3	77.8	77.1
Euro area	54.3	52.1	54.1	62.4	65.6	68.2	72.2	74.9	75.6	75.4	74.4	73.4	72.0
G7	54.6	53.7	60.2	71.6	77.8	84.1	88.4	90.2	91.3	91.2	90.8	90.2	89.6
G20 advanced	52.3	51.2	57.4	68.4	73.8	79.5	83.6	85.3	86.4	86.2	85.7	85.0	84.2

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.1.

[1] Since 2011, government debt also includes "insurance technical reserves," following the GFSM 2001 definition.

Statistical Table 5. Emerging Market Economies: General Government Overall Balance and Primary Balance

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Balance													
Argentina	–1.1	–2.1	–0.9	–3.6	–1.4	–3.5	–4.3	–3.6	–4.1	–3.0	–2.7	–2.5	–2.3
Brazil	–3.5	–2.7	–1.4	–3.1	–2.7	–2.5	–2.7	–3.0	–3.2	–2.3	–2.4	–2.3	–2.2
Bulgaria	3.3	3.3	2.9	–0.9	–4.0	–2.0	–0.5	–1.8	–1.7	–1.2	–0.8	–0.3	0.0
Chile	7.4	7.9	4.1	–4.1	–0.4	1.4	0.6	–0.7	–0.2	–0.3	–0.2	–0.2	–0.1
China	–0.7	0.9	–0.7	–3.1	–1.5	–1.3	–2.2	–2.5	–2.1	–1.5	–0.9	–0.3	0.4
Colombia	–1.0	–0.8	–0.3	–2.8	–3.3	–2.0	0.2	–1.0	–0.7	–0.7	–0.8	–0.7	–0.8
Egypt	–9.2	–7.5	–8.0	–6.9	–8.3	–9.8	–10.7	–14.7	–13.2	–14.3	–14.3	–14.9	–15.0
Hungary	–9.4	–5.1	–3.7	–4.6	–4.4	4.2	–2.0	–2.7	–2.8	–3.0	–3.0	–3.0	–2.8
India	–6.2	–4.4	–10.0	–9.8	–8.4	–8.5	–8.0	–8.5	–8.5	–8.3	–8.2	–8.1	–8.0
Indonesia	0.2	–1.0	0.0	–1.8	–1.2	–0.6	–1.7	–2.2	–2.5	–2.3	–2.0	–1.6	–1.2
Jordan	–3.5	–5.7	–5.5	–8.9	–5.6	–6.8	–8.8	–9.1	–8.0	–5.6	–4.0	–2.7	–2.3
Kazakhstan	7.7	5.2	1.2	–1.3	1.5	6.0	4.5	4.8	4.1	4.0	3.4	2.6	1.8
Kenya	–2.5	–3.2	–4.4	–5.4	–5.5	–5.1	–6.3	–5.8	–4.2	–3.7	–3.6	–3.5	–3.4
Latvia	–0.5	0.6	–7.5	–7.8	–7.3	–3.2	0.1	–1.4	–0.5	–0.7	–0.5	–0.2	–0.3
Lithuania	–0.4	–1.0	–3.3	–9.4	–7.2	–5.5	–3.3	–2.9	–2.7	–2.6	–2.5	–2.5	–2.3
Malaysia	–2.7	–2.7	–3.6	–6.2	–4.5	–3.8	–4.5	–4.3	–4.4	–4.0	–3.8	–4.1	–4.3
Mexico	–1.0	–1.2	–1.0	–5.1	–4.3	–3.4	–3.7	–3.8	–4.1	–3.5	–3.0	–2.5	–2.5
Morocco	–2.0	–0.1	0.7	–1.8	–4.4	–6.7	–7.6	–5.5	–4.8	–4.1	–3.5	–3.0	–2.8
Nigeria	8.9	1.6	6.3	–9.4	–6.7	0.8	–1.8	–1.8	–1.8	–2.8	–3.6	–3.6	–4.1
Pakistan	–3.4	–5.1	–7.1	–5.0	–5.9	–6.9	–8.4	–8.5	–5.5	–4.4	–3.6	–3.5	–3.5
Peru	1.9	3.2	2.6	–1.5	–0.1	2.0	2.1	0.3	0.3	0.5	0.6	0.7	0.5
Philippines	0.0	–0.3	0.0	–2.6	–2.5	–0.6	–0.9	–0.8	–0.8	–0.8	–0.8	–0.9	–0.9
Poland	–3.6	–1.9	–3.7	–7.4	–7.9	–5.0	–3.9	–4.6	–3.4	–2.8	–2.5	–2.7	–2.4
Romania	–1.4	–3.1	–4.8	–7.3	–6.4	–4.3	–2.5	–2.3	–2.0	–1.8	–1.8	–1.8	–1.8
Russia	8.3	6.8	4.9	–6.3	–3.4	1.5	0.4	–0.7	–0.3	–0.7	–1.4	–1.5	–1.5
Saudi Arabia	24.4	15.0	31.6	–4.1	2.1	12.0	15.0	9.6	8.6	5.6	3.9	2.0	–0.8
South Africa	1.2	1.4	–0.4	–5.5	–5.1	–4.0	–4.8	–4.9	–4.7	–4.1	–3.8	–3.7	–3.5
Thailand	2.2	0.2	0.1	–3.2	–0.8	–0.7	–1.7	–2.7	–3.2	–3.8	–3.7	–3.6	–3.1
Turkey	–0.7	–1.9	–2.7	–6.0	–3.0	–0.7	–1.6	–2.3	–2.3	–2.3	–2.4	–2.3	–2.2
Ukraine	–1.4	–2.0	–3.2	–6.3	–5.8	–2.8	–4.5	–4.3	–5.1	–4.4	–4.1	–4.1	–4.0
Average	0.3	0.3	–0.1	–4.6	–3.1	–1.7	–2.1	–2.7	–2.5	–2.2	–2.1	–1.8	–1.6
Asia	–1.7	–0.7	–2.5	–4.3	–2.9	–2.6	–3.2	–3.4	–3.1	–2.6	–2.1	–1.6	–1.1
Europe	2.5	1.9	0.5	–6.1	–4.1	0.0	–0.7	–1.5	–1.2	–1.2	–1.6	–1.7	–1.7
Latin America	–1.4	–1.2	–0.7	–3.6	–2.8	–2.4	–2.5	–2.8	–3.0	–2.3	–2.2	–2.0	–1.9
Middle East and North Africa	–6.2	–4.9	–5.0	–5.5	–7.0	–8.7	–9.8	–11.8	–10.5	–10.9	–10.7	–10.9	–10.9
G20 emerging	0.6	0.6	0.3	–4.5	–2.9	–1.6	–2.0	–2.6	–2.4	–2.1	–1.9	–1.6	–1.3
Primary Balance													
Argentina	4.0	2.5	2.7	0.2	1.6	–0.5	–0.9	–1.3	–1.3	–1.3	–1.3	–1.3	–1.3
Brazil	3.3	3.5	4.1	2.2	2.5	3.2	2.2	1.9	2.0	3.1	3.1	3.1	3.1
Bulgaria	4.3	3.9	2.8	–0.6	–3.7	–1.7	–0.1	–1.1	–1.0	–0.5	–0.1	0.4	0.7
Chile	7.6	7.7	3.8	–4.3	–0.3	1.5	0.7	–0.5	0.0	0.0	0.2	0.2	0.2
China	–0.2	1.3	–0.3	–2.7	–1.2	–0.4	–1.4	–1.8	–1.5	–0.9	–0.4	0.2	0.8
Colombia	1.7	1.8	1.9	–1.1	–1.6	–0.1	1.8	0.7	1.1	1.2	0.9	1.0	0.9
Egypt	–4.2	–3.0	–3.9	–3.7	–3.8	–4.7	–5.2	–7.3	–4.8	–5.3	–5.0	–4.9	–4.5
Hungary	–5.7	–1.2	0.0	–0.5	–0.5	8.0	2.0	1.2	1.1	1.0	1.0	1.1	1.1
India	–1.3	0.4	–5.3	–5.2	–4.2	–4.2	–3.6	–3.8	–3.6	–3.4	–3.4	–3.3	–3.3
Indonesia	2.6	1.0	1.8	–0.1	0.1	0.6	–0.4	–0.8	–0.9	–0.7	–0.4	0.0	0.3
Jordan	–0.7	–2.9	–3.2	–6.7	–3.5	–4.7	–6.3	–5.7	–3.9	–1.5	–0.2	0.9	1.1
Kazakhstan	7.2	4.3	1.5	–1.4	1.8	5.8	3.9	4.8	3.9	3.8	3.2	2.3	1.6
Kenya	–0.2	–1.0	–2.2	–3.3	–3.2	–2.8	–3.7	–3.1	–2.1	–1.8	–1.6	–1.4	–1.4
Latvia	–0.1	0.9	–7.4	–7.2	–6.5	–2.2	1.3	–0.1	0.8	0.5	0.5	0.8	0.6
Lithuania	0.1	–0.5	–2.8	–8.3	–5.5	–3.7	–1.4	–1.0	–0.7	–0.6	–0.6	–0.4	–0.3
Malaysia	–1.7	–2.0	–2.1	–5.1	–3.0	–2.1	–3.1	–3.0	–2.2	–1.6	–1.3	–1.5	–1.7
Mexico	1.8	1.5	1.5	–2.4	–1.7	–1.0	–1.2	–1.2	–1.5	–0.8	–0.1	0.6	0.7
Morocco	1.2	3.0	3.3	0.6	–2.1	–4.4	–5.2	–3.0	–2.1	–1.3	–0.7	–0.3	0.0
Nigeria	10.0	2.6	7.3	–8.2	–5.6	2.2	0.0	–0.1	–0.1	–1.2	–1.9	–1.9	–2.3
Pakistan	–0.5	–1.1	–2.5	–0.1	–1.6	–3.1	–4.0	–3.9	–0.9	0.1	0.7	0.5	0.4
Peru	3.7	4.9	3.9	–0.4	0.9	3.0	3.0	1.1	1.1	1.2	1.3	1.4	1.1
Philippines	4.8	3.4	3.4	0.7	0.5	2.0	1.7	1.8	1.7	1.6	1.5	1.4	1.3
Poland	–1.0	0.4	–1.5	–4.8	–5.2	–2.3	–1.1	–1.9	–1.1	–0.7	–0.3	–0.6	–0.2
Romania	–0.7	–2.6	–4.2	–6.2	–5.1	–2.8	–0.7	–0.6	–0.2	0.0	–0.2	0.0	0.0
Russia	8.9	6.8	5.1	–6.0	–3.1	1.9	0.8	–0.2	0.3	0.0	–0.7	–0.6	–0.5
Saudi Arabia	25.3	14.8	31.0	–3.9	2.5	12.1	14.9	9.3	8.3	5.3	3.6	1.7	–1.1
South Africa	4.1	4.0	2.2	–3.2	–2.7	–1.5	–2.1	–2.1	–1.8	–1.2	–0.9	–0.7	–0.5
Thailand	3.5	1.2	1.0	–2.4	0.1	0.2	–0.8	–2.2	–2.7	–3.2	–3.1	–2.9	–2.3
Turkey	4.4	2.9	1.7	–1.5	0.7	2.0	1.2	0.7	0.4	0.2	0.2	0.2	0.2
Ukraine	–0.7	–1.5	–2.6	–5.1	–4.1	–0.8	–2.6	–1.8	–2.2	–1.1	–0.6	–0.5	–0.3
Average	2.8	2.5	1.8	–2.6	–1.2	0.4	–0.2	–0.8	–0.6	–0.4	–0.2	0.0	0.2
Asia	0.0	0.9	–1.0	–2.9	–1.6	–1.0	–1.7	–2.0	–1.7	–1.2	–0.8	–0.4	0.1
Europe	4.5	3.5	2.0	–4.4	–2.5	1.3	0.6	0.0	0.2	0.1	–0.1	–0.2	–0.1
Latin America	3.0	2.9	3.0	0.1	0.9	1.6	1.0	0.5	0.5	1.2	1.3	1.5	1.6
Middle East and North Africa	–2.0	–1.0	–1.5	–2.7	–3.3	–4.6	–5.3	–6.0	–4.0	–4.0	–3.5	–3.3	–3.0
G20 emerging	3.2	2.9	2.3	–2.4	–0.9	0.5	–0.2	–0.8	–0.6	–0.4	–0.2	0.1	0.4

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. For country-specific details, see "Data and Conventions" in text and Table SA.2.

Statistical Table 6. Emerging Market Economies: General Government Cyclically Adjusted Balance and Cyclically Adjusted Primary Balance

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Cyclically Adjusted Balance													
Argentina	–1.4	–2.8	–1.5	–2.3	–1.2	–4.7	–4.6	–3.8	–4.1	–3.0	–2.6	–2.4	–2.3
Brazil	–3.3	–3.0	–2.1	–2.3	–3.3	–3.0	–2.7	–3.0	–3.2	–2.3	–2.4	–2.3	–2.2
Bulgaria	2.1	1.5	0.8	0.2	–2.8	–1.0	0.3	–0.8	–0.8	–0.5	–0.3	–0.2	0.0
Chile[1]	0.8	0.5	–1.5	–4.3	–2.5	–0.9	–0.4	–1.2	–0.7	–0.7	–0.6	–0.6	–0.5
China	0.0	1.0	–0.5	–2.6	–0.9	–0.2	–0.9	–1.2	–1.0	–0.6	–0.2	0.1	0.4
Colombia	–1.7	–1.6	–1.8	–1.8	–2.9	–3.4	–0.4	–1.1	–0.8	–0.6	–0.8	–0.6	–0.7
Egypt	–9.2	–7.6	–8.3	–7.0	–8.2	–9.4	–10.2	–13.9	–12.4	–13.7	–14.1	–14.9	–15.0
Hungary[1]	–11.5	–6.7	–5.5	–2.9	–3.4	–6.7	–0.9	–1.6	–2.0	–2.5	–2.8	–3.0	–2.9
India	–6.3	–4.8	–9.5	–9.5	–9.0	–9.1	–8.1	–8.2	–8.2	–8.1	–8.1	–8.1	–8.0
Indonesia	0.3	–1.1	–0.1	–1.7	–1.2	–0.6	–1.7	–2.2	–2.4	–2.2	–2.0	–1.6	–1.2
Jordan	–3.5	–6.4	–7.7	–10.8	–6.6	–6.8	–6.2	–5.1	–4.1	–3.3	–2.7	–2.4	–2.2
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Latvia	. . .	–1.0	–8.9	–3.3	–3.2	–1.3	0.8	–1.2	–0.4	–0.7	–0.5	–0.2	–0.4
Lithuania	–2.0	–3.9	–6.3	–6.0	–4.6	–4.4	–2.8	–2.8	–2.8	–2.7	–2.6	–2.5	–2.4
Malaysia	–3.0	–3.3	–4.2	–5.0	–4.2	–3.5	–4.5	–4.3	–4.3	–3.9	–3.8	–4.0	–4.3
Mexico	–1.0	–1.1	–0.8	–3.1	–2.8	–2.3	–2.7	–2.7	–3.0	–2.5	–2.2	–1.8	–1.8
Morocco	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nigeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[1]	0.2	1.5	0.9	–0.5	–0.8	0.8	1.3	0.0	0.2	0.5	0.7	0.7	0.5
Philippines	–1.4	–2.0	–1.7	–3.4	–3.6	–1.9	–2.4	–2.1	–2.1	–2.0	–1.9	–1.9	–1.9
Poland	–4.2	–2.1	–4.0	–6.8	–7.7	–5.4	–3.8	–3.1	–2.5	–1.9	–1.9	–2.4	–2.4
Romania	–1.8	–4.3	–7.5	–6.8	–5.1	–3.4	–1.5	–1.5	–1.4	–1.3	–1.5	–1.8	–2.0
Russia	8.2	6.1	3.9	–3.2	–1.9	1.9	0.3	–0.5	–0.1	–0.6	–1.4	–1.5	–1.5
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	–0.4	–1.2	–2.4	–3.4	–3.6	–4.1	–4.3	–4.3	–4.2	–3.9	–3.8	–3.7	–3.6
Thailand	2.0	–0.1	–0.6	–2.1	–1.0	–0.9	–0.9	–2.5	–3.0	–3.9	–3.8	–3.5	–2.9
Turkey	–1.8	–3.3	–3.1	–3.5	–2.4	–1.5	–1.7	–2.3	–2.1	–2.1	–2.3	–2.3	–2.4
Ukraine	–2.7	–4.2	–3.9	–2.1	–3.6	–3.0	–4.5	–3.9	–4.9	–4.2	–4.1	–4.1	–4.0
Average	–0.7	–0.7	–1.6	–3.5	–2.8	–2.0	–2.1	–2.3	–2.1	–1.8	–1.8	–1.6	–1.4
Asia	–1.3	–0.7	–2.2	–3.8	–2.6	–1.9	–2.2	–2.4	–2.2	–1.9	–1.6	–1.3	–1.1
Europe	1.7	0.9	–0.4	–4.0	–3.2	–0.7	–1.0	–1.4	–1.2	–1.3	–1.8	–2.0	–2.0
Latin America	–1.8	–1.9	–1.5	–2.5	–2.8	–2.8	–2.4	–2.6	–2.7	–2.1	–2.0	–1.8	–1.7
G20 emerging	–0.4	–0.4	–1.3	–3.5	–2.6	–1.8	–2.1	–2.3	–2.1	–1.8	–1.7	–1.5	–1.3
Cyclically Adjusted Primary Balance													
Argentina	3.7	1.8	2.1	1.4	1.7	–1.6	–1.2	–1.5	–1.4	–1.3	–1.2	–1.2	–1.3
Brazil	3.5	3.2	3.5	2.9	2.0	2.8	2.2	1.9	2.0	3.1	3.1	3.1	3.1
Bulgaria	3.1	2.2	0.7	0.5	–2.5	–0.7	0.6	–0.1	–0.1	0.2	0.4	0.5	0.7
Chile[1]	1.0	0.3	–1.9	–4.5	–2.4	–0.8	–0.3	–1.0	–0.5	–0.4	–0.3	–0.2	–0.1
China	0.5	1.4	–0.1	–2.2	–0.5	0.6	–0.2	–0.5	–0.4	0.0	0.3	0.6	0.8
Colombia	1.0	1.1	0.4	–0.1	–1.3	–1.5	1.3	0.6	1.0	1.2	0.9	1.0	0.9
Egypt	–4.2	–3.1	–4.2	–3.8	–3.7	–4.4	–4.9	–6.7	–4.3	–5.0	–4.9	–4.9	–4.5
Hungary[1]	–7.7	–2.7	–1.7	1.1	0.4	–2.9	3.0	2.3	1.8	1.4	1.2	1.1	1.0
India	–1.4	0.0	–4.9	–5.0	–4.7	–4.8	–3.7	–3.6	–3.3	–3.3	–3.3	–3.4	–3.3
Indonesia	2.6	0.9	1.7	0.0	0.2	0.6	–0.5	–0.8	–0.9	–0.6	–0.4	0.0	0.3
Jordan	–1.0	–3.8	–5.2	–8.6	–4.5	–4.7	–3.6	–1.6	0.0	0.8	1.2	1.2	1.2
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Latvia	. . .	–0.7	–8.8	–2.7	–2.5	–0.5	2.0	0.1	0.8	0.5	0.5	0.8	0.6
Lithuania	–1.4	–3.4	–5.8	–4.9	–3.0	–2.7	–0.8	–0.9	–0.8	–0.7	–0.6	–0.5	–0.4
Malaysia	–2.0	–2.6	–2.8	–4.0	–2.7	–1.9	–3.1	–2.9	–2.1	–1.5	–1.2	–1.5	–1.7
Mexico	1.1	0.9	1.0	–1.2	–1.0	–0.6	–0.9	–0.8	–1.1	–0.6	–0.1	0.4	0.5
Morocco	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nigeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[1]	2.0	3.3	2.3	0.6	0.3	1.8	2.2	0.9	1.0	1.3	1.4	1.4	1.1
Philippines	3.5	1.8	1.8	–0.1	–0.6	0.6	0.3	0.5	0.5	0.4	0.4	0.3	0.2
Poland	–1.5	0.3	–1.8	–4.2	–5.1	–2.7	–0.9	–0.4	–0.2	0.2	0.2	–0.2	–0.2
Romania	–1.1	–3.7	–6.8	–5.8	–3.9	–1.9	0.3	0.2	0.4	0.4	0.1	0.0	–0.2
Russia	8.7	6.1	4.1	–2.8	–1.6	2.2	0.7	0.1	0.5	0.1	–0.7	–0.6	–0.5
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	2.6	1.5	0.2	–1.1	–1.2	–1.6	–1.6	–1.5	–1.4	–1.0	–0.9	–0.7	–0.6
Thailand	3.3	0.8	0.3	–1.4	–0.1	0.0	0.0	–2.1	–2.5	–3.3	–3.1	–2.8	–2.1
Turkey	3.5	1.8	1.3	0.6	1.2	1.3	1.1	0.6	0.6	0.3	0.3	0.2	0.1
Ukraine	–2.0	–3.7	–3.4	–1.1	–2.1	–1.0	–2.6	–1.4	–1.9	–1.0	–0.6	–0.5	–0.3
Average	1.8	1.6	0.4	–1.6	–0.8	0.1	–0.2	–0.5	–0.4	–0.1	0.0	0.2	0.3
Asia	0.4	0.9	–0.8	–2.5	–1.3	–0.4	–0.8	–1.1	–0.9	–0.6	–0.4	–0.1	0.1
Europe	3.9	2.6	1.2	–2.2	–1.6	0.7	0.4	0.1	0.4	0.1	–0.2	–0.3	–0.3
Latin America	2.3	2.0	2.1	1.0	0.7	1.1	0.9	0.5	0.5	1.2	1.3	1.5	1.5
G20 emerging	2.2	2.0	0.8	–1.4	–0.6	0.3	–0.2	–0.5	–0.3	–0.1	0.0	0.2	0.4

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

Note: Cyclically adjusted primary balance is defined as the cyclically adjusted balance excluding net interest payments.

[1] Including adjustments beyond the output cycle; for details, see "Data and Conventions" in text and Table SA.2.

Statistical Table 7. Emerging Market Economies: General Government Revenue and Expenditure

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue													
Argentina	29.8	31.5	33.4	34.3	37.2	37.4	40.2	41.7	41.8	41.8	41.9	41.8	41.8
Brazil	34.6	35.7	36.9	34.9	37.2	36.7	37.7	37.0	37.0	37.0	37.0	37.1	37.1
Bulgaria	37.0	38.2	38.0	35.3	32.7	32.4	34.2	35.6	36.3	37.1	36.6	37.0	37.6
Chile	26.2	27.3	25.8	20.6	23.5	24.6	24.0	22.9	23.2	23.0	22.8	22.8	22.8
China	18.2	19.8	19.7	20.2	21.3	22.6	22.7	22.2	22.4	22.8	23.1	23.4	23.7
Colombia	27.3	27.2	26.4	26.7	26.1	26.7	28.1	27.8	27.7	27.1	26.6	26.4	26.2
Egypt	28.6	27.7	28.0	27.7	25.1	22.0	22.6	23.9	27.1	23.3	22.4	22.0	21.5
Hungary	42.8	45.6	45.5	46.9	45.4	53.8	46.5	47.6	48.7	48.9	49.0	49.1	49.1
India	20.3	22.0	19.7	18.5	18.8	18.8	19.4	19.6	19.7	19.7	19.8	19.9	20.0
Indonesia	20.3	19.3	21.3	16.5	17.0	17.8	18.0	18.1	18.2	18.0	17.9	17.9	18.0
Jordan	32.4	32.3	30.1	26.5	24.9	26.4	22.8	26.0	26.0	27.4	27.5	27.8	28.0
Kazakhstan	27.5	29.3	27.9	22.1	23.9	27.7	27.0	25.7	24.4	24.1	23.2	22.0	21.1
Kenya	22.2	23.1	22.9	22.7	24.6	23.8	23.5	24.5	25.6	25.7	25.5	25.4	25.3
Latvia	36.1	36.3	35.6	36.2	36.0	35.6	37.0	35.9	34.7	32.8	31.9	31.4	30.5
Lithuania	33.3	33.8	34.1	34.7	34.6	32.8	32.4	32.0	31.9	31.5	30.9	30.7	30.5
Malaysia	24.1	24.4	24.6	26.2	23.3	24.7	25.3	25.2	24.3	24.1	23.9	23.6	23.4
Mexico	21.6	21.7	24.7	22.1	22.5	23.1	23.6	22.4	23.1	23.2	23.3	23.3	23.1
Morocco	27.4	29.9	32.5	29.3	27.5	27.8	28.1	27.5	28.3	28.5	28.4	28.3	28.3
Nigeria	32.3	26.9	32.0	17.8	20.0	29.9	25.5	24.5	23.1	21.6	20.0	18.8	18.1
Pakistan	13.6	14.4	14.4	14.2	14.3	12.6	13.1	13.2	14.4	14.8	15.3	15.2	15.2
Peru	20.1	20.9	21.3	19.0	20.2	21.1	21.7	20.4	20.2	20.6	21.0	21.1	21.2
Philippines	19.0	18.7	18.7	17.5	16.7	17.4	17.9	18.1	18.4	18.5	18.6	18.6	18.6
Poland	40.2	40.3	39.5	37.2	37.6	38.4	38.4	37.1	37.5	37.7	38.1	37.7	37.8
Romania	32.3	32.3	32.2	31.2	32.2	32.6	32.9	33.4	33.1	33.1	33.0	32.8	32.6
Russia	39.5	39.9	39.2	35.0	34.6	37.4	37.4	36.1	36.2	35.9	34.6	33.8	33.1
Saudi Arabia	53.7	46.6	60.5	36.0	41.6	47.5	51.8	46.6	44.7	42.2	40.1	38.1	36.2
South Africa	29.2	29.8	29.8	27.4	27.3	28.1	27.9	27.8	27.8	27.8	27.9	28.0	28.1
Thailand	22.3	21.5	21.4	20.8	22.4	22.6	23.0	21.5	21.7	21.8	21.9	22.0	22.4
Turkey	32.8	31.6	31.8	32.6	33.3	34.6	34.8	36.0	35.7	35.0	34.7	34.6	34.6
Ukraine	43.2	41.8	44.3	42.3	43.2	42.9	44.5	45.2	44.5	44.2	44.5	44.3	44.0
Average	27.2	27.7	28.4	25.5	26.5	27.6	27.7	27.0	27.0	26.9	26.8	26.7	26.6
Asia	19.1	20.3	19.9	19.6	20.4	21.4	21.6	21.3	21.6	21.9	22.1	22.3	22.5
Europe	37.5	37.6	37.4	34.9	34.9	37.0	36.8	36.2	36.1	35.8	35.0	34.5	34.0
Latin America	28.1	29.2	31.1	29.5	31.5	31.6	32.2	31.3	31.3	31.2	31.2	31.2	31.1
Middle East and North Africa	28.5	28.8	29.6	28.1	25.8	24.0	24.0	25.0	27.3	25.0	24.3	24.1	23.7
G20 emerging	26.7	27.1	28.0	25.1	26.3	27.5	27.8	27.0	27.0	26.9	26.8	26.7	26.7
Expenditure													
Argentina	30.9	33.6	34.3	37.9	38.5	40.9	44.5	45.3	45.9	44.8	44.5	44.3	44.1
Brazil	38.1	38.4	38.2	38.0	39.9	39.2	40.4	40.0	40.2	39.4	39.4	39.3	39.3
Bulgaria	33.6	34.9	35.2	36.2	36.7	34.4	34.6	37.4	38.0	38.2	37.4	37.3	37.6
Chile	18.7	19.4	21.7	24.7	23.9	23.2	23.4	23.7	23.4	23.3	22.9	23.0	23.0
China	18.9	18.9	20.4	23.2	22.8	23.9	24.9	24.6	24.5	24.3	24.0	23.6	23.3
Colombia	28.3	28.0	26.6	29.5	29.4	28.6	27.9	28.8	28.4	27.8	27.4	27.1	27.0
Egypt	37.8	35.3	36.0	34.6	33.4	31.8	33.4	38.6	40.3	37.6	36.7	36.9	36.5
Hungary	52.2	50.6	49.2	51.4	49.8	49.6	48.5	50.3	51.5	51.8	52.0	52.1	52.0
India	26.5	26.4	29.7	28.3	27.2	27.3	27.3	28.0	28.2	28.0	27.9	27.9	28.0
Indonesia	20.1	20.3	21.3	18.3	18.2	18.5	19.7	20.3	20.7	20.3	19.9	19.5	19.3
Jordan	35.9	38.0	35.6	35.4	30.4	33.2	31.7	35.1	34.0	33.0	31.5	30.5	30.3
Kazakhstan	19.8	24.1	26.7	23.5	22.5	21.8	22.5	20.8	20.3	20.0	19.7	19.4	19.2
Kenya	24.7	26.3	27.3	28.1	30.1	28.9	29.8	30.3	29.9	29.4	29.1	28.9	28.7
Latvia	36.6	35.7	43.1	44.1	43.4	38.8	36.9	37.3	35.1	33.4	32.4	31.6	30.8
Lithuania	33.7	34.8	37.4	44.1	41.8	38.3	35.8	34.9	34.6	34.1	33.4	33.1	32.8
Malaysia	26.8	27.1	28.2	32.4	27.8	28.4	29.8	29.6	28.6	28.0	27.7	27.7	27.7
Mexico	22.6	22.8	25.6	27.2	26.8	26.5	27.3	26.2	27.2	26.7	26.3	25.8	25.6
Morocco	29.4	30.1	31.8	31.1	31.9	34.5	35.8	33.0	33.1	32.6	31.9	31.3	31.1
Nigeria	23.3	25.3	25.7	27.2	26.7	29.1	27.3	26.3	24.9	24.4	23.6	22.5	22.2
Pakistan	17.1	19.5	21.4	19.2	20.2	19.5	21.5	21.7	19.9	19.2	18.9	18.7	18.7
Peru	18.2	17.7	18.8	20.5	20.3	19.2	19.6	20.1	19.9	20.1	20.4	20.4	20.7
Philippines	19.1	19.0	18.6	20.1	19.2	18.0	18.8	18.9	19.2	19.3	19.4	19.4	19.5
Poland	43.9	42.2	43.2	44.6	45.4	43.4	42.3	41.7	41.0	40.5	40.6	40.5	40.2
Romania	33.7	35.4	37.0	38.5	38.6	36.9	35.4	35.8	35.1	34.8	34.9	34.6	34.4
Russia	31.1	33.1	34.3	41.4	38.0	35.8	37.0	36.8	36.5	36.5	36.0	35.3	34.7
Saudi Arabia	29.3	31.6	29.0	40.0	39.5	35.5	36.8	37.0	36.1	36.6	36.1	36.1	37.0
South Africa	28.0	28.4	30.2	32.9	32.5	32.1	32.7	32.7	32.5	31.9	31.7	31.6	31.6
Thailand	20.1	21.3	21.2	24.0	23.2	23.4	24.7	24.2	24.9	25.6	25.6	25.6	25.5
Turkey	33.5	33.6	34.5	38.6	36.3	35.3	36.4	38.2	38.0	37.3	37.1	36.9	36.9
Ukraine	44.6	43.8	47.4	48.6	49.0	45.6	49.0	49.5	49.6	48.6	48.6	48.4	48.0
Average	26.9	27.4	28.6	30.1	29.6	29.3	29.9	29.7	29.5	29.1	28.8	28.5	28.2
Asia	20.8	21.0	22.3	23.9	23.3	23.9	24.8	24.7	24.6	24.4	24.2	23.9	23.6
Europe	35.0	35.7	36.9	41.1	39.0	37.0	37.6	37.7	37.3	37.0	36.6	36.2	35.7
Latin America	29.5	30.4	31.8	33.2	34.3	34.0	34.7	34.1	34.3	33.6	33.4	33.1	33.0
Middle East and North Africa	34.7	33.7	34.6	33.6	32.8	32.7	33.8	36.9	37.8	35.9	35.0	35.0	34.6
G20 emerging	26.1	26.6	27.7	29.6	29.2	29.1	29.8	29.6	29.4	29.0	28.7	28.3	28.0

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.2.

Statistical Table 8. Emerging Market Economies: General Government Gross Debt and Net Debt

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Debt													
Argentina	76.4	67.4	58.5	58.7	49.2	44.9	47.7	47.8	45.9	45.4	42.9	41.1	38.9
Brazil[1]	67.0	65.2	63.5	66.8	65.0	64.7	68.0	68.3	69.0	68.8	68.4	67.5	66.7
Bulgaria	23.4	18.6	15.5	15.6	14.9	15.4	17.6	16.0	19.0	18.3	19.8	17.3	17.2
Chile	5.0	3.9	4.9	5.8	8.6	11.1	11.9	12.9	13.2	13.5	13.7	13.8	13.9
China[2]	16.2	19.6	17.0	17.7	33.5	28.7	26.1	22.9	20.9	19.3	17.7	15.7	13.5
Colombia	36.8	32.7	30.9	36.1	36.4	35.4	32.6	32.3	31.6	30.2	28.8	27.5	26.2
Egypt	90.3	80.2	70.2	73.0	73.2	76.6	80.6	89.5	91.8	94.4	96.2	98.9	100.3
Hungary	65.9	67.0	73.0	79.8	81.8	81.4	79.2	79.8	80.0	79.7	79.3	79.1	78.8
India	77.1	74.0	74.5	72.5	67.0	66.4	66.7	67.2	68.1	67.8	67.4	67.3	67.3
Indonesia	39.0	35.1	33.2	28.6	26.8	24.4	24.5	26.2	26.8	26.4	26.0	25.4	24.3
Jordan	76.3	73.8	60.2	64.8	67.1	70.7	79.6	83.8	87.0	87.2	85.8	83.3	81.0
Kazakhstan	6.7	6.2	6.5	10.2	10.7	10.4	12.4	13.2	13.6	13.4	13.6	13.9	14.8
Kenya	46.8	46.0	45.6	47.5	49.8	48.2	48.7	49.4	48.9	48.6	47.9	47.6	47.0
Latvia	9.9	7.8	17.2	32.9	39.7	37.5	36.4	38.4	34.6	28.0	29.0	28.4	26.4
Lithuania	17.9	16.8	15.5	29.5	38.4	39.4	41.1	42.0	42.3	42.3	42.1	41.9	41.6
Malaysia	41.5	41.2	41.2	52.8	53.5	54.3	55.5	57.0	57.3	56.8	56.4	56.3	56.5
Mexico	37.8	37.6	42.9	43.9	42.4	43.6	43.5	44.0	45.8	46.6	46.9	46.6	46.3
Morocco	59.4	54.6	48.2	48.0	51.3	54.4	60.5	61.8	63.1	62.9	62.0	60.6	59.0
Nigeria	11.8	12.8	11.6	15.2	15.5	17.2	18.3	19.6	20.3	21.5	22.5	23.3	21.0
Pakistan	54.4	52.6	57.9	59.1	61.5	59.5	63.8	66.2	66.6	63.5	60.5	58.7	56.9
Peru	33.1	30.4	26.8	27.1	24.4	22.3	20.5	18.6	17.1	15.8	14.6	13.4	12.4
Philippines	51.6	44.6	44.2	44.3	43.5	42.0	41.9	41.2	39.0	37.0	35.5	33.8	32.4
Poland	47.7	45.0	47.1	50.9	54.8	56.2	55.6	57.6	50.0	50.7	51.1	50.7	49.9
Romania	12.6	12.7	13.6	23.8	31.1	34.4	38.2	38.2	38.1	37.2	36.9	36.6	36.2
Russia	9.0	8.5	7.9	11.0	11.0	11.7	12.5	14.1	14.6	15.1	15.3	15.4	15.5
Saudi Arabia	25.8	17.1	12.1	14.0	8.5	5.4	3.7	3.3	2.8	2.4	1.9	2.2	2.4
South Africa	32.6	28.3	27.8	31.3	35.8	39.6	42.3	43.0	44.7	46.2	46.8	47.0	47.0
Thailand	42.0	38.3	37.3	45.2	42.6	42.1	45.4	47.1	48.3	49.5	51.1	52.6	53.5
Turkey	46.5	39.9	40.0	46.1	42.3	39.1	36.2	36.0	34.9	33.5	32.6	31.7	30.7
Ukraine	14.8	12.3	20.5	35.4	40.5	36.8	37.4	42.8	48.1	51.4	54.6	56.6	57.0
Average	36.9	35.5	33.5	36.0	40.3	37.8	36.5	35.3	34.1	33.4	32.6	31.6	30.3
Asia	34.5	35.1	31.3	31.5	40.8	36.7	34.5	32.0	30.1	28.9	27.6	26.1	24.3
Europe	26.4	23.5	23.6	29.5	29.1	27.7	26.9	28.1	27.5	27.5	27.5	27.3	26.9
Latin America	50.6	49.5	50.4	53.2	51.7	51.5	52.0	51.5	51.6	51.4	50.8	50.0	49.1
Middle East and North Africa	78.4	71.1	62.3	64.9	66.8	70.1	75.5	81.8	83.8	85.7	86.7	88.0	88.5
G20 emerging	36.5	35.6	32.9	34.6	39.8	36.8	35.1	33.4	32.2	31.3	30.3	29.1	27.6
Net Debt													
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	47.3	45.1	38.0	41.5	39.1	36.4	35.2	34.0	34.3	34.1	33.8	33.6	33.4
Bulgaria	–10.4	–10.2	–13.6	–13.9	–13.6	–11.3	–10.3	–9.3	–7.8	–7.1	–6.9	–7.4	–8.0
Chile	–6.6	–13.0	–19.3	–10.6	–7.0	–8.6	–6.7	–6.1	–5.1	–4.4	–3.8	–3.3	–2.9
China	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	26.3	22.7	21.0	27.2	28.5	27.0	25.2	25.6	25.0	24.0	23.2	22.2	21.4
Egypt	71.4	64.5	55.6	58.7	60.0	64.3	69.3	79.2	82.7	86.6	89.4	93.1	95.3
Hungary	63.3	64.5	64.8	73.9	76.4	75.0	72.9	73.7	74.1	74.0	73.9	73.9	73.8
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Jordan	68.9	67.6	54.8	57.1	61.1	65.4	74.9	79.6	83.0	83.5	82.4	80.1	78.0
Kazakhstan	–10.7	–14.2	–13.8	–10.9	–10.2	–12.8	–16.1	–19.4	–21.4	–23.2	–24.2	–24.1	–23.3
Kenya	42.1	41.3	40.6	42.6	44.6	43.2	43.7	44.4	43.9	43.6	42.9	42.6	42.0
Latvia	7.5	4.7	11.3	21.5	28.2	29.9	29.2	27.1	26.0	24.9	23.9	22.6	21.5
Lithuania	11.0	11.1	12.7	23.4	31.1	34.9	34.9	36.0	36.7	37.0	37.2	37.3	37.2
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	29.8	29.1	33.2	36.3	36.4	37.8	38.0	38.5	40.2	41.0	41.3	41.0	40.7
Morocco	56.8	53.1	47.5	47.3	50.8	54.0	59.9	61.3	62.5	62.4	61.4	60.0	58.4
Nigeria	2.9	4.7	1.3	11.0	14.4	15.0	14.9	16.5	15.8	17.0	18.7	20.5	18.2
Pakistan	50.6	47.9	53.2	55.5	57.9	56.2	60.5	63.4	64.1	61.3	58.5	56.9	55.3
Peru	22.8	16.0	12.5	11.7	9.9	6.8	4.3	3.6	3.1	2.4	1.6	0.8	0.3
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	15.0	10.2	9.9	14.9	20.5	26.2	27.6	28.9	22.3	24.0	25.5	26.0	26.2
Romania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	1.6	–15.9	–41.9	–44.0	–42.6	–42.5	–53.9	–63.4	–69.9	–73.7	–75.4	–74.0	–69.6
South Africa	26.9	24.0	22.9	26.3	29.4	32.5	35.6	38.2	40.4	41.9	42.3	42.5	42.4
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Turkey	39.0	32.7	32.5	37.5	34.7	31.2	27.5	27.8	26.0	24.8	23.9	23.1	22.1
Ukraine	11.7	10.1	18.3	31.9	38.4	34.5	35.2	40.1	45.8	49.3	52.5	54.7	55.2
Average	30.4	26.8	23.0	27.9	28.0	26.6	24.7	24.4	23.7	23.8	23.9	24.0	24.2
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	26.6	22.0	21.9	27.8	28.9	27.8	25.8	26.0	23.6	23.4	23.3	22.9	22.3
Latin America	34.7	33.2	31.1	34.7	33.8	32.3	31.0	30.6	31.2	31.1	30.9	30.5	30.2
Middle East and North Africa	66.1	60.9	52.9	55.2	57.6	61.6	67.4	74.6	77.4	80.1	81.7	83.7	84.8
G20 emerging	33.7	30.2	25.2	29.0	28.2	26.0	22.8	21.5	20.9	20.7	20.6	20.7	21.1

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.2.

[1] Gross debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

[2] Up to 2009, public debt data include only central government debt as reported by the Ministry of Finance. For 2010, debt data include subnational debt identified in the 2011 *National Audit Report*. Information on new debt issuance by the local governments and some government agencies in 2011 and 2012 is not yet available, hence debt data reflect only amortization plans as specified in the 2011 *National Audit Report*. Public debt projections assume that about 60 percent of subnational debt will be amortized by 2014, 16 percent over 2015–16, and 24 percent beyond 2017, with no issuance of new debt or rollover of existing debt. For more details, see Box 4 of the April 2013 *Fiscal Monitor*.

Statistical Table 9. Low-Income Countries: General Government Overall Balance and Primary Balance

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Balance													
Armenia	–2.0	–2.3	–1.8	–7.7	–5.0	–2.9	–1.6	–2.2	–2.3	–2.0	–1.8	–1.6	–1.5
Bolivia	4.5	1.7	3.6	0.0	1.7	0.8	1.8	1.5	1.4	1.2	1.1	1.0	0.9
Burkina Faso	16.1	–6.7	–4.3	–5.3	–4.6	–2.4	–3.2	–2.3	–3.2	–3.2	–3.2	–3.2	–3.2
Cambodia	–0.2	–0.7	0.3	–4.2	–2.8	–4.1	–2.7	–2.4	–2.0	–1.6	–1.3	–1.1	–0.8
Cameroon	32.8	4.7	2.2	–0.1	–1.1	–2.7	–1.1	–3.3	–3.5	–3.7	–3.9	–4.0	–4.0
Chad	2.2	2.5	3.6	–9.2	–4.2	2.4	0.5	–2.4	–0.7	1.7	0.6	0.1	–1.4
Congo, Dem. Rep. of the	–3.6	–3.8	–3.8	–2.6	4.9	–1.8	–0.1	–2.8	–3.4	–3.2	–3.0	–2.9	–3.1
Congo, Rep. of	16.6	9.4	23.4	4.8	16.1	16.4	6.4	14.3	15.5	11.8	10.9	10.7	8.6
Côte d'Ivoire	–1.8	–0.8	–0.6	–1.6	–2.3	–5.7	–3.4	–3.1	–3.5	–3.4	–3.3	–3.3	–3.3
Ethiopia	–3.9	–3.6	–2.9	–0.9	–1.3	–1.6	–1.2	–2.8	–3.1	–2.7	–2.6	–2.4	–2.4
Georgia	3.4	0.8	–2.0	–6.5	–4.8	–0.9	–0.8	–2.2	–2.0	–1.6	–1.4	–1.1	–1.2
Ghana	–4.7	–5.6	–8.4	–7.0	–9.4	–5.5	–9.3	–7.0	–7.3	–7.1	–7.3	–7.4	–7.4
Haiti	–1.7	0.2	–2.8	–4.6	2.4	–3.7	–5.1	–5.5	–6.9	–5.4	–4.3	–3.5	–3.1
Honduras	–2.7	–1.6	–1.7	–4.5	–2.8	–2.8	–4.2	–6.5	–6.3	–6.6	–6.8	–6.9	–6.9
Lao P.D.R.	–3.2	–2.4	–2.6	–5.3	–4.7	–2.1	–2.6	–4.5	–4.7	–5.0	–5.0	–5.0	–4.9
Madagascar	–0.5	–2.7	–1.1	–3.1	–1.5	–4.8	–2.9	–2.7	–3.0	–3.5	–3.4	–3.9	–3.7
Mali	31.3	–3.2	–2.2	–4.2	–2.7	–3.7	–1.1	–2.5	–3.0	–2.9	–2.9	–2.7	–2.7
Moldova	0.0	–0.2	–1.0	–6.3	–2.5	–2.4	–2.1	–2.6	–2.8	–2.8	–2.7	–2.7	–2.5
Mozambique	–4.1	–2.9	–2.5	–5.5	–4.3	–5.0	–4.0	–4.6	–7.2	–6.7	–6.4	–5.8	–4.8
Myanmar	–3.6	–3.3	–2.4	–4.9	–5.4	–4.6	–3.7	–5.1	–4.8	–4.8	–4.8	–4.8	–4.7
Nepal	0.3	–0.8	–0.4	–2.6	–0.8	–1.0	–0.6	2.7	–0.3	–0.3	–0.2	–0.2	–0.4
Nicaragua	0.5	0.9	–0.6	–1.7	–0.6	0.3	0.0	–0.9	–1.0	–0.7	–1.7	–0.8	–1.0
Senegal	–5.4	–3.8	–4.7	–4.9	–5.2	–6.3	–5.6	–5.3	–4.6	–3.9	–3.8	–3.6	–3.6
Sudan	–1.4	–3.5	0.6	–5.1	0.3	0.2	–3.8	–2.0	–0.9	–1.4	–1.6	–2.9	–3.2
Tanzania	–4.5	–1.9	–2.6	–6.0	–6.5	–5.0	–5.0	–5.3	–4.5	–3.8	–3.3	–2.9	–2.7
Uganda	–0.8	–1.1	–2.7	–2.3	–6.7	–3.1	–3.5	–1.8	–6.0	–5.7	–5.5	–5.5	–5.7
Uzbekistan	5.4	5.2	10.2	2.8	4.9	8.8	8.5	1.2	0.6	0.3	0.2	0.2	0.2
Vietnam	0.3	–2.0	–0.5	–6.6	–2.8	–2.9	–4.8	–4.0	–4.0	–3.4	–3.1	–2.9	–2.6
Yemen	1.2	–7.2	–4.5	–10.2	–4.0	–4.4	–6.3	–5.8	–5.8	–5.8	–5.7	–5.3	–6.4
Zambia	20.2	–1.3	–0.8	–2.5	–3.0	–2.2	–3.1	–7.8	–6.6	–6.9	–7.4	–8.3	–8.9
Average	2.3	–1.6	–0.4	–4.1	–2.1	–1.7	–2.6	–3.0	–3.2	–3.1	–3.1	–3.1	–3.1
Oil producers	6.5	–0.8	1.2	–5.8	–1.7	–1.5	–3.7	–3.1	–3.1	–2.8	–2.7	–2.5	–2.7
Asia	–0.5	–2.1	–0.9	–5.7	–3.4	–3.2	–4.1	–3.7	–3.8	–3.5	–3.3	–3.1	–3.0
Latin America	0.5	0.3	0.3	–2.3	0.0	–0.9	–1.1	–2.0	–2.1	–2.0	–2.0	–1.8	–1.7
Sub-Saharan Africa	5.2	–1.5	–1.1	–3.2	–2.8	–2.5	–3.1	–3.4	–3.7	–3.6	–3.7	–3.7	–3.8
Others	0.9	–1.9	1.1	–4.4	–0.2	1.2	–0.4	–1.9	–1.8	–1.9	–1.9	–2.1	–2.4
Primary Balance													
Armenia	–1.7	–2.0	–1.5	–7.2	–4.1	–1.9	–0.6	–1.0	–1.1	–0.7	–0.4	–0.2	0.0
Bolivia	7.0	4.3	5.5	1.7	3.1	2.1	2.8	2.6	2.3	2.1	1.9	1.8	1.6
Burkina Faso	16.7	–6.3	–3.9	–4.9	–4.2	–1.9	–2.5	–1.8	–2.6	–2.6	–2.5	–2.5	–2.5
Cambodia	0.0	–0.5	0.5	–4.0	–2.5	–3.8	–2.4	–2.0	–1.6	–1.2	–0.9	–0.7	–0.4
Cameroon	33.8	5.2	2.5	0.3	–0.8	–2.3	–0.7	–3.0	–3.0	–3.2	–3.4	–3.4	–3.4
Chad	2.6	2.8	3.8	–8.8	–3.6	3.0	0.9	–1.8	–0.1	2.3	1.0	0.5	–1.1
Congo, Dem. Rep. of the	1.0	1.4	0.9	2.9	7.1	0.9	2.3	–0.7	–1.4	–1.4	–1.5	–1.5	–1.8
Congo, Rep. of	21.1	11.9	25.8	6.1	17.0	16.5	6.5	13.9	15.0	11.3	10.4	10.3	8.2
Côte d'Ivoire	0.0	1.0	1.2	0.0	–0.6	–3.1	–1.6	–1.7	–2.2	–2.0	–1.9	–1.9	–1.9
Ethiopia	–3.0	–2.9	–2.5	–0.6	–0.9	–1.2	–0.9	–2.5	–2.7	–2.2	–2.0	–1.7	–1.7
Georgia	4.1	1.4	–1.3	–5.6	–3.8	0.3	0.2	–1.0	–0.9	–0.5	–0.2	0.0	0.0
Ghana	–2.6	–3.7	–6.2	–4.2	–6.2	–2.8	–6.0	–3.5	–3.3	–3.1	–3.1	–3.1	–2.8
Haiti	–1.2	1.3	–2.1	–3.8	3.0	–3.3	–4.6	–5.0	–6.5	–4.9	–3.8	–2.9	–2.5
Honduras	–3.1	–2.2	–2.7	–5.4	–3.4	–3.0	–4.3	–5.9	–5.5	–5.5	–5.5	–5.5	–5.5
Lao P.D.R.	–2.5	–1.9	–2.1	–4.9	–4.2	–1.6	–2.0	–3.6	–4.1	–4.4	–4.5	–4.5	–4.5
Madagascar	1.9	–1.5	–0.3	–2.3	–0.7	–4.0	–2.2	–1.8	–1.8	–2.3	–2.3	–2.8	–2.7
Mali	31.8	–2.8	–1.9	–3.9	–2.3	–3.0	–0.5	–1.9	–2.4	–2.4	–2.4	–2.2	–2.2
Moldova	1.3	1.0	0.2	–5.0	–1.7	–1.6	–1.3	–2.1	–1.9	–2.0	–2.1	–2.1	–2.0
Mozambique	–3.3	–2.3	–2.0	–5.0	–3.5	–4.1	–3.0	–3.4	–5.9	–5.3	–4.8	–4.1	–3.0
Myanmar	–3.0	–2.7	–1.9	–4.2	–4.5	–3.5	–2.1	–3.5	–3.3	–3.3	–3.2	–3.2	–3.1
Nepal	0.9	–0.1	0.3	–1.9	0.0	–0.1	0.2	3.5	0.6	0.5	0.6	0.6	0.5
Nicaragua	2.0	1.9	0.2	–0.6	0.5	1.4	1.1	0.3	0.1	0.4	–0.7	0.5	0.3
Senegal	–4.5	–3.2	–4.0	–4.2	–4.3	–4.7	–4.1	–3.7	–2.9	–2.2	–2.1	–1.9	–1.9
Sudan	–0.2	–2.5	1.5	–4.0	1.4	1.5	–2.4	–0.6	0.4	–0.1	–0.4	–1.6	–1.7
Tanzania	–3.3	–0.7	–1.6	–5.1	–5.5	–4.0	–3.8	–3.7	–2.7	–2.1	–1.6	–1.3	–1.2
Uganda	0.4	0.1	–1.5	–1.2	–5.7	–2.0	–2.0	–0.2	–4.3	–3.9	–3.8	–3.7	–4.0
Uzbekistan	5.6	5.3	10.3	2.9	5.0	8.9	8.6	1.3	0.7	0.4	0.3	0.3	0.3
Vietnam	1.0	–1.0	0.6	–5.4	–1.7	–1.6	–3.6	–2.8	–2.9	–2.3	–2.0	–1.8	–1.6
Yemen	3.5	–4.9	–2.1	–7.7	–1.7	–0.1	–0.9	–1.2	–1.5	–1.4	–1.5	–1.3	–2.8
Zambia	22.1	0.4	0.9	–0.9	–1.3	–1.0	–1.5	–5.8	–4.2	–4.4	–4.6	–5.1	–5.2
Average	3.5	–0.5	0.6	–3.1	–1.1	–0.5	–1.3	–1.7	–1.9	–1.7	–1.7	–1.7	–1.7
Oil producers	7.8	0.3	2.4	–4.5	–0.5	0.0	–2.1	–1.6	–1.7	–1.4	–1.3	–1.2	–1.5
Asia	0.2	–1.2	–0.1	–4.8	–2.4	–2.1	–2.8	–2.5	–2.7	–2.4	–2.1	–2.0	–1.9
Latin America	1.6	1.3	1.0	–1.7	0.6	–0.2	–0.5	–1.1	–1.2	–1.0	–1.1	–0.8	–0.8
Sub-Saharan Africa	6.8	–0.1	0.2	–1.9	–1.6	–1.2	–1.7	–2.0	–2.2	–2.0	–2.1	–2.0	–2.1
Others	2.0	–0.9	2.0	–3.4	0.9	2.7	1.4	–0.3	–0.2	–0.4	–0.5	–0.7	–1.0

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. For country-specific details, see "Data and Conventions" in text and Table SA.3.

Statistical Table 10. Low-Income Countries: General Government Revenue and Expenditure

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue													
Armenia	18.0	20.1	20.5	20.9	21.2	22.1	22.4	23.2	23.8	24.2	24.5	24.7	24.9
Bolivia	34.3	34.4	38.9	35.8	33.2	36.2	37.9	37.3	36.3	35.3	34.7	34.3	34.0
Burkina Faso	40.8	20.1	16.9	19.6	19.8	21.2	22.7	23.8	22.3	22.1	22.1	21.6	21.6
Cambodia	12.8	13.7	15.9	15.8	17.0	15.6	17.2	17.3	17.8	18.0	18.2	18.3	18.4
Cameroon	47.4	20.3	20.8	18.4	17.4	18.7	18.8	19.0	19.0	18.8	18.6	18.6	18.6
Chad	16.2	19.7	22.5	15.0	20.2	24.8	23.4	19.9	19.7	21.5	20.5	19.8	18.6
Congo, Dem. Rep. of the	19.5	17.0	21.1	24.3	33.0	27.2	31.1	31.1	29.7	29.4	29.1	28.9	28.5
Congo, Rep. of	44.4	39.3	47.0	29.5	37.5	42.5	42.6	46.7	47.9	42.6	42.0	39.2	37.7
Côte d'Ivoire	19.0	19.7	20.6	19.5	19.7	20.3	20.8	21.5	21.8	21.9	22.4	22.7	22.7
Ethiopia	18.6	17.3	16.2	16.5	17.5	16.9	15.7	15.2	14.5	14.9	14.9	14.9	14.9
Georgia	26.7	29.3	30.7	29.3	28.3	28.2	28.8	27.4	27.1	27.2	27.3	27.4	27.4
Ghana	17.1	17.5	15.9	16.4	16.7	19.1	19.1	20.2	20.9	21.2	21.4	21.5	22.2
Haiti	13.5	15.8	15.1	17.9	28.4	29.8	23.3	20.7	19.9	19.4	19.1	18.9	20.1
Honduras	23.3	24.5	26.4	24.4	24.1	23.1	22.5	22.4	22.5	22.7	22.6	22.7	22.5
Lao P.D.R.	14.5	15.6	15.9	17.1	18.3	18.3	19.6	20.3	19.8	19.6	19.6	19.3	19.0
Madagascar	21.0	16.0	17.6	12.3	12.3	11.3	12.0	13.0	13.7	12.4	12.2	12.0	12.3
Mali	56.2	21.3	19.0	21.7	20.1	21.0	17.6	21.5	22.5	23.1	23.6	23.0	23.1
Moldova	39.9	41.7	40.6	38.9	38.3	36.6	38.1	38.1	38.1	37.8	37.5	37.2	37.0
Mozambique	22.9	25.2	25.3	27.1	28.6	28.6	28.9	31.7	28.3	28.1	28.0	28.0	27.8
Myanmar	12.8	12.3	11.6	10.7	11.4	12.0	23.0	23.4	23.9	24.5	25.1	25.5	26.0
Nepal	13.0	14.2	14.9	16.8	18.0	17.6	18.6	19.9	19.9	20.1	20.2	20.3	20.4
Nicaragua	24.9	25.4	24.8	25.5	25.7	28.2	28.0	28.2	27.9	28.3	28.6	28.6	28.6
Senegal	21.2	23.6	21.6	21.7	22.0	22.4	23.3	23.4	22.9	22.9	22.7	22.8	22.9
Sudan	22.4	21.9	24.0	15.4	19.3	18.1	10.0	11.2	12.9	13.2	13.0	12.0	12.3
Tanzania	18.8	21.3	21.9	21.0	21.0	21.9	21.9	23.0	23.5	23.1	23.3	23.5	23.7
Uganda	16.7	16.0	15.0	14.8	15.5	16.8	15.6	16.1	15.6	15.8	16.1	16.2	16.2
Uzbekistan	34.4	35.6	40.7	36.7	37.0	40.2	41.6	36.3	35.7	35.8	35.7	35.6	35.6
Vietnam	26.3	26.1	26.6	25.0	27.2	25.2	22.9	22.2	21.7	21.7	21.6	21.6	21.7
Yemen	38.6	33.2	36.7	25.0	26.0	25.0	29.9	27.2	26.9	25.9	24.8	24.7	23.4
Zambia	43.6	23.0	23.0	18.9	19.6	21.7	23.2	20.9	22.2	22.2	22.6	22.8	23.2
Average	25.9	23.0	24.0	21.5	22.8	23.2	23.4	23.3	23.2	23.1	23.1	23.0	23.1
Oil producers	32.0	26.8	28.5	23.9	26.1	25.6	24.6	23.9	23.3	23.0	22.6	22.4	22.2
Asia	21.6	21.3	21.4	20.3	21.6	20.6	22.1	22.0	21.8	21.9	22.0	22.1	22.3
Latin America	26.0	26.7	29.1	27.9	28.5	30.2	30.0	29.7	29.2	28.9	28.7	28.6	28.7
Sub-Saharan Africa	26.8	20.4	20.8	19.1	20.5	21.6	21.4	21.9	21.7	21.6	21.6	21.5	21.5
Others	28.9	28.0	30.9	24.8	26.3	26.9	26.3	25.6	25.9	25.9	25.8	25.6	25.6
Expenditure													
Armenia	20.0	22.4	22.2	28.6	26.2	25.0	24.0	25.4	26.1	26.2	26.4	26.3	26.4
Bolivia	29.8	32.7	35.3	35.8	31.5	35.4	36.1	35.8	34.9	34.1	33.6	33.3	33.1
Burkina Faso	24.6	26.8	21.1	24.9	24.4	23.6	25.9	26.1	25.4	25.3	25.2	24.8	24.7
Cambodia	13.0	14.5	15.6	20.0	19.9	19.6	20.0	19.7	19.8	19.6	19.5	19.4	19.2
Cameroon	14.6	15.6	18.6	18.5	18.6	21.4	19.9	22.4	22.5	22.5	22.5	22.6	22.6
Chad	14.0	17.1	18.9	24.2	24.4	22.4	23.0	22.2	20.4	19.8	20.0	19.6	20.0
Congo, Dem. Rep. of the	23.1	20.8	24.9	26.9	28.1	29.0	31.2	33.9	33.1	32.6	32.1	31.8	31.6
Congo, Rep. of	27.8	29.9	23.6	24.7	21.4	26.1	36.2	32.4	32.4	30.9	31.0	28.5	29.1
Côte d'Ivoire	20.8	20.5	21.1	21.1	22.0	25.9	24.2	24.7	25.4	25.3	25.8	25.9	26.0
Ethiopia	22.5	20.9	19.1	17.4	18.8	18.5	16.9	18.0	17.6	17.7	17.5	17.3	17.3
Georgia	23.3	28.4	32.7	35.8	33.1	29.1	29.6	29.6	29.1	28.9	28.7	28.5	28.5
Ghana	21.8	23.1	24.4	23.4	26.1	24.6	28.4	27.2	28.2	28.3	28.6	28.9	29.6
Haiti	15.2	15.6	17.9	22.5	26.0	33.5	28.4	26.2	26.7	24.8	23.4	22.4	23.2
Honduras	26.0	26.1	28.1	28.9	27.0	25.9	26.6	29.0	28.8	29.3	29.4	29.6	29.4
Lao P.D.R.	17.7	18.0	18.6	22.4	23.0	20.4	22.2	24.8	24.5	24.6	24.6	24.3	23.9
Madagascar	21.5	18.7	18.6	15.3	13.8	16.0	14.9	15.8	16.7	15.9	15.6	15.9	15.9
Mali	24.9	24.5	21.2	25.9	22.8	24.7	18.7	24.1	25.5	26.0	26.5	25.7	25.7
Moldova	39.8	42.0	41.6	45.2	40.8	39.0	40.3	40.8	40.9	40.5	40.2	39.8	39.5
Mozambique	27.0	28.1	27.8	32.6	32.9	33.6	32.9	36.3	35.5	34.8	34.4	33.8	32.6
Myanmar	16.4	15.5	14.0	15.6	16.9	16.6	26.6	28.5	28.8	29.3	29.9	30.3	30.7
Nepal	12.7	15.0	15.4	19.4	18.8	18.5	19.2	17.2	20.3	20.3	20.5	20.5	20.8
Nicaragua	24.4	24.4	25.5	27.2	26.3	28.0	28.0	29.1	29.0	29.1	30.3	29.4	29.6
Senegal	26.6	27.5	26.3	26.6	27.2	28.6	28.8	28.7	27.5	26.8	26.5	26.4	26.5
Sudan	23.8	25.4	23.5	20.5	19.0	17.9	13.8	13.2	13.9	14.6	14.6	14.9	15.6
Tanzania	23.2	23.1	24.5	27.0	27.5	26.9	26.9	28.4	28.0	26.9	26.6	26.4	26.4
Uganda	17.5	17.1	17.7	17.1	22.2	19.9	19.1	17.9	21.6	21.5	21.6	21.6	21.9
Uzbekistan	29.0	30.4	30.5	33.9	32.1	31.4	33.0	35.0	35.1	35.4	35.4	35.4	35.4
Vietnam	26.1	28.1	27.1	31.6	30.0	28.1	27.7	26.2	25.7	25.1	24.7	24.5	24.4
Yemen	37.4	40.3	41.2	35.2	30.1	29.4	36.2	33.0	32.7	31.7	30.5	30.0	29.8
Zambia	23.5	24.3	23.8	21.3	22.6	23.9	26.3	28.7	28.9	29.1	30.0	31.1	32.1
Average	23.5	24.6	24.5	25.6	25.0	24.9	26.0	26.4	26.4	26.2	26.2	26.1	26.2
Oil producers	25.5	27.6	27.4	29.6	27.8	27.1	28.3	27.0	26.4	25.7	25.3	25.0	24.9
Asia	22.1	23.4	22.3	26.0	25.0	23.8	26.2	25.6	25.6	25.4	25.3	25.3	25.3
Latin America	25.5	26.4	28.8	30.3	28.5	31.1	31.1	31.6	31.3	30.9	30.7	30.4	30.4
Sub-Saharan Africa	21.6	21.9	22.0	22.3	23.3	24.1	24.5	25.2	25.4	25.2	25.3	25.2	25.4
Others	28.0	29.9	29.8	29.2	26.5	25.7	26.7	27.5	27.6	27.8	27.7	27.8	28.0

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.3.

Statistical Table 11. Low-Income Countries: General Government Gross Debt and Net Debt

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Debt													
Armenia	16.2	14.2	14.6	34.1	33.7	35.5	38.9	41.7	44.1	42.9	42.8	41.1	40.8
Bolivia	55.2	40.5	37.2	40.0	38.5	34.7	33.4	30.8	29.2	27.6	26.0	24.5	22.9
Burkina Faso	22.6	25.4	25.2	28.6	29.3	29.7	27.3	31.4	31.7	32.6	33.7	34.3	34.8
Cambodia	32.7	30.6	27.5	28.9	29.1	28.5	28.8	28.2	28.4	27.9	27.3	26.5	25.9
Cameroon	15.9	12.0	9.5	10.6	12.1	13.8	16.2	19.3	21.9	24.5	27.0	29.4	31.7
Chad	26.5	21.1	18.9	23.3	26.3	31.3	27.8	28.1	26.2	23.5	23.3	22.9	23.1
Congo, Dem. Rep. of the	162.0	136.3	143.0	146.4	42.6	35.5	35.4	38.1	38.6	37.6	36.4	35.3	33.1
Congo, Rep. of	98.8	98.0	68.1	61.6	22.9	30.2	26.2	21.8	21.7	19.8	18.0	14.5	12.7
Côte d'Ivoire	84.2	75.6	75.3	66.5	66.4	94.9	45.8	41.5	39.8	38.6	37.5	36.4	35.3
Ethiopia	39.4	37.2	30.8	25.3	27.9	26.2	21.2	22.5	24.1	24.7	25.3	25.6	26.2
Georgia	27.1	21.6	27.6	37.3	39.2	33.8	32.3	32.9	33.6	33.0	32.0	30.8	29.6
Ghana	26.2	31.0	33.6	36.2	46.3	43.7	50.2	51.6	53.8	55.0	56.5	59.7	60.3
Haiti	39.0	34.8	37.8	28.2	17.7	12.2	15.4	20.4	24.5	27.6	29.4	30.3	31.1
Honduras	40.2	24.6	22.9	24.6	29.7	32.1	34.4	40.0	44.4	49.4	54.6	60.1	67.4
Lao P.D.R.	71.9	64.2	60.3	63.2	62.1	56.1	52.8	54.0	53.1	51.2	49.5	47.6	44.9
Madagascar	37.0	33.5	31.9	36.0	36.1	37.4	38.1	37.2	39.0	37.5	36.4	33.9	31.8
Mali	20.4	21.1	22.6	24.7	28.7	29.2	29.7	29.8	30.7	31.5	32.2	32.7	33.2
Moldova	30.4	25.2	18.8	26.7	26.5	23.1	23.9	23.5	23.3	22.4	21.7	20.6	20.2
Mozambique	53.6	41.9	42.1	45.6	46.1	39.3	42.2	45.7	49.1	50.3	51.6	52.2	51.5
Myanmar	90.3	62.3	53.0	55.0	49.5	49.2	48.0	42.6	42.9	43.2	43.4	43.7	43.9
Nepal	49.5	42.8	41.2	39.3	35.4	33.1	33.6	30.0	29.8	29.9	29.2	28.9	28.6
Nicaragua	74.2	51.0	47.4	50.7	50.1	45.7	42.7	41.3	39.5	37.9	36.7	35.8	34.4
Senegal	21.8	23.5	23.9	34.2	35.7	40.0	41.7	45.5	47.3	48.9	49.4	49.7	50.1
Sudan	75.0	70.7	68.8	71.8	73.1	70.9	95.7	100.0	99.2	97.4	97.1	97.9	98.1
Tanzania	42.6	28.4	29.2	32.6	37.7	40.6	40.8	42.5	43.6	44.2	44.2	44.0	43.9
Uganda	35.5	21.9	21.4	21.4	26.7	28.9	29.7	32.0	34.7	36.9	38.6	40.5	42.5
Uzbekistan	21.3	15.8	12.7	11.0	10.0	9.1	8.6	8.7	8.9	9.0	9.3	9.5	9.8
Vietnam	38.4	40.9	39.4	46.9	51.7	47.9	51.3	50.4	50.5	49.8	48.3	46.9	45.8
Yemen	40.8	40.4	36.4	49.9	42.2	45.2	47.8	48.1	50.1	51.5	53.1	54.0	56.7
Zambia	29.8	26.7	23.5	26.9	25.8	27.2	32.4	36.2	38.9	41.9	44.9	48.8	53.1
Average	47.7	42.1	39.9	42.7	41.8	40.8	41.9	41.4	42.2	42.1	42.0	41.9	41.9
Oil producers	38.6	38.8	35.6	42.1	42.1	41.4	44.5	44.1	44.7	44.4	44.0	43.2	43.0
Asia	48.5	45.1	42.4	47.6	48.9	46.2	48.0	46.1	46.3	45.9	44.9	44.0	43.2
Latin America	51.9	36.6	34.8	35.4	35.0	32.9	33.0	33.8	34.4	35.0	35.3	35.6	36.1
Sub-Saharan Africa	46.3	40.5	38.6	38.7	35.0	36.5	34.0	35.4	36.8	37.4	38.2	38.9	39.5
Others	47.5	43.4	40.8	46.0	45.7	43.3	50.0	48.4	48.9	48.0	47.6	47.0	47.1
Net Debt													
Armenia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bolivia	41.9	27.3	20.6	23.1	18.4	14.4	11.1	8.6	6.6	4.9	3.4	2.1	1.0
Burkina Faso	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cambodia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cameroon	15.9	12.0	9.5	10.6	12.1	13.8	16.2	19.3	21.9	24.5	27.0	29.4	31.7
Chad	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Dem. Rep. of the	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Congo, Rep. of	98.8	98.0	68.1	61.6	22.9	30.2	26.2	21.8	21.7	19.8	18.0	14.5	12.7
Côte d'Ivoire	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ethiopia	29.5	29.2	25.8	21.3	23.7	20.7	17.9	19.7	21.6	22.6	23.5	24.1	24.8
Georgia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ghana	21.9	23.3	30.1	32.7	43.0	39.9	48.0	49.6	51.8	52.9	54.3	57.3	57.5
Haiti	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lao P.D.R.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Madagascar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mali	14.9	15.2	16.7	15.5	18.5	20.4	24.6	25.6	26.6	26.9	27.1	27.4	27.7
Moldova	30.4	25.2	18.8	26.7	26.5	23.1	23.9	23.5	23.3	22.4	21.7	20.6	20.2
Mozambique	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nepal	49.5	42.8	41.2	39.3	35.4	33.1	33.6	30.0	29.8	29.9	29.2	28.9	28.6
Nicaragua	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Senegal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tanzania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uganda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uzbekistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Vietnam	32.3	33.7	33.2	43.7	49.0	45.4	49.0	48.4	48.7	48.2	46.9	45.7	44.6
Yemen	33.0	35.2	31.4	43.7	38.1	41.8	45.9	46.5	48.6	50.2	52.0	53.0	55.8
Zambia	25.8	21.4	19.9	22.0	22.1	21.8	27.7	33.2	36.1	39.6	43.1	47.3	51.9
Average	32.6	31.3	29.5	34.2	35.7	34.3	36.9	37.1	38.2	38.6	38.6	38.7	38.9
Oil producers	34.4	34.7	32.0	40.1	40.7	39.9	43.5	43.4	44.3	44.4	44.0	43.3	43.1
Asia	...	...	...	...	...	...	...	...	...	...	...	...	...
Latin America	...	...	...	...	...	...	...	...	...	...	...	...	...
Sub-Saharan Africa	29.6	28.0	26.5	24.9	26.0	25.9	28.1	30.1	32.3	33.6	35.0	36.7	38.0
Others	32.6	33.5	29.1	40.6	36.3	38.6	42.1	42.7	44.4	45.4	46.5	46.9	48.9

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

Note: For country-specific details, see "Data and Conventions" in text and Table SA.3.

Statistical Table 12a. Advanced Economies: Structural Fiscal Indicators

(Percent of GDP, except where otherwise indicated)

	Pension spending change, 2013–30[1]	Net present value of pension spending change, 2013–50[1,2]	Health care spending change, 2013–30	Net present value of health care spending change, 2013–50[2]	Gross financing needs, 2013[3]	Average term to maturity, 2013 (years)[4]	Debt-to-average maturity, 2013	Projected interest rate–growth differential, 2013–18 (percent)	Precrisis overall balance, 2000–07	Projected overall balance, 2013–18	Nonresident holding of general government debt, 2013 (percent of total)[5]
Australia	0.7	22.6	2.0	66.7	6.2	5.6	5.2	–0.6	1.1	–0.8	55.2
Austria	2.3	49.9	1.7	57.7	9.0	7.5	9.9	0.0	–1.7	–1.9	83.5
Belgium	4.0	105.1	2.4	80.8	18.7	7.3	13.9	1.1	–0.3	–1.1	59.9
Canada	1.6	33.3	2.1	63.7	16.6	5.6	15.6	0.0	1.2	–2.2	24.7
Czech Republic	–0.1	10.9	0.6	17.8	11.3	5.7	8.3	0.1	–3.9	–2.6	31.6
Denmark	0.3	3.6	1.2	34.3	9.1	7.6	6.2	1.1	2.5	–1.7	41.0
Estonia	–0.4	–15.5	0.4	13.5	. . .	11.7	0.9	–2.7	1.5	0.1	68.4
Finland	3.1	66.9	1.1	32.2	8.8	6.2	9.3	–1.0	4.1	–1.6	91.6
France	0.4	9.0	0.7	22.3	17.4	6.7	13.9	–0.5	–2.8	–2.3	61.3
Germany	1.2	35.4	0.8	25.3	8.3	6.4	12.5	0.3	–2.3	0.0	59.9
Greece	0.5	20.9	0.7	37.0	21.1	8.2	21.5	1.0	–5.6	–1.9	79.8
Hong Kong SAR	. . .	. . .	. . .	. . .	. . .	. . .	. . .	–7.4	0.0	3.9	1.5
Iceland	0.3	6.0	1.1	38.7	9.4	7.4	12.5	0.4	1.5	–1.1	. . .
Ireland	0.9	38.3	0.6	18.4	12.4	12.1	10.2	0.8	1.5	–3.6	65.7
Israel	. . .	. . .	0.3	10.2	. . .	5.4	13.0	0.3	–5.0	–3.4	17.6
Italy	–0.6	–2.6	0.6	20.5	28.4	6.4	20.7	2.2	–3.0	–1.5	35.8
Japan	–0.3	4.2	1.9	45.8	58.4	6.4	38.3	–1.4	–5.8	–6.3	8.4
Korea	5.2	181.7	3.0	105.6	1.7	5.9	6.1	–1.6	2.1	2.1	13.7
Netherlands	2.3	67.1	3.9	138.1	11.6	6.7	11.2	0.4	–0.6	–4.2	56.0
New Zealand	2.2	64.8	3.2	104.1	9.0	5.6	6.7	–0.8	3.0	0.2	. . .
Norway	2.5	69.6	2.1	64.6	–8.1	4.1	8.4	–2.0	13.4	9.8	41.6
Portugal	0.4	13.7	0.8	41.8	23.3	4.8	25.5	1.3	–4.1	–2.9	65.2
Singapore[6]	. . .	. . .	. . .	. . .	. . .	3.3	32.5	–4.6	7.1	4.7	. . .
Slovak Republic	1.3	48.7	0.8	24.3	11.0	5.9	9.3	–0.3	–3.6	–3.3	49.9
Slovenia	1.8	78.0	0.8	22.4	12.0	6.1	11.8	2.2	–1.0	–4.0	53.7
Spain	0.4	36.5	1.0	45.8	20.2	5.5	17.0	2.5	0.4	–4.4	37.5
Sweden	0.5	10.7	0.3	8.5	4.9	5.4	7.8	–1.4	1.3	–0.4	54.4
Switzerland	1.7	45.1	4.1	144.4	3.3	8.2	5.9	–0.5	0.2	0.7	10.4
United Kingdom	0.2	6.0	1.8	66.2	12.1	14.4	6.4	–0.2	–1.7	–4.2	32.7
United States	1.9	41.9	4.8	160.0	23.9	5.5	19.3	–1.8	–2.4	–4.3	33.8
Average	1.3	35.0	2.8	93.3	22.3	6.4	17.8	–0.8	–1.9	–3.0	36.6
G7	1.1	27.7	3.1	99.8	25.8	6.5	19.9	–0.9	–2.7	–3.7	34.6
G20 advanced	1.3	33.2	3.0	98.8	24.2	6.5	18.8	–1.0	–2.5	–3.4	34.7

Sources: Bloomberg L.P.; Haver Analytics; Joint External Debt Hub; national authorities; and IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability.

[1] Pension projections are based on Clements, Coady, Eich, and others (2013). Projections rely on authorities' estimates when these are available.

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

[3] *Gross financing needs* are defined as the projected overall deficit and maturing government debt in 2013; for more details on the assumptions, see note 1 in Table 5. Data are from Bloomberg L.P. and IMF staff projections.

[4] For most countries, *average term to maturity* data refer to central government securities; source is Bloomberg L.P.

[5] *Nonresident holding of general government debt* data are for 2013:Q1 or latest available from the Joint External Debt Hub (JEDH), Quarterly External Debt Statistics, which include marketable and nonmarketable debt. 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 percentage of 2013 gross general government debt.

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

Statistical Table 12b. Emerging Market Economies: Structural Fiscal Indicators

(Percent of GDP, except where otherwise indicated)

	Pension spending change, 2013–30[1]	Net present value of pension spending change, 2013–50[1,2]	Health care spending change, 2013–30	Net present value of health care spending change, 2013–50[2]	Gross financing needs, 2013[3]	Average term to maturity, 2013 (years)[4]	Debt-to-average maturity, 2013	Projected interest rate–growth differential, 2013–18 (percent)	Precrisis overall balance, 2000–07	Projected overall balance, 2013–18	Nonresident holding of general government debt, 2013 (percent of total)[5]
Argentina	1.3	51.8	1.4	50.6	9.8	13.3	3.6	–14.6	–4.7	–3.0	35.8
Brazil	1.3	74.1	1.9	65.4	18.7	5.1	13.5	3.0	–3.5	–2.5	4.7
Bulgaria	–0.1	3.8	1.0	34.3	4.0	4.0	4.0	1.9	1.1	–1.0	44.1
Chile	–1.6	–36.0	1.5	49.4	1.0	8.2	1.6	0.1	2.4	–0.3	17.1
China	3.0	92.4	1.3	45.8	7.8	7.9	2.9	–6.3	–1.8	–1.1	. . .
Colombia	–0.8	–32.4	2.2	75.9	4.9	6.7	4.8	1.6	–1.9	–0.8	30.1
Egypt	3.5	69.1	0.7	23.2	42.8	1.8	50.5	1.6	–6.7	–14.4	13.4
Hungary	–0.6	1.2	1.4	45.6	20.8	5.0	16.0	1.6	–6.6	–2.9	62.6
India	0.0	–1.9	0.4	14.6	12.2	9.0	7.5	–4.0	–7.9	–8.2	7.8
Indonesia	0.4	13.7	0.4	13.9	3.8	11.1	2.4	–4.1	–1.0	–2.0	59.2
Jordan	1.6	73.0	1.9	72.3	26.4	1.7	50.7	–2.6	–3.3	–5.3	23.2
Kazakhstan	. . .	. . .	0.7	22.7	–3.0	7.2	1.8	–7.4	3.4	3.5	18.6
Kenya	. . .	. . .	0.4	14.4	. . .	5.4	9.1	–5.3	–1.9	–4.0	. . .
Latvia	–2.6	–66.8	0.9	31.5	2.9	4.2	9.1	–1.8	–1.4	–0.6	85.4
Lithuania	0.1	15.1	1.3	45.5	8.4	4.3	9.7	–0.9	–1.8	–2.6	79.4
Malaysia	1.5	47.5	0.6	21.6	10.4	5.6	10.1	–2.1	–4.1	–4.1	30.0
Mexico	1.2	12.2	1.1	40.8	11.7	7.8	5.6	0.2	–2.0	–3.2	36.9
Morocco	. . .	. . .	0.8	29.1	15.2	5.0	12.4	–2.4	–3.5	–3.9	22.7
Nigeria	. . .	. . .	0.4	13.0	. . .	2.8	6.9	–1.8	3.9	–2.9	. . .
Pakistan	0.1	5.8	0.2	7.2	34.0	2.0	32.8	–3.7	–2.9	–4.8	. . .
Peru	. . .	. . .	1.0	34.7	1.8	15.2	1.2	–2.4	–0.4	0.5	48.8
Philippines	0.8	28.1	0.4	15.4	7.6	10.5	3.9	–2.1	–2.4	–0.8	. . .
Poland	–1.0	–41.7	1.7	56.9	10.1	5.0	11.4	–0.2	–4.3	–3.1	52.8
Romania	0.7	29.1	1.3	46.1	10.9	4.7	8.1	–0.9	–2.6	–1.9	56.2
Russia	2.8	97.9	1.1	37.6	2.4	7.6	1.9	–2.1	4.6	–1.0	23.6
Saudi Arabia	1.3	58.1	1.0	36.6	. . .	10.3	0.3	0.5	10.7	4.8	. . .
South Africa	0.7	20.6	1.2	41.3	12.4	10.3	4.2	–2.3	–0.5	–4.1	41.3
Thailand	0.6	17.8	1.4	46.5	8.2	7.7	6.1	–4.4	–0.4	–3.3	12.6
Turkey	4.6	105.8	2.1	73.9	9.5	5.0	7.3	–0.8	–4.1	–2.3	31.3
Ukraine	1.1	69.1	1.1	36.4	11.7	4.1	10.4	1.4	–2.4	–4.3	39.6
Average	2.0	63.2	1.2	42.3	9.6	7.6	5.9	–3.5	–1.7	–2.2	26.0
G20 emerging	2.6	84.1	1.3	46.3	8.7	7.7	4.5	–4.1	–0.7	–1.3	25.0

Sources: Bloomberg L.P.; Joint External Debt Hub; national authorities; and IMF staff estimates and projections.

Note: All country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability.

[1] Pension projections are based on Clements, Coady, Eich, and others (2013). Projections rely on authorities' estimates when these are available.

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

[3] *Gross financing needs* are defined as the projected overall balance and maturing government debt in 2013. Data are from IMF staff projections. See Table 6.

[4] *Average term to maturity* data refer to government securities; source is Bloomberg L.P.

[5] *Nonresident holding of general government debt* data are 2013:Q1 or latest available from the Joint External Debt Hub (JEDH), Quarterly External Debt Statistics, which include marketable and nonmarketable debt. 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 percentage of 2013 gross general government debt.

Statistical Table 13a. Advanced Economies: Illustrative Adjustment Needs Based on Long-Term Debt Targets

(Percent of GDP)

	2013		Age-related spending, 2013–30[3]	Illustrative Fiscal Adjustment Strategy to Achieve Debt Target in 2030		
	Gross debt[1]	CAPB[2]		CAPB in 2020–30[4]	Required adjustment between 2013 and 2020	Required adjustment and age-related spending, 2013–30
	(1)	(2)	(3)	(4)	(4) – (2)	(4) + (3) – (2)
Australia	13.7	–2.4	2.8	0.3	2.7	5.5
Austria	74.4	0.5	4.1	1.3	0.8	4.9
Belgium	100.9	1.1	6.4	4.0	2.8	9.3
Canada	36.5	–2.3	3.6	0.5	2.8	6.5
Czech Republic	47.6	–0.2	0.5	0.3	0.5	1.0
Denmark	47.1	2.3	1.6	0.0	–2.3	–0.8
Finland	58.0	0.2	4.2	–0.1	–0.3	3.9
France	93.5	–0.7	1.0	3.0	3.7	4.7
Germany	80.4	2.2	2.1	1.2	–1.0	1.1
Greece	175.7	4.8	1.2	6.8	2.1	3.3
Iceland	93.2	2.8	1.4	2.6	–0.3	1.2
Ireland	123.3	–0.3	1.5	6.0	6.3	7.7
Israel	70.4	–1.8	...	1.8	3.5	. . .
Italy	132.3	4.7	0.0	6.8	2.1	2.2
Japan	139.9	–8.6	1.6	6.7	15.3	16.8
Korea	35.7	2.8	8.2	–0.6	–3.4	4.8
Netherlands	74.4	1.9	6.3	1.8	–0.1	6.2
New Zealand	27.5	–1.2	5.4	0.1	1.4	6.8
Portugal	123.6	1.1	1.2	6.0	4.9	6.1
Slovak Republic	55.3	–0.2	2.1	0.8	1.0	3.1
Slovenia	71.5	1.8	2.5	1.7	–0.1	2.5
Spain	93.7	–1.4	1.4	4.7	6.1	7.5
Sweden	42.2	–0.2	0.9	–0.2	0.0	0.8
Switzerland	48.2	1.2	5.8	–0.5	–1.7	4.1
United Kingdom	92.1	–1.0	2.0	4.0	5.0	7.0
United States	106.0	–1.3	6.7	3.7	5.0	11.7
Average	95.3	–1.2	4.1	3.4	4.6	8.7
G20 advanced	98.3	–1.5	4.2	3.6	5.1	9.3

Source: IMF staff estimates and projections.

Note: The CAPB required to reduce debt and its comparison to the 2013 CAPB is a standardized calculation, and policy recommendations for individual countries would require a case-by-case assessment.

[1] Gross general government debt, except in the cases of Australia, Canada, Japan, and New Zealand, for which net debt ratios are used.

[2] Cyclically adjusted primary balance (CAPB) is reported in percent of nominal GDP (in contrast to the conventional definition in percent of potential GDP). CAPB is defined as cyclically adjusted balance (CAB) plus gross interest expenditure (this differs from the definition in Statistical Table 2), except in the cases of Australia, Canada, Japan, and New Zealand, for which CAPB is defined as CAB plus net interest payments (as in Statistical Table 2). Structural balances are used instead of CAB for Sweden and the United States. For details, see "Data and Conventions" in text.

[3] See Statistical Table 12a.

[4] CAPB needed to bring the debt ratio down to 60 percent in 2030, or to stabilize debt at the end-2013 level by 2030, if the respective debt-to-GDP ratio is less than 60 percent. 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. The CAPB is assumed to change in line with *Fiscal Monitor* projections in 2011–14 and adjust gradually from 2015 until 2020. Thereafter it is maintained constant until 2030. These calculations assume that the initial country-specific interest rate–growth differentials (based on *Fiscal Monitor* projections) converge over time to model-based country-specific levels with the speed of adjustment based on empirical estimates of the effect of public debt on the interest rate (Poghosyan, 2012) and growth rates obtained from *Fiscal Monitor* projections for 2018. The assumption on interest rate–growth differentials for countries with IMF/EU-supported programs and without market access (Greece, Portugal) is drawn from their debt sustainability analyses. The interest rate–growth differential is assumed to follow the endogenous adjustment path determined by debt levels from 2019 in the case of Portugal.

Statistical Table 13b. Advanced Economies: Illustrative Adjustment Needs Based on Medium-Term Structural Balance Targets

(Percent of GDP)

	2013			Illustrative Fiscal Adjustment Strategy		Index of Difficulty of Adjustment		2030			
	Gross debt	Structural balance	Structural balance target	Primary balance adjustment, 2013–20	Average primary balance, 2021–30	Primary balance adjustment, 2013–20	Average primary balance, 2021–30	Debt, baseline	Debt, 50th percentile shock	Debt, 75th percentile shock	Debt, 95th percentile shock
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Australia	13.7	–3.1	0.0	3.2	0.6	0.3	0.0	8.6	10.8	11.5	14.2
Austria	74.4	–1.8	–0.5	1.8	2.1	0.2	0.2	42.2	45.2	47.7	58.4
Belgium	100.9	–2.7	0.8	4.2	4.1	0.4	0.7	47.8	53.4	56.8	71.7
Canada	36.5	–2.7	0.0	3.8	1.3	0.4	0.1	19.7	21.5	22.7	28.0
Czech Republic	47.6	–1.7	1.0	3.0	2.3	0.3	0.3	15.9	16.5	17.9	23.9
Denmark	47.1	–0.4	0.0	0.2	1.4	0.1	0.1	23.4	26.0	27.6	34.3
Finland	58.0	–1.1	–0.5	1.4	1.6	0.1	0.1	34.5	36.7	38.6	47.0
France	93.5	–2.1	0.0	3.5	3.3	0.3	0.5	48.0	52.1	55.1	68.5
Germany	80.4	–0.1	–0.5	0.5	2.4	0.1	0.3	38.7	49.3	52.0	63.7
Iceland	93.2	–2.8	0.0	2.8	4.2	0.3	0.7	44.9	48.5	51.3	63.5
Ireland	123.3	–5.2	0.0	6.4	5.3	0.7	0.9	66.1	76.5	80.9	100.1
Israel	70.4	–5.1	–1.0	4.6	2.2	0.5	0.3	44.5	51.4	53.9	64.7
Italy	132.3	–0.2	0.0	1.2	5.2	0.1	0.9	73.4	80.3	85.0	105.8
Japan	139.9	–9.3	–3.0	11.8	4.8	1.0	0.9	124.5	139.3	146.0	175.1
Korea	35.7	1.7	0.0	–1.3	1.2	0.0	0.1	15.1	16.0	17.0	21.1
Netherlands	74.4	0.1	–0.5	0.5	2.1	0.1	0.2	47.7	52.8	55.7	68.1
New Zealand	27.5	–0.6	0.0	1.6	0.8	0.1	0.1	12.6	12.7	13.4	16.7
Portugal	123.6	–3.6	–0.5	4.5	4.8	0.4	0.8	72.7	82.8	87.3	107.4
Slovak Republic	55.3	–3.8	–0.5	4.0	1.9	0.4	0.2	36.0	38.5	40.4	49.0
Slovenia	71.5	–0.6	0.3	1.8	2.7	0.2	0.4	35.9	38.9	41.3	51.7
Spain	93.7	–5.2	0.0	6.4	4.0	0.7	0.7	61.6	67.7	71.6	88.5
Sweden	42.2	–1.3	–1.0	0.7	0.7	0.1	0.0	30.7	32.9	34.4	40.9
Switzerland	48.2	0.4	0.0	0.1	1.2	0.1	0.1	23.0	25.7	27.2	33.9
United Kingdom	92.1	–4.1	–1.0	5.0	3.7	0.5	0.6	65.1	69.1	72.6	88.0
United States	106.0	–4.1	–3.0	3.2	2.4	0.3	0.3	87.4	93.8	98.0	115.9
Average	94.9	–3.6	–1.6	3.8	2.8	0.4	0.4	69.4	76.2	79.8	95.9
G20 advanced	98.3	–3.8	–1.9	4.0	2.9	0.4	0.4	73.7	80.8	84.6	101.4

Sources: European Commission (2013); IMF, Public Finances in Modern History Database; and IMF staff estimates and projections.

Note: Structural balance targets are country specific and based on medium-term budgetary objectives. Targets range from a surplus of 1 percent of GDP to a deficit of 3 percent of GDP. The indices of difficulty are based on cumulative distributions of 7-year headline primary balance adjustments and 10-year maximum averages for the headline primary balance for advanced economies between 1950 and 2011. Please refer to Box 1 for details. Figures reported in columns (8) to (11) refer to general government gross debt except in the cases of Australia, Canada, Japan, and New Zealand, for which net debt is reported. The distribution of growth shocks is based on the distribution of revisions to the five-year-ahead potential GDP growth between the November 2010 and April 2013 issues of the *World Economic Outlook*. The revisions corresponding to the 50th, 75th, and 95th percentiles are, respectively, –0.6,–0.9, and –2.2 percentage points.

Statistical Table 14. Emerging Market Economies: Illustrative Adjustment Needs Based on Long-Term Debt Targets

(Percent of GDP)

	2013		Age-related spending, 2013–30[2]	Illustrative Fiscal Adjustment Strategy to Achieve Debt Target in 2030		
	Gross debt	CAPB[1]		CAPB in 2020–30[3]	Required adjustment between 2013 and 2020	Required adjustment and age-related spending, 2013–30
	(1)	(2)	(3)	(4)	(4) – (2)	(4) + (3) – (2)
Argentina	47.8	–1.6	2.7	–1.2	0.4	3.1
Brazil[4]	68.3	3.9	3.2	2.1	–1.8	1.4
Bulgaria	16.0	0.3	0.9	0.6	0.3	1.2
Chile	12.9	–0.4	–0.2	0.0	0.4	0.2
China	22.9	–0.6	4.3	–0.3	0.2	4.5
Colombia	32.3	1.5	1.4	0.0	–1.5	. . .
Egypt	89.5	–6.6	4.2	5.4	12.0	. . .
Hungary	79.8	2.5	0.7	3.7	1.1	1.9
India	67.2	–3.5	0.4	2.9	6.4	6.8
Indonesia	26.2	–0.8	0.8	0.3	1.1	1.9
Jordan	83.8	–1.6	3.5	3.9	5.4	. . .
Kenya	49.4	–1.2	. . .	0.9	2.1	. . .
Latvia	38.4	0.3	–1.7	–0.1	–0.5	–2.1
Lithuania	42.0	–0.8	1.4	0.7	1.5	2.9
Malaysia	57.0	–1.9	2.1	2.0	4.0	6.1
Mexico	44.0	–1.1	2.3	1.0	2.2	4.5
Morocco	61.8	–3.8	. . .	2.4	6.1	. . .
Nigeria	19.6	1.9	. . .	0.1	–1.8	. . .
Pakistan	66.2	–3.4	0.3	2.1	5.5	5.9
Peru	18.6	1.0	. . .	–0.3	–1.3	. . .
Philippines	41.2	0.5	1.3	–0.2	–0.7	0.6
Poland	57.6	–0.4	0.8	1.5	2.0	2.8
Romania	38.2	0.2	2.0	0.3	0.0	2.0
Russia	14.1	0.3	4.0	0.0	–0.3	3.7
South Africa	43.0	–1.6	1.9	1.0	2.6	4.4
Thailand	47.1	–1.8	2.0	1.2	3.0	4.9
Turkey	36.0	1.2	6.7	0.1	–1.1	5.6
Ukraine	42.8	–1.5	. . .	1.9	3.4	. . .
Average	36.5	–0.3	3.2	0.6	0.9	4.6
G20 emerging	34.5	–0.2	3.5	0.4	0.7	4.2

Source: IMF staff estimates and projections.

Note: The cyclically adjusted primary balance (CAPB) required to reduce debt and its comparison to the 2013 CAPB is a standardized calculation, and policy recommendations for individual countries would require a case-by-case assessment. For countries with debt below 40 percent of GDP in 2013, calculations show the CAPB required to stabilize debt at the end-2013 level by 2030.

[1] CAPB is reported in percent of nominal GDP (in contrast to the conventional definition in percent of potential GDP). CAPB is defined as cyclically adjusted balance (CAB) plus gross interest expenditure (this differs from the definition in Statistical Table 6). Structural balances are used instead of CAB for Chile and Peru. For countries not reporting CAB in Statistical Table 6, a Hodrick-Prescott filter is used to estimate potential output, and the CAB is estimated assuming growth elasticities of 1 and 0 for revenues and expenditure, respectively. For details, see "Data and Conventions" in text.

[2] See Statistical Table 12b.

[3] CAPB needed to bring the debt ratio down to 40 percent in 2030, or to stabilize debt at the end-2013 level by 2030 if the respective debt-to-GDP ratio is less than 40 percent. The CAPB is assumed to change in line with *Fiscal Monitor* projections in 2011–14 and adjust gradually from 2015 until 2020; thereafter it is maintained constant until 2030. The analysis makes some simplifying assumptions: in particular, country-specific interest rate–growth differentials are assumed to increase linearly from their 2013 level (from *Fiscal Monitor* projections) to 1 by 2027. Thereafter, the differential is maintained at 1 percentage point, regardless of country-specific circumstances. The speed of convergence to 1 is determined by the gap between the 2013 level and this long-run differential. 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.

[4] Gross public debt refers to the nonfinancial public sector, excluding Eletrobras and Petrobras, and includes sovereign debt held on the balance sheet of the central bank.

Statistical Table 15a. The Top 10 Percent: Their Shares of Taxes and Income

(Percent of total, except where otherwise indicated)

	Year	Share of Taxes, Richest 10 Percent	Share of Market Income, Richest 10 Percent	Ratio of Shares, Richest 10 Percent	Year	Share of Taxes, Richest 10 Percent	Share of Market Income, Richest 10 Percent	Ratio of Shares, Richest 10 Percent	Change in Ratio
		(1)	(2)	(1/2)		(3)	(4)	(3/4)	
Advanced economies									
Australia	2003	36.8	27.5	1.34	1989	35.8	26.5	1.35	–0.01
Austria	2004	30.0	26.1	1.15					
Belgium	1997	31.9	26.9	1.18	1992	29.0	24.3	1.19	–0.01
Canada	2007	35.9	27.8	1.29	1987	30.0	24.3	1.23	0.06
Czech Republic	2004	34.4	28.3	1.22	1992	26.2	24.1	1.08	0.13
Denmark	2004	26.8	24.9	1.07	1987	24.0	21.8	1.10	–0.03
Estonia	2004	36.9	31.2	1.18					
Finland	2004	31.6	27.1	1.17	1987	29.2	22.9	1.27	–0.11
France	2005	54.0	24.5	2.21	1989	49.8	26.2	1.90	0.30
Germany	2010	33.7	28.7	1.18	1989	29.8	25.0	1.19	–0.02
Greece	2010	37.3	30.0	1.25					
Ireland	2010	47.1	31.8	1.48	1987	36.9	29.4	1.26	0.22
Israel	2007	45.7	30.9	1.48	1986	44.0	28.8	1.53	–0.05
Italy	2010	39.3	26.7	1.47					
Japan	2008	33.6	24.3	1.38					
Korea	2006	28.4	22.2	1.28					
Netherlands	2004	29.6	25.7	1.15	1987	29.8	25.8	1.16	–0.00
Norway	2004	28.5	27.2	1.05	1986	24.6	21.5	1.15	–0.10
Slovak Republic	2010	34.5	25.8	1.34	1992	26.6	23.7	1.12	0.21
Spain	2010	33.0	28.5	1.16					
Sweden	2005	29.1	26.4	1.10	1987	25.7	23.3	1.10	0.00
Switzerland	2004	21.9	22.4	0.98	1982	35.0	27.7	1.27	–0.29
United Kingdom	2010	38.1	32.0	1.19	1986	29.7	27.3	1.09	0.10
United States	2010	43.4	30.6	1.42	1986	37.4	26.6	1.41	0.01
Emerging market economies									
Brazil	2006	66.1	35.9	1.84					
China	2002	42.8	31.5	1.36					
Colombia	2010	48.1	33.6	1.43					
Guatemala	2006	80.5	34.9	2.31					
Poland	2004	29.8	28.6	1.04	1995	22.6	28.2	0.80	0.24
Romania	1997	28.6	24.6	1.16	1995	28.1	24.3	1.16	0.00
South Africa	2010	61.3	41.7	1.47					

Sources: Luxembourg Income Study Database; and IMF staff estimates.

Statistical Table 15b. The Top 1 Percent: Their Shares of Taxes and Income

(Percent of total, except where otherwise indicated)

	Year	Share of Taxes, Richest 1 Percent	Share of Market Income, Richest 1 Percent	Ratio of Shares, Richest 1 Percent	Year	Share of Taxes, Richest 1 Percent	Share of Market Income, Richest 1 Percent	Ratio of Shares, Richest 1 Percent	Change in Ratio
		(1)	(2)	(1/2)		(3)	(4)	(3/4)	
Advanced economies									
Australia	2003	10.6	5.8	1.83	1989	8.4	4.7	1.78	0.05
Austria	2004	5.7	4.2	1.36					
Belgium	1997	6.2	4.4	1.41	1992	4.8	3.3	1.44	–0.03
Canada	2007	11.2	6.0	1.87	1987	8.0	5.6	1.41	0.45
Czech Republic	2004	10.7	6.9	1.55	1992	5.1	5.2	0.99	0.56
Denmark	2004	6.2	4.8	1.31	1987	5.7	4.4	1.29	0.02
Estonia	2004	10.8	7.7	1.40					
Finland	2004	5.8	3.1	1.89	1987	3.1	1.8	1.69	0.20
France	2005	14.4	3.1	4.64	1989	14.4	4.9	2.97	1.68
Germany	2010	6.0	3.6	1.67	1989	9.0	6.0	1.50	0.17
Greece	2010	9.7	6.3	1.54					
Ireland	2010	10.2	4.6	2.21	1987	5.7	4.2	1.37	0.84
Israel	2007	8.3	4.1	2.03	1986	12.0	5.3	2.28	–0.25
Italy	2010	11.1	5.8	1.92					
Japan	2008	7.7	3.7	2.10					
Korea	2006	3.0	2.4	1.26					
Netherlands	2004	7.7	5.8	1.33	1987	8.8	6.9	1.28	0.06
Norway	2004	5.2	5.1	1.02	1986	3.4	2.8	1.19	–0.17
Slovak Republic	2010	7.9	4.9	1.60	1992	5.3	4.3	1.23	0.37
Spain	2010	5.2	4.2	1.24					
Sweden	2005	6.6	4.3	1.56	1987	4.8	3.3	1.44	0.12
Switzerland	2004	4.1	3.7	1.09	1982	11.6	5.6	2.08	–0.99
United Kingdom	2010	8.1	6.0	1.34	1986	4.5	3.7	1.21	0.13
United States	2010	12.2	5.6	2.17	1986	7.4	3.6	2.03	0.14
Emerging market economies									
Brazil	2006	12.5	3.3	3.82					
China	2002	9.7	6.0	1.62					
Colombia	2010	4.7	2.6	1.82					
Guatemala	2006	37.6	7.8	4.82					
Poland	2004	5.2	4.9	1.07	1995	4.2	5.4	0.77	0.30
Romania	1997	5.1	4.7	1.09	1995	4.3	4.4	0.97	0.12
South Africa	2010	11.8	5.9	2.02					

Sources: Luxembourg Income Study Database; and IMF staff estimates.

ACRONYMS

ACT	Arab country in transition
CAB	cyclically adjusted balance
CAPB	cyclically adjusted primary balance
CDF	cumulative distribution function
CFC	controlled foreign corporation
CIS	Commonwealth of Independent States (WEO classification)
GDP	gross domestic product
GFSM	*Government Finance Statistics Manual*
GFSR	*Global Financial Stability Report*
LAC	Latin America and the Caribbean
LIC	low-income country
MENA	Middle East and North Africa
OECD	Organisation for Economic Co-operation and Development
VAT	value-added tax
WEO	*World Economic Outlook*

COUNTRY ABBREVIATIONS

Code	Country name
AFG	Afghanistan
AGO	Angola
ALB	Albania
ARE	United Arab Emirates
ARG	Argentina
ARM	Armenia
ATG	Antigua and Barbuda
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BDI	Burundi
BEL	Belgium
BEN	Benin
BFA	Burkina Faso
BGD	Bangladesh
BGR	Bulgaria
BHR	Bahrain
BHS	Bahamas, The
BIH	Bosnia and Herzegovina
BLR	Belarus
BLZ	Belize
BOL	Bolivia
BRA	Brazil
BRB	Barbados
BRN	Brunei Darussalam
BTN	Bhutan
BWA	Botswana
CAF	Central African Republic
CAN	Canada
CHE	Switzerland
CHL	Chile
CHN	China
CIV	Côte d'Ivoire
CMR	Cameroon
COD	Congo, Democratic Republic of the
COG	Congo, Republic of
COL	Colombia
COM	Comoros
CPV	Cape Verde
CRI	Costa Rica
CYP	Cyprus
CZE	Czech Republic
DEU	Germany
DJI	Djibouti
DMA	Dominica
DNK	Denmark

Code	Country name
DOM	Dominican Republic
DZA	Algeria
ECU	Ecuador
EGY	Egypt
ERI	Eritrea
ESP	Spain
EST	Estonia
ETH	Ethiopia
FIN	Finland
FJI	Fiji
FRA	France
FSM	Micronesia, Federated States of
GAB	Gabon
GBR	United Kingdom
GEO	Georgia
GHA	Ghana
GIN	Guinea
GMB	Gambia, The
GNB	Guinea-Bissau
GNQ	Equatorial Guinea
GRC	Greece
GRD	Grenada
GTM	Guatemala
GUY	Guyana
HKG	Hong Kong SAR
HND	Honduras
HRV	Croatia
HTI	Haiti
HUN	Hungary
IDN	Indonesia
IND	India
IRL	Ireland
IRN	Iran
IRQ	Iraq
ISL	Iceland
ISR	Israel
ITA	Italy
JAM	Jamaica
JOR	Jordan
JPN	Japan
KAZ	Kazakhstan
KEN	Kenya
KGZ	Kyrgyz Republic
KHM	Cambodia
KIR	Kiribati
KNA	Saint Kitts and Nevis

Code	Country name
KOR	Korea
KWT	Kuwait
LAO	Lao P.D.R.
LBN	Lebanon
LBR	Liberia
LBY	Libya
LCA	Saint Lucia
LKA	Sri Lanka
LSO	Lesotho
LTU	Lithuania
LUX	Luxembourg
LVA	Latvia
MAR	Morocco
MDA	Moldova
MDG	Madagascar
MDV	Maldives
MEX	Mexico
MHL	Marshall Islands
MKD	Macedonia, former Yugoslav Republic of
MLI	Mali
MLT	Malta
MMR	Myanmar
MNE	Montenegro
MNG	Mongolia
MOZ	Mozambique
MRT	Mauritania
MUS	Mauritius
MWI	Malawi
MYS	Malaysia
NAM	Namibia
NER	Niger
NGA	Nigeria
NIC	Nicaragua
NLD	Netherlands
NOR	Norway
NPL	Nepal
NZL	New Zealand
OMN	Oman
PAK	Pakistan
PAN	Panama
PER	Peru
PHL	Philippines
PLW	Palau
PNG	Papua New Guinea
POL	Poland
PRT	Portugal
PRY	Paraguay
QAT	Qatar

Code	Country name
ROU	Romania
RUS	Russia
RWA	Rwanda
SAU	Saudi Arabia
SDN	Sudan
SEN	Senegal
SGP	Singapore
SLB	Solomon Islands
SLE	Sierra Leone
SLV	El Salvador
SMR	San Marino
SOM	Somalia
SRB	Serbia
STP	São Tomé and Príncipe
SUR	Suriname
SVK	Slovak Republic
SVN	Slovenia
SWE	Sweden
SWZ	Swaziland
SYC	Seychelles
SYR	Syria
TCD	Chad
TGO	Togo
THA	Thailand
TJK	Tajikistan
TKM	Turkmenistan
TLS	Timor-Leste
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TUV	Tuvalu
TWN	Taiwan Province of China
TZA	Tanzania
UGA	Uganda
UKR	Ukraine
URY	Uruguay
USA	United States
UZB	Uzbekistan
VCT	Saint Vincent and the Grenadines
VEN	Venezuela
VNM	Vietnam
VUT	Vanuatu
WSM	Samoa
YEM	Yemen
ZAF	South Africa
ZMB	Zambia
ZWE	Zimbabwe

GLOSSARY

Term	Definition
Automatic stabilizers	Budgetary measures that dampen fluctuation in real GDP, automatically triggered by the tax code and by spending rules.
C-efficiency	Revenue from the value-added tax divided by the product of the standard rate and aggregate private consumption.
Contingent liabilities	Obligations of a government whose timing and magnitude depend on the occurrence of some uncertain future event outside the government's control. Can be explicit (obligations based on contracts, laws, or clear policy commitments) or implicit (political or moral obligations) and sometimes arise from expectations that government will intervene in the event of a crisis or a disaster, or when the opportunity cost of not intervening is considered to be unacceptable.
Cyclical balance	Cyclical component of the overall fiscal balance, computed as the difference between cyclical revenues and cyclical expenditures. 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)	Difference between the overall balance and the automatic stabilizers; equivalently, an estimate of the fiscal balance that would apply under current policies if output were equal to potential.
Cyclically adjusted (CA) expenditure and revenue	Revenue and expenditure adjusted for temporary effects associated with the deviation of actual from potential output (i.e., net of automatic stabilizers).
Cyclically adjusted primary balance (CAPB)	Cyclically adjusted balance excluding net interest payments.
Expenditure elasticity	Elasticity of expenditure with respect to the output gap.
Fiscal devaluation	A revenue-neutral shift from employers' social contributions toward value-added tax.
Fiscal multiplier	The ratio of a change in output to an exogenous and temporary change in the fiscal deficit with respect to their respective baselines.
Fiscal stimulus	Discretionary fiscal policy actions (including revenue reductions and spending increases) adopted in response to the financial crisis.
General government	All government units and all nonmarket, nonprofit institutions that are controlled and mainly financed by government units comprising the central, state, and local governments; 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 special drawing rights, currency, and deposits; debt securities; loans; insurance, pension, and standardized guarantee schemes; and other accounts payable.

Term	Definition
	(See the 2001 edition of the IMF's *Government Financial Statistics Manual* and the *Public Sector Debt Statistics Manual*). The term "public debt" is used in the *Fiscal Monitor*, 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 (also gross financing requirements)	Overall new borrowing requirement plus debt maturing during the year.
Interest rate–growth differential	Effective interest rate (r, defined as the ratio of interest payments over the debt of the preceding period) minus nominal GDP growth (g), divided by 1 plus nominal GDP growth: $(r - g)/(1 + g)$.
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.
Nonfinancial public sector	General government plus nonfinancial public corporations.
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 *Government Finance Statistics Manual* (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 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.
Stock-flow adjustment	Change in the gross debt explained by factors other than the overall fiscal balance (for example, valuation changes).
Structural fiscal balance	Difference between the cyclically adjusted balance and other nonrecurrent effects that go beyond the cycle, such as one-time operations and other factors whose cyclical fluctuations do not coincide with the output cycle (for instance, asset and commodity prices and output composition effects).
Tax expenditures	Government revenues that are forgone as a result of preferential tax treatments to specific sectors, activities, regions, or economic agents.

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