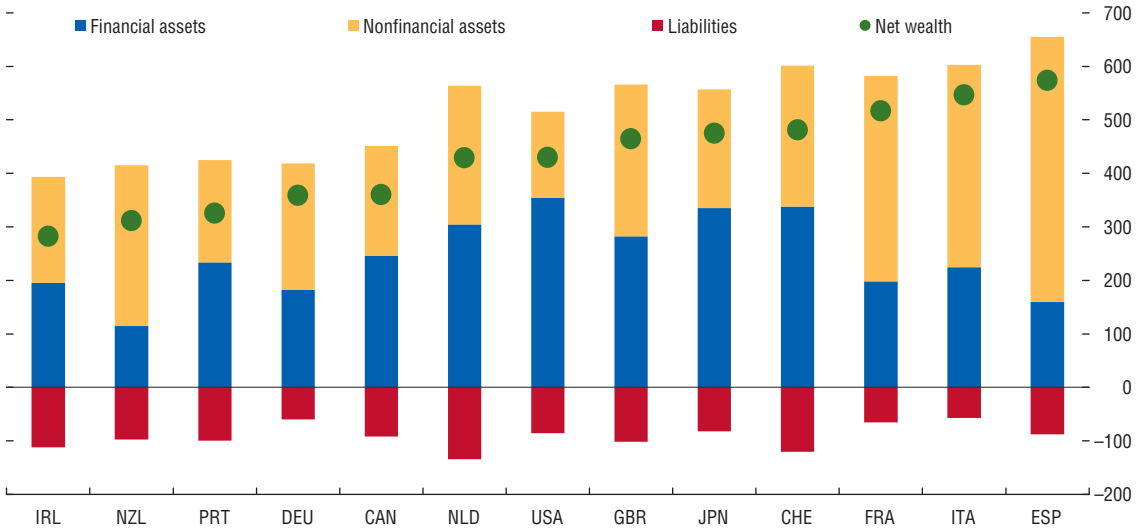
Figure 23. Selected Advanced Economies: Composition of Net Wealth
(Percent of GDP)



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.

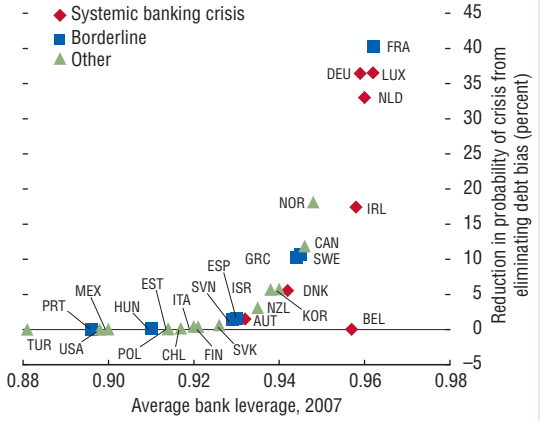
Box 3. Learning from the Crisis? Taxation and Financial Stability

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):

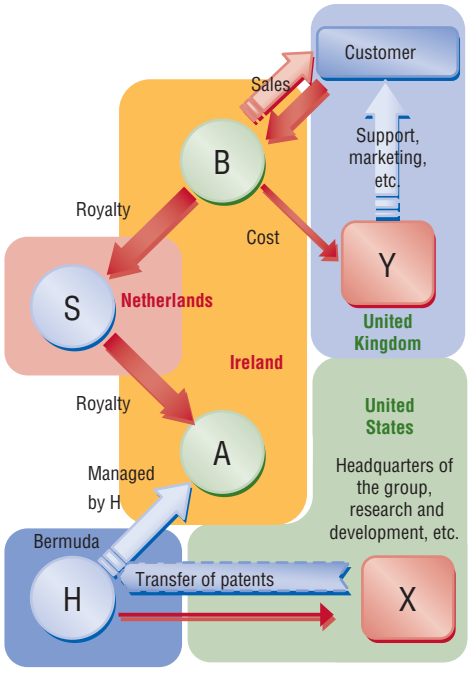
- Multinational Firm X, headquartered in the United States, has an opportunity to make profit in (say) the United Kingdom from a product that it can for the most part deliver remotely. But the tax rate in the United Kingdom is fairly high. So . . .
- It sells the product directly from Ireland through 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.

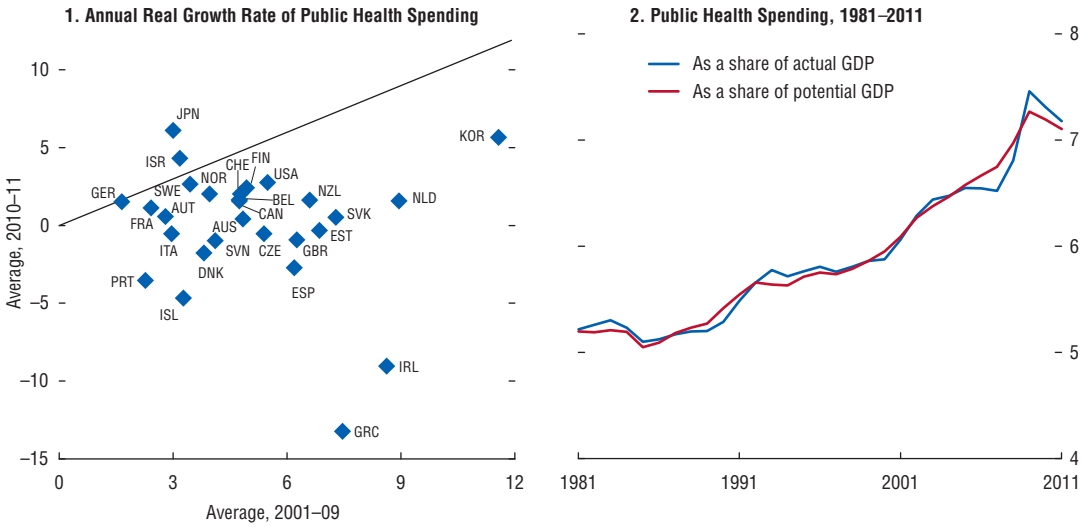
Appendix 1. Recent Developments in Public Health Spending and Outlook for the Future

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.

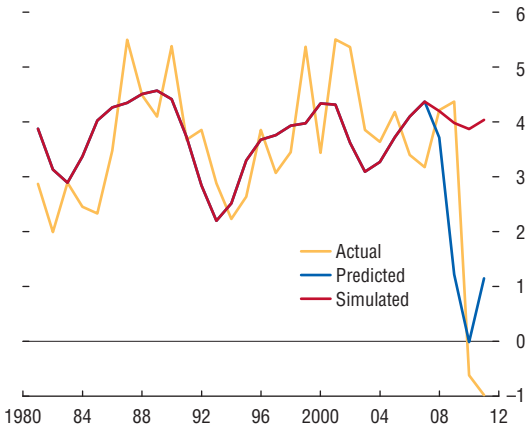
[63] User charges were raised for private health insurance in the United States (Ryu and others, 2013).

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

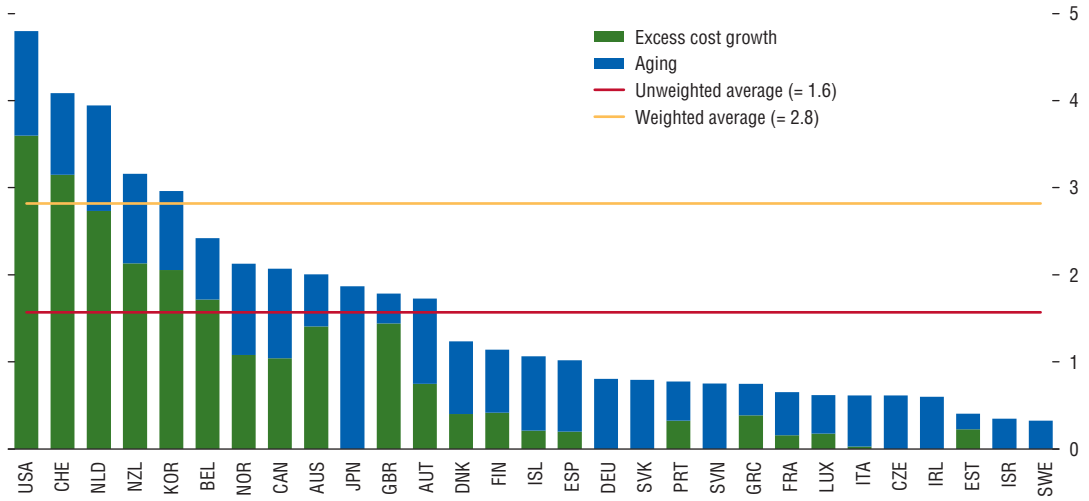
[64] See IMF (2013a) for a similar model.

[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

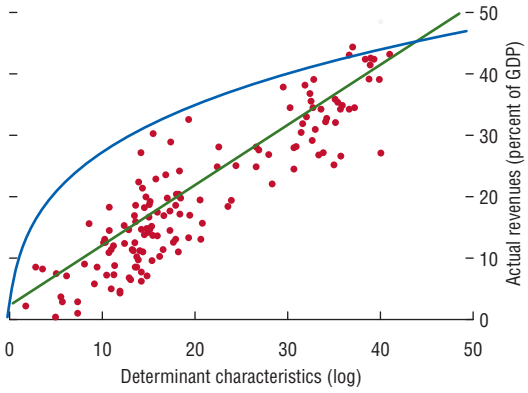
Stochastic frontier analysis[69] instead models revenue potential explicitly, taking revenue to be a function

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

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.

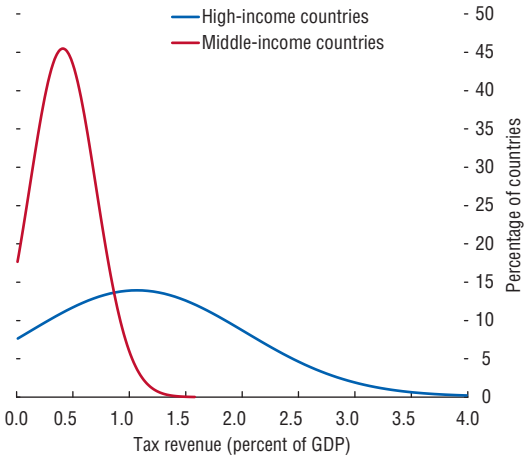
The rationale for increased use of property taxes

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 practice	Coverage		Accounting practice	Coverage		Accounting practice
Country	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
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
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.

REFERENCES

Accessing Global Knowledge (AGN) International, 2011, "Tax Surveys" (London), available at www.agn-europe.org/tax/index.html.

Acemoglu, D., and J. Robinson, 2008, "Persistence of Power, Elites and Institutions," *American Economic Review*, Vol. 98, No. 1, pp. 267–93.

Acosta-Ormachea, S., M. Keen, and J. Yoo, 2013, "Growth and the VAT" (unpublished; Washington: International Monetary Fund).

Acosta-Ormachea, S., and J. Yoo, 2012, "Tax Composition and Economic Growth," IMF Working Paper 12/257 (Washington: International Monetary Fund).

Afonso, J.R.R., J.M. Soares, and K.P. de Castro, 2013, "Avaliação da Estrutura e do Desempenho do Sistema Tributário Brasileiro: Livro Branco da Tributação Brasileira," Working Paper No. IDB-DP-265 (Washington: Inter-American Development Bank, Institutions for Development).

Alesina, A., 2000, "The Political Economy of the Budget Surplus in the United States," *Journal of Economic Perspectives*, Vol. 14, No. 3, pp. 3–19.

Alesina, A., and A. Drazen, 1991, "Why Are Stabilizations Delayed?" *American Economic Review,* Vol. 81, pp. 1170–88.

Alvaredo, F., T. Atkinson, T. Piketty, and E. Saez, 2013, "The World Top Incomes Database," available at http://topincomes.g-mond.parisschoolofeconomics.eu/.

Anderson, D., B. Hunt, M. Kortelainen, M. Kumhof, D. Laxton, D. Muir, S. Mursula, and S. Snudden, 2013, "Getting to Know GIMF: The Simulation Properties of the Global Integrated Monetary and Fiscal Model," IMF Working Paper 13/55 (Washington: International Monetary Fund).

Apps, P., and R. Rees, 2013, "Raise Top Tax Rates, Not the GST," Legal Studies Research Paper No. 13/45 (Sydney, Australia: University of Sydney).

Arin, K.P., P.H. Helles, and O.F.M. Reich, 2010, "Should We Care about the Composition of Tax-Based Stimulus Packages? An Empirical Investigation," presentation at the 20th meeting of the New Zealand Econometric Study Group, Auckland University of Technology, Auckland, New Zealand, February 26–27.

Arnold, J., B. Brys, C. Heady, Å. Johansson, C. Schwellnus, and L. Vartia, 2011, "Tax Policy for Economic Recovery and Growth," *Economic Journal,* Vol. 121, pp. 59–80.

Atkinson, A.B., T. Piketty, and E. Saez, 2011, "Top Incomes in the Long Run of History," *Journal of Economic Literature*, Vol. 49, pp. 3–71.

Bach, S., 2012, "Capital Levies—A Step towards Improving Public Finances in Europe," *DIW Economic Bulletin*, Vol. 2, No. 8, pp. 3–11.

Baldacci, E., J. McHugh, and I. Petrova, 2011, "Measuring Fiscal Vulnerability and Fiscal Stress: A Proposed Set of Indicators," IMF Working Paper 11/94 (Washington: International Monetary Fund).

Ball, L., D. Furceri, D. Leigh, and P. Loungani, 2013, "The Distributional Effects of Fiscal Austerity," IMF Working Paper 13/151 (Washington: International Monetary Fund).

Barreix, A., M. Bès, S. de Sarralde, and F. Velayos, 2013, "Value Added Tax: Let It Be," pp. 159–75 in *More than Revenue,* ed. A. Corbacho, V. F. Cibils, and E. Lora (New York: Palgrave Macmillan).

Benedek, D., E. Crivelli, S. Gupta, and P. Muthoora, 2013, "Foreign Aid and Revenue: Still a Crowding Out Effect?" forthcoming in *Finanz Archiv: Public Finance Analysis*.

Boadway, R., E. Chamberlain, and C. Emmerson, 2010, "Taxation of Wealth and Wealth Transfers," pp. 737–814 in *Dimensions of Tax Design: The Mirrlees Review,* ed. J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba (Oxford: Oxford University Press for the Institute for Fiscal Studies).

Bornhorst, F., S. Gupta, and J. Thornton, 2009, "Natural Resource Endowment and the Domestic Revenue Effort," *European Journal of Political Economy*, Vol. 25, pp. 439–46.

Brondolo, J., 2009, "Collecting Taxes During an Economic Crisis: Challenges and Policy Options," IMF Staff Discussion Note 09/17 (Washington: International Monetary Fund).

Brys, B., 2011, "Making Fundamental Tax Reform Happen," OECD Taxation Working Papers No. 3 (Paris: Organisation for Economic Co-operation and Development), available at http://dx.doi.org/10.1787/5kg3h0v54g34-en.

Clements, B.J., D. Coady, F. Eich, S. Gupta, A. Kangur, B. Shang, and M. Soto, 2013, *The Challenge of Public Pension Reform in Advanced and Emerging Market Economies,* IMF Occasional Paper No. 275 (Washington: International Monetary Fund).

Clements, B.J., D. Coady, S. Fabrizio, S. Gupta, T. Alleyne, and C. Sdralevich, eds., 2013, *Energy Subsidy Reform: Lessons and Implications* (Washington: International Monetary Fund).

Clements, B.J., D. Coady and S. Gupta, eds., 2012, *The Economics of Public Health Care Spending in Advanced and Emerging Economies* (Washington: International Monetary Fund).

Cnossen, S., 2003, "Is the VAT's Sixth Directive Becoming an Anachronism?"*European Taxation*, Vol. 43, No. 12, pp. 434–42.

———, 2013, "Preparing the Way for a Modern GST in India," *International Tax and Public Finance*, Vol. 20, pp. 715–23.

Crawford, I., M.J. Keen, and S. Smith, 2010, "VAT and Excises," pp. 275–362 in *Dimensions of Tax Design: The Mir-*

rlees Review, ed. J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba (Oxford: Oxford University Press for the Institute for Fiscal Studies).

Cutler, D.M., and N.R. Sahni, 2013, "If Slow Rate of Health Care Spending Growth Persists, Projections May Be Off by $770 Billion," *Health Affairs*, Vol. 32, No. 5, pp. 841–50.

Cyan, M., J. Martinez-Vasquez, and V. Vulovic, 2013, "Measuring Tax Effort: Does the Estimation Approach Matter and Should Effort Be Linked to Expenditure Goals?" International Center for Public Policy Working Paper No. 13-08 (Atlanta: Andrew Young School of Policy Studies, Georgia State University).

Daniel, P., M. Keen, and C. McPherson, 2010, *The Taxation of Petroleum and Minerals: Principles, Problems and Practice* (London: Routledge).

de Mooij, R., 2011, "Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions," IMF Staff Discussion Note No. 11/11 (Washington: International Monetary Fund).

de Mooij, R., and M.J. Keen, 2012, "Debt, Taxes and Banks," IMF Working Paper 12/48 (Washington: International Monetary Fund).

———, 2013, "'Fiscal Devaluation,' Fiscal Consolidation: The VAT in Troubled Times," pp. 443–85 in *Fiscal Policy after the Crisis*, ed. A. Alesina and F. Giavazzi (Chicago: University of Chicago Press).

de Mooij, R., M. Keen, and M. Orihara, 2013, "Taxation, Bank Leverage and Financial Crises," in *Taxation and Regulation of the Financial Sector*, ed. R. de Mooij and G. Nicodeme (forthcoming; Cambridge, Massachusetts: MIT Press).

De Souza, S., 2013, "The Political Economy of Tax Reform in Latin America: A Critical Review," Woodrow Wilson Center Update on the Americas, February (Washington: Woodrow Wilson Center).

Desai, M.A., C.F. Foley, and J.R. Hines Jr., 2006, "The Demand for Tax Haven Operations," *Journal of Public Economics,* Vol. 90, No. 3, pp. 513–31.

Devereux, M., N. Johannesen, and J. Vella, 2013, "Can Taxes Tame the Banks? Capital Structure Responses to the Post-crisis Bank Levies" (unpublished; Oxford, U.K.: Centre for Business Taxation, University of Oxford).

Dewatripont, M., and G. Roland, 1995, "The Design of Reform Packages under Uncertainty," *American Economic Review*, Vol. 85, No. 5, pp. 1207–23.

Ebrill, L., M. Keen, J. P. Bodin, and V. Summers, 2001, *The Modern VAT* (Washington: International Monetary Fund).

Eichengreen, B., 1990, "The Capital Levy in Theory and Practice," pp. 191–220 in *Public Debt Management: Theory and History*, ed. R. Dornbusch and M. Draghi (Cambridge, U.K.: Cambridge University Press).

European Commission, 2010, "Public Finances in EMU—2010," European Economy No. 4/2010 (Brussels: Directorate-General for Economic and Financial Affairs, European Commission).

———, 2013, "Report on Public Finances in EMU—2013," European Economy No. 4/2013 (Brussels: Directorate-General for Economic and Financial Affairs, European Commission).

Fahri, E., and I. Werning, 2010, "Progressive Estate Taxation," *Quarterly Journal of Economics*, Vol. 125, pp. 635–73.

Gemmell, N., R. Kneller, and I. Sanz, 2011, "The Timing and Persistence of Fiscal Policy Impacts on Growth: Evidence from OECD Countries," *Economic Journal,* Vol. 121, No. 550, pp. F33–F58.

Gorodnichenko, Y., J. Martinez-Vasquez, and K.S. Peter, 2009, "Myth and Reality of Flat Tax Reform: Micro Estimates of Tax Evasion Response and Welfare Effects in Russia," *Journal of Political Economy*, Vol. 117, pp. 504–54.

Gravelle, J.G., 2013, *Tax Havens: International Tax Avoidance and Evasion*, Congressional Research Service Report for Congress (Washington: Congressional Research Service).

Grigoli, F., and P. Muthoora, 2013, "How Far Can We Go? Measuring Tax System Inefficiency and Policy Mis(Design)" IMF Working Paper (forthcoming; Washington: International Monetary Fund).

Hemmelgarn, T., and D. Teichmann, 2013, "Tax Reforms and the Capital Structure of Banks" (Brussels: European Commission).

Household Finance and Consumption Network, 2013, first wave of the Eurosystem's Household Finance and Consumption Survey, available at http://www.ecb.europa.eu/home/html/researcher_hfcn.en.html.

Institute for Social and Economic Research (ISER), 2013, EUROMOD Statistics on Distribution and Decomposition of Disposable Income (Essex, U.K.: Institute for Social and Economic Research, University of Wessex), available at http://www.iser.essex.ac.uk/research/euromod/index/statistics/.

Inter-American Development Bank (IDB), 2013, *Recaudar no basta: los impuestos como instrumentos de desarrollo*, Development in the Americas (Washington: Inter-American Development Bank).

International Monetary Fund (IMF), 2010a, "From Stimulus to Consolidation: Revenue and Expenditure Policies in Advanced and Emerging Economies" (Washington).

———, 2010b, "Strategies for Fiscal Consolidation in the Post-crisis World" (Washington), available at www.imf.org/external/np/pp/eng/2010/020410a.pdf

———, 2011, "Revenue Mobilization in Developing Countries" (Washington).

———, 2012, "Fiscal Regimes for Extractive Industries: Design and Implementation." (Washington), available at www.imf.org/external/np/pp/eng/2012/081512.pdf.

———, 2013a, "Issues in International Taxation and the Role of the IMF" (Washington).

———, 2013b, "People's Republic of China: 2013 Article IV Consultation" (Washington), available at www.imf.org/external/pubs/cat/longres.aspx?sk=40786.0.

———, 2013c, "Risky Business: The Uncertainty in U.S. Health Care Spending," in *United States: 2012 Article IV Con-*

sultation—Selected Issues, IMF Country Report No. 13/237 (Washington).

Ivanova, A., M.J. Keen, and A. Klemm, 2005, "The Russian 'Flat Tax' Reform," *Economic Policy*, Vol. 20, pp. 397–444.

Johannesen, N., and G. Zucman, 2013, "The End of Bank Secrecy? An Evaluation of the G20 Tax Haven Crackdown," forthcoming in *American Economic Journal: Economic Policy*.

Jones, B., and M. Keen, 2011, "Climate Policy in Crisis and Recovery," *Journal of International Commerce, Economics and Policy,* Vol. 2, No. 1, pp. 103–19.

Keen, M., 2013, "The Anatomy of the VAT," *National Tax Journal*, Vol. 66, pp. 423–46.

Keen, M., and K. Konrad, 2013, "The Theory of International Tax Competition and Coordination," in *Handbook of Public Economics,* Vol. 5, ed. A. Auerbach, R. Chetty, M. Feldstein, and E. Saez (forthcoming; Amsterdam: North Holland).

Kinda, T. 2013, "The Quest for Non-Resource-Based FDI: Do Taxes Matter?" IMF Working Paper (forthcoming; Washington: International Monetary Fund).

Kleinbard, E., 2013, "Through a Latte, Darkly: Starbuck's Stateless Income Planning," *Tax Notes*, June 24, pp. 1515–35.

Klemm, A., and S. van Parys, 2009, "Empirical Evidence on the Effects of Tax Incentives," *International Tax and Public Finance*, Vol. 19, pp. 393–423.

Kleven, H., C. Landais, and E. Saez, 2010, "Taxation and International Migration of Superstars: Evidence from the European Football Market," NBER Working Paper No. 16545 (Cambridge, Massachusetts: National Bureau of Economic Research).

Kopczuk, W., 2013, "Taxation of Intergenerational Transfers and Wealth," in *Handbook of Public Economics,* Vol. 5, ed. A. Auerbach, R. Chetty, M. Feldstein, and E. Saez (Amsterdam: North Holland).

Kopczuk, W., and J. Slemrod, 2003, "Dying to Save Taxes: Evidence from Estate Tax Returns on the Death Elasticity," *Review of Economics and Statistics*, Vol. 85, pp. 256–65.

Laeven, L., and F. Valencia, 2010, "Resolution of Banking Crises: The Good, the Bad, and the Ugly," IMF Working Paper 10/146 (Washington: International Monetary Fund).

Le, T. M., B. Moreno-Dodson, and N. Bayraktar, 2012, "Tax Capacity and Tax Effort: Extended Cross-Country Analysis from 1994 to 2009," Policy Research Working Paper No. WPS 6252 (Washington: World Bank).

Martinelli, C., and M. Tommasi, 1997, "Sequencing of Economic Reforms in the Presence of Political Constraints," *Economics and Politics*, Vol. 9, No. 2, pp. 115–31.

Martinez-Vazquez, J., and R. McNab, 2000, "The Tax Reform Experiment in Transitional Countries," International Center for Public Policy Working Paper No. 00-1 (Atlanta: Andrew Young School of Policy Studies, Georgia State University).

Matheson, T., 2012, "Security Transaction Taxes: Issues and Evidence," *International Tax and Public Finance*, Vol. 19, pp. 884–912.

Mauro, P., ed., 2011, *Chipping Away at Public Debt: Sources of Failure and Keys to Success in Fiscal Adjustment* (London: Wiley).

Mauro, P., R. Romeu, A. Binder, and A. Zaman, 2013, "A Modern History of Fiscal Prudence and Profligacy," IMF Working Paper 13/05 (Washington: International Monetary Fund).

Melo, M.A., C. Pereira, and S. Souza, 2010, "The Political Economy of Fiscal Reform in Brazil: The Rationale for the Suboptimal Equilibrium," Working Paper No. 117 (Washington: Inter-American Development Bank).

Meltzer, A.H., and S.F. Richard, 1981, "A Rational Theory of the Size of Government," *Journal of Political Economy,* Vol. 89, No. 5, pp. 914–27.

Mertens, K., 2013, "Marginal Tax Rates and Income: New Time Series Evidence," NBER Working Paper No. 19171 (Cambridge, Massachusetts: National Bureau of Economic Research).

Mertens, K., and M.O. Ravn, 2013, "The Dynamic Effects of Personal and Corporate Income Taxes in the United States," *American Economic Review*, Vol. 101, pp. 1212–47.

Mladovsky, P., D. Srivastava, J. Cylus, M. Karanikolos, T. Evetovits, S. Thomson, and M. McKee, 2012, "Health Policy Responses to the Financial Crisis in Europe," Policy Summary No. 5 (Copenhagen: World Health Organization Regional Office for Europe, European Observatory on Health Systems and Policies, and Health Evidence Network).

Morgan, D., and R. Astolfi, 2013, "Health Spending Growth at Zero," Health Working Paper No. 60 (Paris: Organisation for Economic Co-operation and Development).

Moss, T., G. Pettersson, and N. van de Walle, 2006, "An Aid-Institutions Paradox? A Review Essay on Aid Dependency and State Building in Sub-Saharan Africa," Working Paper No. 74 (Washington: Center for Global Development).

Mullins, P., 2006, "Moving to Territoriality? Implications for the US and the Rest of the World," *Tax Notes International,* Vol. 43, pp. 839–53.

Norregaard, J., 2013, "Taxing Immovable Property: Revenue Potential and Implementation Challenges," IMF Working Paper 13/129 (Washington: International Monetary Fund).

Organisation for Economic Co-operation and Development (OECD), 2008, *Consumption Tax Trends 2008* (Paris).

———, 2010a, *Making Reform Happen: Lessons from OECD Countries* (Paris).

———, 2010b, *Tax Policy Reform and Economic Growth*, Tax Policy Study No. 20 (Paris).

———, 2011, *Taxing Wages 2011* (Paris).

———, 2013a, "Note on Financial Sector Taxation" (unpublished; Paris).

———, 2013b, "Choosing Fiscal Consolidation Instruments Compatible with Growth and Equity," Economic Policy Papers No. 07 (Paris).

———, 2013c, "Action Plan on Base Erosion and Profit Shifting" (Paris).

Panizza, U., and A.F. Presbitero, 2012, "Public Debt and Economic Growth: Is There a Causal Effect?" Working Paper No. 168 (Alessandria, Italy: Institute of Public Policy and Public Choice [POLIS]).

Paulus, A., F. Figari, M. Matsaganis, and H. Sutherland, 2012, "The Design and Distributional Effect of Fiscal Consolidation Measures in the European Union" (unpublished; Essex, U.K.: University of Essex).

Perry, V., 2010., "International Experience in Implementing VATs in Federal Jurisdictions: A Summary," *Tax Law Review*, Vol. 63, No. 3, pp. 623–38.

Perry, V., T. Matheson, and D. Veung, 2013, "Territorial vs. Worldwide Corporate Taxation: Implications for Developing Countries?" (unpublished).

Pescatori, A., D. Sandri, and J. Simon, 2013, "Debt and Growth: Is There a Magic Threshold?" IMF Working Paper (forthcoming; Washington: International Monetary Fund).

Pessino, C., and R. Fenochietto, 2010, "Determining Countries' Tax Effort," *Hacienda Pública Española/Revista de Economía Pública,* Vol. 195, No. 4, pp. 65–87.

Peter, K.S., S. Buttrick, and D. Duncan, 2010, "Global Reform of Personal Income Taxation, 1981–2005," *National Tax Journal*, Vol. 63, pp. 447–78.

Piketty, T., and E. Saez, 2006, "The Evolution of Top Incomes: A Historical and International Perspective," *American Economic Review*, Vol. 96, pp. 200–5.

———, 2012, "A Theory of Optimal Capital Taxation," NBER Working Paper No. 17989 (Cambridge, Massachusetts: National Bureau of Economic Research).

Piketty, T., E. Saez, and S. Stantcheva, 2011, "Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities," NBER Working Paper No. 17616 (Cambridge, Massachusetts: National Bureau of Economic Research).

Piketty, T., and G. Zucman, 2013, "Capital Is Back: Wealth-Income Ratios in Rich Countries 1700–2010" (unpublished; Paris: Paris School of Economics).

Poghosyan, T., 2012, "Long-Run and Short-Run Determinants of Sovereign Bond Yields in Advanced Economies," IMF Working Paper 12/271 (Washington: International Monetary Fund).

Reckon LLP, 2009, *Study to Quantify and Analyze the VAT Gap in the EU-25 Member States,* Taxation Studies No. 29 (Brussels: Directorate-General Taxation and Customs Union, European Commission).

Riera-Crichton, R., C. Veigh, and G. Vultein, 2012, "Tax Multipliers: Pitfalls in Measurement and Identification," NBER Working Paper No. 18497 (Cambridge, Massachusetts: National Bureau of Economic Research).

Rodrik, D., 1998, "Why Do More Open Economies Have Bigger Governments?" *Journal of Political Economy*, Vol. 106, pp. 997–1032.

Rogoff, K., and A. Sibert, 1988, "Elections and Macroeconomic Policy Cycles," *Review of Economic Studies*, Vol. 55, No. 1, pp. 1–16.

Ryu, A.J., T.B. Gibson, M.R. McKellar, and M. Chernew, 2013, "The Slowdown in Health Care Spending in 2009–11 Reflected Factors Other than the Weak Economy and Thus May Persist," *Health Affairs,* Vol. 32, No. 5, pp. 835–40.

Saez, E., 2001, "Using Elasticities to Derive Optimal Income Tax Rates," *Review of Economic Studies*, Vol. 68, No. 1, pp. 205–29.

———, 2012, "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review," *Journal of Economic Literature*, Vol. 50, pp. 3–50.

Sankaran, H., M. Saxena, and C.A. Erickson, 2011, "Average Conditional Volatility: A Measure of Systemic Risk for Commercial Banks," *Journal of Business and Economic Research*, Vol. 9, No. 2, pp. 79–94.

Schwab, K., ed., 2012, *The Global Competitiveness Report 2012–2013* (Geneva: World Economic Forum), available at http://reports.weforum.org/global-competitiveness-report-2012-2013/#=.

Shaviro, D., 2012, "The Financial Transactions Tax versus (?) the Financial Activities Tax," *Tax Notes,* Vol. 135, p. 453.

Tait, A., and P.S. Heller, 1982*, International Comparisons of Government Expenditure*, IMF Occasional Paper No. 10 (Washington: International Monetary Fund).

Tanzi, V., 1992, "Structural Factors and Tax Revenue in Developing Countries: A Decade of Evidence," in *Open Economies: Structural Adjustment and Agriculture,* ed. I. Goldin and L.A. Winters (Cambridge, U.K.: Cambridge University Press).

Torres, J.L., 2013, "Revenue and Expenditure Gaps and Fiscal Consolidation: A Cross-Country Analysis," IMF Working Paper (forthcoming; Washington: International Monetary Fund).

U.S. Congressional Budget Office, 2012, "The 2012 Long-Term Budget Outlook" (Washington: Congressional Budget Office).

———, 2013, "Updated Budget Projections: Fiscal Year 2013–2023" (Washington: Congressional Budget Office).

U.S. Interagency Working Group on Social Cost of Carbon (IAWG), 2013, *Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866,* Technical Support Document (Washington), available at www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf.

van Ommeren, J., and M. van Leuvensteijn, 2005, "New Evidence of the Effect of Transaction Costs on Residential Mobility," *Journal of Regional Science,* Vol. 45, No. 4, pp. 681–702.

van Parys, S., and S. James, 2010, "The Effectiveness of Tax Incentives in Attracting FDI: Evidence from the Tourism Sector in the Caribbean," Working Paper No. 10/675 (Ghent, Belgium: Faculty of Economics and Business Administration, Ghent University).

Weingast, B., K. Shepsle, and C. Johnsen, 1981, "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics," *Journal of Political Economy*, Vol. 89, No. 5, pp. 642–64.

Xing, J., 2012, "Tax Structure and Growth: How Robust Is the Empirical Evidence?" *Economics Letters*, Vol. 117, pp. 379–82.

Zucman, G., 2013, "The Missing Wealth of Nations: Are Europe and the U.S. Net Debtors or Net Creditors?" *Quarterly Journal of Economics,* Vol. 128, No. 3, pp. 1321–64.

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