World Economic and Financial Surveys

Fiscal Monitor

Now Is the Time
Fiscal Policies for Sustainable Growth

APR 15

INTERNATIONAL MONETARY FUND

World Economic and Financial Surveys

Fiscal Monitor

April 2015

Now Is the Time

Fiscal Policies for Sustainable Growth

INTERNATIONAL MONETARY FUND

Cover: IMF Multimedia Services Division
Composition: AGS

Cataloging-in-Publication Data

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

Twice a year.
Some issues have also thematic titles.

1. Finance, Public—Periodicals. 2. Finance, Public—Forecasting—Periodicals. 3. Fiscal policy—Periodicals. 4. Fiscal policy—Forecasting—Periodicals. 5. Financial crises—Periodicals. 6. Global Financial Crisis, 2008–2009—Periodicals. I. International Monetary Fund. II. Series: World economic and financial surveys.
HJ101.F57

Disclaimer: The *Fiscal Monitor* (FM) is a survey by the IMF staff published twice a year, in the spring and fall. The report analyzes the latest public finance developments, updates medium-term fiscal projections, and assesses policies to put public finances on a sustainable footing. The report was prepared by IMF staff and has benefited from comments and suggestions from Executive Directors following their discussion of the report on April 3, 2015. The views expressed in this publication are those of the IMF staff and do not necessarily represent the views of the IMF's Executive Directors or their national authorities.

Recommended citation: International Monetary Fund, *Fiscal Monitor—Now Is the Time: Fiscal Policies for Sustainable Growth* (Washington, April 2015).

ISBN: 978-1-49839-638-7 (paper)
ISBN: 978-1-47554-491-6 (ePub)
ISBN: 978-1-47554-925-6 (Mobipocket)
ISBN: 978-1-47559-787-5 (PDF)

Publication orders may be placed online, by fax, or through the mail:
International Monetary Fund, Publication Services
P.O. Box 92780, Washington, DC 20090, U.S.A.
Telephone: (202) 623-7430 Fax: (202) 623-7201
E-mail: publications@imf.org
www.imfbookstore.org
www.elibrary.imf.org

CONTENTS

Figures

Tables

ASSUMPTIONS AND CONVENTIONS

The following symbols have been used throughout this publication:

. . . to indicate that data are not available

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

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

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

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

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

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

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

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

FURTHER INFORMATION AND DATA

This version of the *Fiscal Monitor* is available in full through the IMF eLibrary (www.elibrary.imf.org) and the IMF website (www.imf.org).

The data and analysis appearing in the *Fiscal Monitor* are compiled by the IMF staff at the time of publication. Every effort is made to ensure, but not guarantee, their timeliness, accuracy, and completeness. When errors are discovered, there is a concerted effort to correct them as appropriate and feasible. Corrections and revisions made after publication are incorporated into the electronic editions available from the IMF eLibrary (www.elibrary.imf.org) and on the IMF website (www.imf.org). All substantive changes are listed in detail in the online tables of contents.

PREFACE

The projections included in this issue of the *Fiscal Monitor* are based on the same database used for the April 2015 *World Economic Outlook* and *Global Financial Stability Report* (and are referred to as "IMF staff projections"). Fiscal projections refer to the general government unless otherwise indicated. Short-term projections are based on officially announced budgets, adjusted for differences between the national authorities and the IMF staff regarding macroeconomic assumptions. The medium-term fiscal projections incorporate policy measures that are judged by the IMF staff as likely to be implemented. For countries supported by an IMF arrangement, the medium-term projections are those under the arrangement. In cases in which the IMF staff has insufficient information to assess the authorities' budget intentions and prospects for policy implementation, an unchanged cyclically adjusted primary balance is assumed, unless indicated otherwise. Details on the composition of the groups, as well as country-specific assumptions, can be found in the Methodological and Statistical Appendix.

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the supervision of Vitor Gaspar, Director of the Department, Martine Guerguil, Deputy Director, and Benedict Clements, Division Chief. The main authors of this issue are Marta Ruiz-Arranz (team leader), Elva Bova, Paolo Dudine, Marina Marinkov and Natalija Novta for Chapter 1; and Xavier Debrun (team leader), Kamil Dybczak, Davide Furceri, João Tovar Jalles, Ivo Razafimahefa, and Sampawende J.-A. Tapsoba for Chapter 2, which also benefited from comments from Antonio Fatás and Justin Wolfers. Outstanding research assistance was provided by Ethan Alt, Nathalie Carcenac, and Tafadzwa Mahlanganise. Nadia Malikyar and Jeffrey Pichocki provided excellent administrative and editorial support. From the IMF Communications Department, Gemma Diaz and Linda Kean edited the issue, and Gemma Diaz managed its production.

Inputs, comments, and suggestions were received from other departments in the IMF, including area departments—namely, the African Department, Asia and Pacific Department, European Department, Middle East and Central Asia Department, and Western Hemisphere Department—as well as the Institute for Capacity Development; Monetary and Capital Markets Department; Research Department; Statistics Department; and Strategy, Policy, and Review Department. Both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

EXECUTIVE SUMMARY

Recent Fiscal Developments and Outlook

A moderate and uneven recovery is taking place in advanced economies, supported by lower oil prices, continued accommodative monetary policy, and slower fiscal adjustment. However, high public and private debt levels continue to pose headwinds to growth and debt sustainability in some advanced economies. In addition, inflation is below target by a large margin in many countries, making the task of reducing high public debt levels more difficult. Growth in emerging economies is softening and financial and exchange rate volatility has increased public financing costs for some of them. Meanwhile, lower oil and commodity revenues have created challenges for exporting countries.

In this challenging environment, fiscal policy continues to play an essential role—alongside accommodative monetary policy and structural reforms—in building confidence and, where appropriate, sustaining aggregate demand. With narrow margins for policy maneuvering, three courses of action for sound fiscal policy stand out:

Use fiscal policy flexibly to support growth, while mitigating risks and ensuring medium-term debt sustainability. The degree and type of flexibility will depend on individual countries' fiscal positions, macroeconomic conditions, and relevant fiscal risks. Countries with fiscal space can use it to support growth, particularly where risks of low growth and low inflation have materialized. For example, higher public investment in infrastructure could raise aggregate demand in the short term and increase potential output in the medium term. Countries that are more constrained should pursue more growth-friendly fiscal rebalancing and structural reforms to boost potential growth. Meanwhile, in countries where mounting fiscal risks may lead to market pressure, rebuilding fiscal buffers should be a priority. In oil- and commodity-exporting countries, the government's financial assets, if sufficient, can be used to adjust gradually to the shock from lower oil prices. Nonetheless, spending cuts may be unavoidable in some financially constrained oil exporters. In economies with oil subsidies, the windfall gains from lower prices should be used to increase spending that can boost growth and, where macroeconomic vulnerabilities are high, to rebuild fiscal buffers.

Seize the opportunity created by falling oil prices. Energy tax reform can help reduce negative externalities caused by energy consumption and provide breathing room for rebalancing the tax burden—for example, by lowering taxes on labor to boost employment. In developing economies, further reform of energy subsidies could provide space for productive spending on education, health, and infrastructure, as well as for programs to benefit the poor.

Strengthen institutional frameworks for managing fiscal policy. Fiscal frameworks anchor fiscal policy and guide it toward its medium-term objectives. These frameworks help enhance the play of automatic stabilizers over the course of the business cycle and thus reduce output volatility and raise medium-term growth. Well-grounded fiscal frameworks are particularly necessary in countries with high levels of public debt and a looming increase in the burden of age-related spending.

Can Fiscal Policy Stabilize Output?

In an environment of tepid growth and persistent downside risks, finding ways to enhance fiscal policy's ability to smooth the effect of shocks to economic activity is high on the policy agenda. As is clear from the evidence gathered in this *Fiscal Monitor*, fiscal policy has often served this purpose over the last 30 years. Since the mid-1990s, some advanced economies have also increasingly turned to fiscal policy to help stabilize economic conditions. Many emerging market and developing economies, however, seemed less inclined to use this approach, given their less potent fiscal instruments and the prominence of policy objectives other than output stability, such as building economic and social infrastructure geared toward economic development, and addressing social needs.

Fiscal policy can seek to stabilize output in two ways. One way is through so-called automatic stabilizers (tax payments that move in sync with income and spending and social transfers, such as unemployment benefits, that automatically boost aggregate demand

during downturns and moderate it during upswings). Another way is through deliberate fiscal policy measures adopted in response to specific shocks. Automatic stabilizers are timely, but often have adverse side effects for efficiency (such as high marginal tax rates or overly generous transfers that undermine incentives to find work or create jobs).

Automatic stabilizers have played an important role in fiscal stabilization, often accounting for more than half the stabilizing response of fiscal policy in advanced economies. However, they have generally not been allowed to play fully in good times, because spending a portion of revenue windfalls is tempting. The resulting asymmetry in the policy response to output shocks prevents the restoration of fiscal buffers when growth is strong and can contribute to significant accumulation of public debt over time.

If the past is any indication of the future, making fiscal policy more responsive to output shocks could substantially reduce macroeconomic volatility. The dividends of greater fiscal stabilization are especially large in advanced economies, where it could lower output volatility by up to 20 percent. Reduced volatility and uncertainty could in turn foster medium-term growth. An average increase—by one standard deviation in the sample—in the responsiveness of fiscal policy to output could boost annual growth by about 0.3 percentage point in advanced economies. Dividends appear much smaller in emerging market and developing economies, where fiscal stabilization is less effective and is dominated by developmental priorities.

In sum, stability and growth could both benefit when procyclical fiscal measures are avoided. Well-designed fiscal rules and medium-term frameworks can help by allowing automatic stabilizers to play in good as well as in bad times. Countries seeking to augment automatic stabilizers should pursue measures that do not entail large efficiency costs (for example, making tax exemptions such as the investment tax credit or the mortgage interest deduction less procyclical). The decision and implementation lags associated with discretionary stabilization could be eased, for instance, by moving quickly to identify easy-to-implement capital and maintenance spending.

CHAPTER 1

RECENT FISCAL DEVELOPMENTS AND OUTLOOK

A moderate and uneven recovery is taking place in advanced economies, supported by lower oil prices, continued accommodative monetary policy, and slower fiscal adjustment. However, high public and private debt levels continue to pose headwinds to growth and debt sustainability in some advanced economies. In addition, inflation is below target by a large margin in many countries, making the task of reducing high public debt levels more difficult. Growth in emerging market economies is softening, and financial and exchange rate volatility has increased public financing costs for some of them. Meanwhile, lower oil and commodity revenues have created challenges for exporting countries.

In light of these challenges, it is important to focus on growth in a coordinated fashion. Although continued support from monetary policy is welcome, decisive action is also needed on fiscal policy and structural reforms. Fiscal policy has an essential role to play in both building confidence and sustaining aggregate demand but is constrained in many economies by high explicit and implicit public debt. Countries should continue to implement fiscal policy flexibly to support growth while ensuring the sustainability of their medium-term fiscal outlook and strengthening their fiscal frameworks.

Fiscal reforms will be essential to catalyze growth. Lower oil prices provide a golden opportunity to reduce inefficient energy subsidies in favor of more productive and equitable spending. Energy tax reform could help reduce negative externalities caused by energy consumption, such as pollution and global warming, and provide breathing room for growth-enhancing tax reforms—for example, by lowering taxes on labor to boost employment (see the October 2014 *Fiscal Monitor*).

The Fiscal Impact of Lower Oil Prices

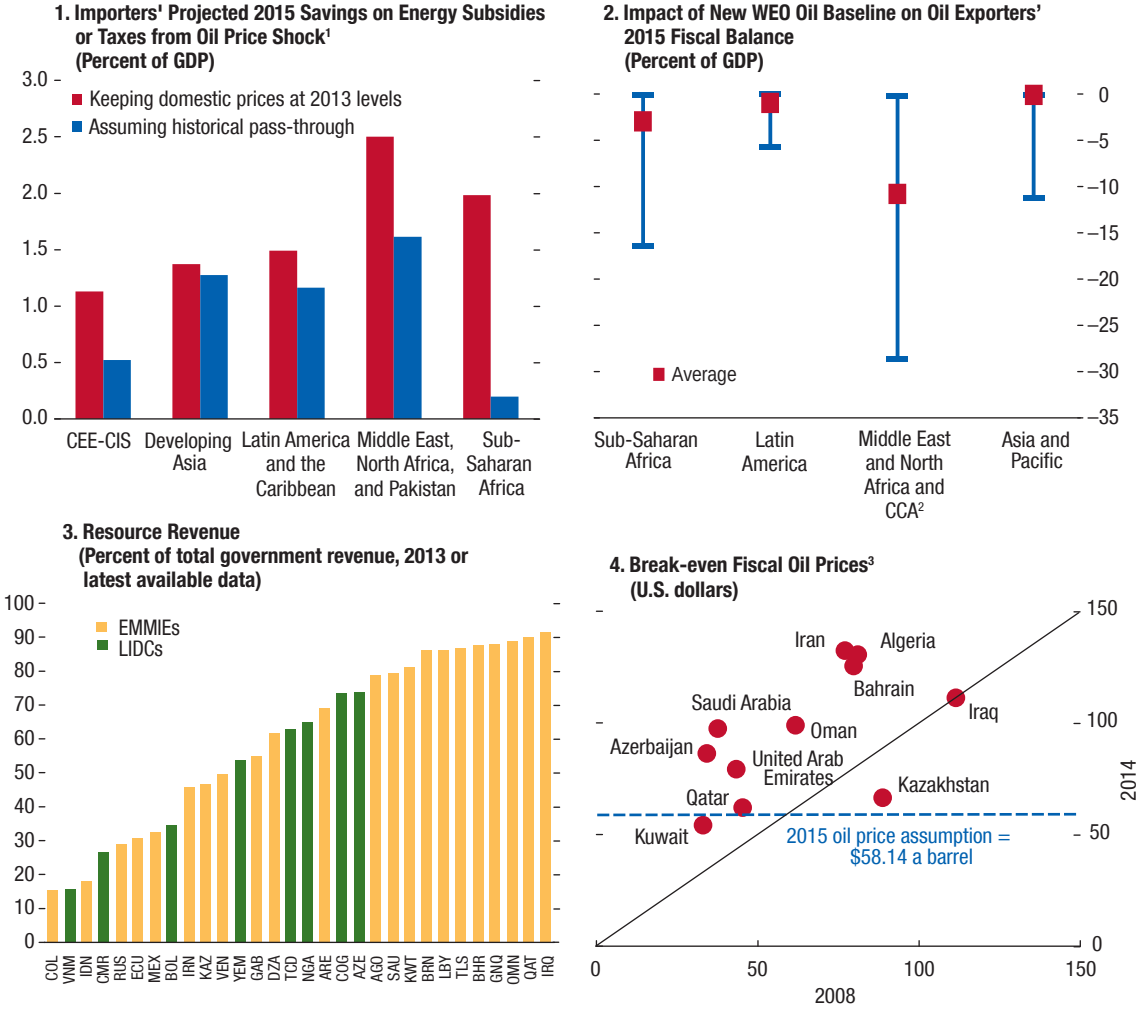
Independent of its impact on global growth (see the April 2015 *World Economic Outlook*), the fall in international oil prices is expected to help the public finances of importers and hurt those of exporters. The impact could be large, but whereas the gains will be spread across many economies, the adverse fiscal effects will be concentrated in relatively few. Although oil exporters account for a lower share of global GDP than oil importers, exporters face a much larger shock given that oil has a much bigger weight in their economies and budgets.

Oil importers in emerging market and developing economies could reap, on average, fiscal savings of 1 percent of GDP in 2015. Country-specific estimates range from near zero to 5 percent of GDP, depending on the expected pass-through of international to domestic retail prices and the structure of energy taxation (Figure 1.1, panel 1): the higher the pass-through, the lower the fiscal savings. Oil importers that provide no subsidies on oil products but earn some fiscal revenues through oil import tariffs and other domestic taxes on fuel and petroleum products could see some deterioration in revenues—as those tariffs and taxes are ad valorem—but the impact is expected to be small (less than 0.1 percent of GDP in advanced economies). Where fuel prices are liberalized and the entire decline in international prices is expected to be passed on to consumers, there could be positive second-round effects, through stronger aggregate demand and revenues.

For oil exporters—most of which are emerging market and middle-income economies—the fiscal loss associated with lower oil prices is estimated to average 4 percent of GDP this year. Country estimates range from close to zero to more than 25 percent of GDP, depending on the contribution of oil revenues to fiscal revenues (Figure 1.1, panel 2). In many oil exporters, oil revenues often account for more than 50 percent of total revenues; the share is as high as 80 to 90 percent in some countries (Equatorial Guinea, Iraq, Qatar—Figure 1.1, panel 3). The impact on the overall balance will also depend on the weight of fuel

Figure 1.1. Fiscal Impact of Lower Oil Prices

Lower oil prices will help importers and hurt exporters, and the impact could be considerable. The gains will be spread across many economies, whereas the adverse effects will be concentrated in relatively few.



Sources: IMF, Fiscal Affairs Department Tax Policy database; and IMF staff estimates.
Note: CCA = Caucasus and Central Asia; CEE-CIS = Central and Eastern Europe and the Commonwealth of Independent States; EMMIEs = emerging market and middle-income economies; LIDCs = low-income developing countries; WEO = *World Economic Outlook*. Data labels in the figure use International Organization for Standardization (ISO) country codes.
[1] The pass-through is calculated as the change in domestic retail price divided by the change in international price of fuel products. Historical pass-through refers to the pass-through in the second half of 2008, when the oil price also dropped sharply. Data on retail prices are collected by IMF staff.
[2] Impact on fiscal revenues.
[3] Price of oil that is sufficient to ensure that total revenues are equal to or greater than government spending.

subsidies, the size of fiscal buffers, and exchange rate movements.

- Countries whose governments have amassed significant financial assets (net of public debt), including the Gulf Cooperation Council countries and Norway, are well placed to cope with the short-term impact of the shock. Others, with fewer accumulated financial assets, such as Libya, Nigeria, and Venezuela, are already facing major budget challenges.
- Oil exporters that have allowed their currencies to weaken (including Azerbaijan, Colombia, Nigeria,

Russia) will be able to partially offset lower oil revenues in foreign currency terms. This is not the case for oil exporters with fixed or tightly managed exchange rates (such as Ecuador, Kazakhstan, Venezuela), whose fiscal positions have deteriorated more sharply.

For many oil exporters, vulnerabilities were building before oil prices started to fall. Fiscal revenues from higher oil prices were used to pay for large increases in current and capital expenditures. As a result, the fiscal break-even price for oil (that is, the price necessary to balance the budget) increased significantly in most exporting countries in the Middle East between 2008 and 2014 (Figure 1.1, panel 4). Currently, most oil exporters need prices considerably above the $58 a barrel projected for 2015 to cover budgetary spending (at current exchange rates). Furthermore, in many countries, net government assets fell from 2011 to 2014 as they drew on their sovereign wealth funds or increased gross debt.

The outlook has also worsened for other commodity exporters, particularly in Latin America. The downward trend in commodity prices preceded the fall in oil prices and has been more gradual. Nonetheless, lower metal prices have contributed to lower commodity fiscal revenues and a slowdown in investment and growth in Chile and Peru. The fiscal impact could be severe in some resource-rich African countries, including Zambia. Some economies are experiencing negative spillovers from some commodity producers, notably Russia. For example, in emerging Europe and the Commonwealth of Independent States, sovereign bond spreads have increased recently and exports, remittances, and foreign direct investment have suffered. Countries in Central America and the Caribbean could face tighter financing conditions if Venezuela's budget woes lead to a reduction in the Petrocaribe regional loans-for-oil scheme.

The decline in oil prices could negatively affect profit margins and balance sheets of some state-owned energy corporations, especially those with significant upstream (exploration and production) activity and external debt. In Brazil, Petrobras's finances have come under stress as a result of adverse economic trends and internal issues, with the company's difficulties reflected in its stock price, downgrades to the ratings of both its global foreign currency and local currency debt, and lack of normal access to funding markets. In Russia, the impact of international sanctions, lower oil prices, and the deteriorating economy may lead to further public support of the banking sector and sanctioned companies.

Advanced Economies: Low Growth and Low Inflation Complicate Debt Reduction

Very low inflation and sluggish growth adversely affect debt dynamics in most advanced economies.[1] Despite significant fiscal adjustment since 2010 and record low nominal bond yields, the average ratio of debt to GDP remains above 100 percent and is expected to decline only slowly in coming years. In some countries, debt paths have been revised upward and the turning point postponed (Tables 1.1a, 1.1b, 1.2; Figure 1.2, panel 1). The impact of lower inflation is sizable, as shown by a simple simulation: if nominal growth were to reach 4 percent by 2017 in countries now experiencing low growth and low inflation, the average debt ratio in 2020 for advanced economies would be 6 percentage points lower than under the current baseline. For some countries (Austria, Belgium, Italy, Japan, Portugal), the impact could be as large as 10 percentage points.

A few advanced economies, notably the United States, have experienced stronger-than-expected growth, supporting debt reduction efforts. Some countries overperformed relative to their 2014 budget targets thanks to robust activity, together with lower-than-expected interest payments and one-off measures (Figure 1.2, panel 6). In particular, lower-than-expected interest payments and some one-off revenue, contributed to the stronger outturn in Germany. Canada, Ireland, the Netherlands, and the United States benefited from strong tax revenues.

In general, however, the pace of fiscal consolidation in advanced economies has slowed to support economic activity (from 1 percent of GDP a year during 2011–13 to ½ percent of GDP in 2014, and an expected ¼ percent of GDP in 2015). After increasing strongly over 2010–14, in part due to tax hikes, overall revenue ratios are now broadly back to precrisis levels and expected to stabilize or decline slightly in the coming years (Box 1.1). The fiscal stance for the euro area as a whole was neutral in 2014 and is expected to remain broadly neutral through 2016. At the same time, output gaps are still sizable in many countries, and fiscal space is lacking where demand support is needed the most (Figure 1.2, panels 3–5).

With fiscal policy constrained at the national level, the European Commission announced an investment

[1] For a detailed discussion of the implications of low inflation on debt dynamics, see Box 1.1 of the October 2014 *Fiscal Monitor*.

Table 1.1a. Fiscal Balances, 2008–16: Overall Balance

(Percent of GDP)

								Projections		Difference from October 2014 *Fiscal Monitor*		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2014	2015	2016
World	**–2.2**	**–7.3**	**–5.9**	**–4.3**	**–3.9**	**–3.2**	**–3.3**	**–3.4**	**–2.9**	**–0.1**	**–0.8**	**–0.6**
Advanced Economies	**–3.6**	**–8.9**	**–7.8**	**–6.4**	**–5.7**	**–4.2**	**–3.9**	**–3.3**	**–2.7**	**0.1**	**–0.1**	**–0.1**
United States[1]	–7.0	–13.5	–11.3	–9.9	–8.6	–5.8	–5.3	–4.2	–3.9	0.2	0.2	0.3
Euro Area[2]	–2.1	–6.2	–6.1	–4.1	–3.6	–2.9	–2.7	–2.3	–1.7	0.2	0.2	0.2
France	–3.2	–7.2	–6.8	–5.1	–4.9	–4.1	–4.2	–3.9	–3.5	0.2	0.4	0.2
Germany	–0.1	–3.0	–4.0	–0.8	0.1	0.1	0.6	0.3	0.4	0.3	0.1	0.1
Greece	–9.9	–15.2	–11.1	–10.1	–6.3	–2.8	–2.7	–0.8	0.7	0.0	1.1	1.3
Ireland[3]	–7.0	–13.9	–32.4	–12.6	–8.0	–5.7	–3.9	–2.4	–1.5	0.4	0.4	0.2
Italy	–2.7	–5.3	–4.2	–3.5	–3.0	–2.9	–3.0	–2.6	–1.7	0.0	–0.3	–0.4
Portugal	–3.8	–9.8	–11.2	–7.4	–5.6	–4.8	–4.5	–3.2	–2.8	–0.5	–0.7	–0.4
Spain[3]	–4.4	–11.0	–9.4	–9.4	–10.3	–6.8	–5.8	–4.3	–2.9	–0.1	0.4	0.9
Japan	–4.1	–10.4	–9.3	–9.8	–8.8	–8.5	–7.7	–6.2	–5.0	–0.6	–0.4	–0.3
United Kingdom	–5.1	–10.8	–9.7	–7.6	–7.8	–5.7	–5.7	–4.8	–3.1	–0.4	–0.7	–0.1
Canada	–0.3	–4.5	–4.9	–3.7	–3.1	–2.8	–1.8	–1.7	–1.3	0.8	0.4	0.4
Others	2.4	–0.9	–0.2	0.4	0.4	0.2	0.1	–0.4	0.0	0.0	–0.8	–0.9
Emerging Market and Middle-Income Economies	**0.9**	**–3.6**	**–2.4**	**–0.7**	**–0.7**	**–1.5**	**–2.4**	**–3.7**	**–3.3**	**–0.5**	**–1.8**	**–1.4**
Excluding MENAP Oil Producers	–1.1	–4.1	–3.1	–1.6	–1.9	–2.5	–2.8	–3.4	–3.2	–0.3	–1.0	–0.9
Asia	–1.9	–3.4	–2.7	–1.2	–1.4	–2.1	–2.1	–2.8	–2.9	0.0	–0.9	–1.1
China	0.0	–1.8	–1.2	0.6	0.0	–1.1	–1.1	–1.9	–2.2	–0.1	–1.2	–1.4
India	–10.0	–9.8	–8.4	–8.1	–7.5	–7.2	–7.1	–7.2	–7.1	0.1	–0.5	–0.6
Europe	0.8	–5.8	–3.8	–0.1	–0.7	–1.5	–1.6	–2.9	–2.0	0.0	–1.5	–0.9
Russia	4.9	–6.3	–3.4	1.5	0.4	–1.3	–1.2	–3.7	–2.6	–0.2	–2.6	–1.9
Turkey	–2.7	–6.0	–3.4	–0.6	–1.7	–1.3	–1.5	–1.4	–0.9	0.5	0.5	1.2
Latin America	–0.8	–3.8	–3.0	–2.7	–3.1	–3.2	–4.9	–4.9	–4.4	–1.0	–1.1	–0.8
Brazil	–1.5	–3.2	–2.7	–2.5	–2.6	–3.1	–6.2	–5.3	–4.7	–2.4	–2.2	–1.7
Mexico	–1.0	–5.1	–4.3	–3.3	–3.7	–3.8	–4.6	–4.1	–3.5	–0.4	–0.1	0.0
MENAP	13.3	–0.7	2.7	4.7	7.1	4.9	0.0	–7.5	–4.7	–2.2	–8.5	–5.2
South Africa	–0.5	–4.7	–4.8	–3.9	–4.1	–4.1	–4.1	–4.2	–3.4	0.8	1.0	1.6
Low-Income Developing Countries	**1.1**	**–4.3**	**–2.7**	**–1.1**	**–2.0**	**–3.2**	**–3.1**	**–3.5**	**–3.2**	**0.0**	**–0.4**	**–0.3**
Oil Producers	**7.2**	**–2.5**	**–0.1**	**2.8**	**2.8**	**1.2**	**–0.8**	**–4.5**	**–3.0**	**–1.0**	**–4.2**	**–2.7**
Memorandum												
World Output (percent)	3.1	0.0	5.4	4.2	3.4	3.4	3.4	3.5	3.8	0.1	–0.4	–0.3

Source: IMF staff estimates and projections.

Note: All fiscal data country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. For country-specific details, see Data and Conventions and Tables A, B, and C in the Methodological and Statistical Appendix. MENAP = Middle East, North Africa, and Pakistan.

[1] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.

[2] Data for the member countries of the European Union have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010).

[3] Including financial sector support.

plan (the European Fund for Strategic Investment) to mobilize €315 billion (2 percent of EU GDP) in public and private investment in the next three years. The funds would be channeled to private projects of small and medium enterprises and long-term investments in energy, transport, education, research, and innovation. While the plan could help catalyze much-needed investment and remove regulatory barriers, there is uncertainty about project selection and implementation, and achieving the assumed leverage ratio of 15 could be challenging. The European Commission also issued guidance on how it will apply the existing rules of the Stability and Growth Pact to encourage structural reforms and public investment. This increased flexibility is welcome and in line with the recommendations in the October 2014 *Fiscal Monitor.*

Meanwhile, Japan responded to lower-than-expected growth in 2014 by delaying the increase in

Table 1.1b. Fiscal Balances, 2008–16: Cyclically Adjusted Balance
(Percent of potential GDP)

								Projections		Difference from October 2014 *Fiscal Monitor*		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2014	2015	2016
Advanced Economies	**–4.1**	**–6.1**	**–6.8**	**–5.7**	**–4.7**	**–3.6**	**–3.1**	**–2.8**	**–2.5**	**–0.1**	**–0.3**	**–0.3**
United States[1,2]	–6.2	–7.9	–9.7	–8.3	–6.8	–5.2	–4.4	–3.8	–3.8	–0.4	–0.5	–0.3
Euro Area[3]	–3.2	–4.5	–4.8	–3.7	–2.6	–1.1	–1.0	–0.9	–0.7	0.1	0.1	0.1
France	–3.7	–5.4	–5.6	–4.6	–4.1	–3.0	–2.7	–2.5	–2.2	0.2	0.3	0.2
Germany	–1.1	–0.8	–3.3	–1.3	–0.2	0.5	0.8	0.3	0.2	0.1	–0.2	–0.2
Greece	–13.9	–18.6	–12.1	–8.0	–2.0	2.2	1.5	2.1	2.1	–0.1	0.9	0.9
Ireland[2]	–13.0	–11.0	–8.9	–6.5	–5.0	–4.0	–2.8	–2.0	–1.4	0.5	0.2	–0.1
Italy	–3.7	–3.6	–3.5	–3.2	–1.4	–0.6	–0.6	–0.4	0.2	0.1	0.0	0.1
Portugal	–4.2	–8.9	–10.8	–6.3	–3.1	–1.7	–2.1	–1.7	–1.9	0.2	–0.2	–0.2
Spain[2]	–5.6	–9.5	–7.8	–7.0	–4.2	–3.0	–2.7	–2.3	–1.5	0.7	0.6	0.9
Japan	–3.5	–7.4	–7.8	–8.3	–7.8	–8.2	–7.2	–6.0	–4.9	–0.6	–0.5	–0.5
United Kingdom[2]	–6.8	–9.9	–8.1	–5.8	–5.6	–3.6	–4.2	–4.0	–2.6	–0.1	–0.3	0.1
Canada	–0.6	–3.0	–4.0	–3.2	–2.6	–2.3	–1.5	–1.6	–1.2	0.6	0.2	0.3
Others	–0.2	–1.9	–1.5	–1.2	–1.0	–1.0	–0.9	–1.2	–1.0	0.2	–0.3	–0.6
Emerging Market and Middle-Income Economies	**–1.5**	**–3.5**	**–3.1**	**–1.7**	**–1.7**	**–2.3**	**–2.4**	**–2.9**	**–2.9**	**–0.2**	**–0.9**	**–0.9**
Asia	–2.1	–3.3	–2.8	–1.2	–1.2	–1.8	–1.7	–2.5	–2.8	0.0	–0.9	–1.1
China	–0.3	–1.8	–1.3	0.6	0.2	–0.7	–0.7	–1.6	–2.0	–0.1	–1.1	–1.4
India	–9.6	–9.6	–8.8	–8.4	–7.4	–7.1	–7.0	–7.1	–7.0	0.0	–0.5	–0.6
Europe	–0.1	–5.2	–3.8	–1.3	–1.1	–1.9	–1.1	–2.2	–1.9	0.5	–0.8	–0.7
Russia	4.6	–5.5	–3.0	1.6	0.2	–1.5	0.0	–2.5	–2.4	0.9	–1.7	–1.9
Turkey	–3.1	–3.6	–2.7	–1.4	–1.8	–1.5	–1.5	–1.3	–0.8	0.6	0.5	1.3
Latin America	–1.3	–2.7	–2.8	–2.6	–2.4	–2.9	–4.5	–4.0	–3.5	–1.1	–1.0	–0.6
Brazil	–2.1	–2.3	–3.2	–2.8	–2.6	–3.4	–6.2	–4.8	–4.2	–2.6	–1.9	–1.4
Mexico	–1.2	–4.4	–4.0	–3.3	–3.8	–3.8	–4.5	–4.0	–3.4	–0.4	0.0	0.1
South Africa	–0.7	–3.1	–3.5	–3.5	–3.9	–3.8	–3.7	–3.7	–3.0	0.9	1.1	1.8
MENAP	…	…	…	…	…	…	…	…	…	…	…	…

Source: IMF staff estimates and projections.
Note: All fiscal data country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. For country-specific details, see Data and Conventions and Tables A, B, and C in the Methodological and Statistical Appendix. MENAP = Middle East, North Africa, and Pakistan.
[1] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.
[2] Excluding financial sector support.
[3] Data for members of the European Union have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010).

the consumption tax from October 2015 to April 2017. It also announced temporary stimulus measures (targeted transfers and infrastructure investment). Nonetheless, the pace of consolidation (in terms of the structural primary balance) is projected to exceed 1 percent of potential GDP in 2015 (unchanged from the October 2014 *Fiscal Monitor*). Under current policies, debt is projected to rise to 250 percent of GDP by 2020.

Deficit reduction is also moderating in the United States. In contrast to Japan, fiscal consolidation in the United States is taking place on the back of stronger-than-expected growth. In 2014, the deficit as a percent of GDP reached its lowest level since 2007, and it is expected to fall by another ½ percentage point (in cyclically adjusted terms) this year, based on already approved measures and funding. As in recent years, consolidation will largely be driven by sequester cuts and war drawdown, following the expiration of previous stimulus measures. Nonetheless, there is significant uncertainty about fiscal policy and fiscal reforms beyond the last quarter of 2015. Although the 2016 president's budget proposal includes a number of measures to simplify the tax system and make it more equitable and to contain growth in health spending, the likelihood that it will be passed by Congress remains unclear.

Table 1.2. General Government Debt, 2008–16

(Percent of GDP)

								Projections		Difference from October 2014 *Fiscal Monitor*		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2014	2015	2016
Gross Debt												
World	**65.0**	**75.4**	**77.7**	**78.7**	**80.5**	**79.1**	**79.8**	**80.4**	**80.0**	**–0.2**	**1.0**	**1.6**
Advanced Economies	**78.8**	**92.1**	**98.6**	**102.6**	**106.8**	**105.2**	**105.3**	**105.4**	**105.1**	**–1.1**	**–0.6**	**0.1**
United States[1]	72.8	86.0	94.8	99.1	102.4	103.4	104.8	105.1	104.9	–0.8	0.0	0.1
Euro Area[2]	68.6	78.4	83.9	86.5	91.1	93.4	94.0	93.5	92.4	–2.4	–2.6	–2.4
France	67.9	78.8	81.5	85.0	89.2	92.4	95.1	97.0	98.1	–0.1	–0.7	–0.9
Germany	64.9	72.4	80.3	77.6	79.0	76.9	73.1	69.5	66.6	–2.4	–3.0	–2.7
Greece	108.8	126.2	145.7	171.0	156.5	174.9	177.2	172.7	162.4	2.9	1.7	1.8
Ireland	42.6	62.2	87.4	111.1	121.7	123.3	109.5	107.7	104.9	–3.0	–3.9	–3.8
Italy	102.3	112.5	115.3	116.4	123.2	128.6	132.1	133.8	132.9	–4.6	–2.7	–1.2
Portugal	71.7	83.6	96.2	111.1	125.8	129.7	130.2	126.3	124.3	–1.1	–2.4	–2.1
Spain	39.4	52.7	60.1	69.2	84.4	92.1	97.7	99.4	100.1	–1.0	–1.7	–2.1
Japan	191.8	210.2	216.0	229.8	236.8	242.6	246.4	246.1	247.0	1.4	0.7	3.1
United Kingdom	51.8	65.8	76.4	81.8	85.8	87.3	89.5	91.1	91.7	–2.4	–2.0	–1.3
Canada[1]	70.8	83.0	84.6	85.3	87.9	87.7	86.5	87.0	85.0	–1.6	0.2	–0.5
Emerging Market and Middle-Income Economies[1]	**35.2**	**39.7**	**39.4**	**38.4**	**38.6**	**39.7**	**41.7**	**43.9**	**44.6**	**1.1**	**2.7**	**3.1**
Excluding MENAP Oil Producers	38.1	42.2	41.9	41.2	41.3	42.5	44.5	46.5	47.3	1.1	2.4	2.9
Asia	40.1	42.8	42.3	41.7	41.8	42.9	44.1	46.0	47.7	0.8	2.0	3.2
China	31.7	35.8	36.6	36.5	37.3	39.4	41.1	43.5	46.2	0.3	1.6	3.3
India	74.5	72.5	67.5	68.1	67.5	65.5	65.0	64.4	63.3	4.5	4.9	4.8
Europe	23.8	29.6	29.4	28.0	27.2	28.5	30.9	33.9	32.5	2.0	4.3	3.4
Russia	8.0	10.6	11.3	11.6	12.7	14.0	17.9	18.8	17.1	2.2	2.3	0.8
Turkey	40.0	46.0	42.3	39.1	36.2	36.2	33.5	33.4	32.5	–0.1	0.3	0.1
Latin America	46.5	49.2	48.4	48.0	48.2	49.2	52.2	52.3	52.2	0.9	0.6	0.4
Brazil[3]	61.9	65.0	63.0	61.2	63.5	62.2	65.2	66.2	66.2	–0.6	0.6	0.6
Mexico	42.8	43.9	42.2	43.2	43.2	46.3	50.1	51.4	51.7	2.1	2.4	2.0
MENAP	19.8	25.7	24.6	22.1	23.0	23.1	24.5	27.8	27.9	0.9	3.6	3.3
South Africa	25.9	30.3	34.4	37.6	40.5	43.3	45.9	47.5	48.2	–2.1	–3.3	–5.5
Low-Income Developing Countries	**29.7**	**33.0**	**30.5**	**30.0**	**30.2**	**30.7**	**31.3**	**33.9**	**34.4**	**–0.1**	**2.6**	**3.0**
Oil Producers	**21.8**	**24.7**	**23.1**	**21.2**	**21.3**	**22.2**	**24.2**	**26.7**	**26.3**	**1.5**	**3.7**	**3.7**
Net Debt												
World	**42.2**	**50.8**	**54.3**	**57.5**	**59.7**	**58.2**	**59.2**	**61.3**	**61.9**	**–3.8**	**–1.9**	**–1.2**
Advanced Economies	**49.0**	**58.3**	**63.4**	**68.1**	**71.3**	**69.8**	**70.4**	**72.0**	**72.3**	**–3.2**	**–2.1**	**–1.5**
United States[1]	50.4	62.1	69.5	76.1	79.2	79.5	79.7	80.4	80.7	–1.1	–0.5	–0.3
Euro Area[2]	47.5	52.8	56.4	58.5	66.7	69.0	69.8	69.8	69.2	–4.0	–4.2	–4.0
France	60.3	70.1	73.7	76.4	81.5	84.7	87.4	89.3	90.4	–0.7	–1.3	–1.5
Germany	48.7	55.0	56.8	55.0	54.3	52.7	49.7	46.9	44.7	–4.2	–4.6	–4.4
Greece	...	...	...	...	152.8	172.1	174.3	169.9	159.7	5.5	3.4	2.1
Ireland	20.4	37.2	67.5	79.1	87.9	92.1	85.7	85.5	83.8	–7.3	–7.5	–7.4
Italy	86.2	94.2	96.3	98.4	103.0	107.5	110.4	111.8	111.1	–3.8	–2.2	–1.0
Portugal	67.6	79.7	91.9	100.9	115.9	119.4	120.1	119.2	118.5	–3.7	–4.3	–3.0
Spain	30.0	24.3	32.5	39.3	51.9	59.5	64.8	67.4	68.8	–0.8	–1.4	–1.9
Japan	95.3	106.2	113.1	127.3	129.1	122.9	127.3	129.6	131.9	–10.5	–10.4	–8.4
United Kingdom	45.7	58.8	69.1	73.4	77.1	78.7	81.0	82.6	83.1	–2.9	–2.4	–1.7
Canada[1]	24.3	29.9	32.9	34.6	36.4	37.1	37.3	38.3	37.9	–1.3	–0.7	–1.1
Emerging Market and Middle-Income Economies	**7.2**	**10.4**	**12.4**	**11.5**	**8.6**	**7.8**	**9.2**	**10.9**	**12.8**	**–7.8**	**–7.1**	**–6.0**
Asia	...	...	...	...	...	...	...	...	...	...	...	...
Europe	23.3	29.1	29.8	28.3	26.0	26.5	25.8	26.7	27.0	1.1	2.2	3.4
Latin America	30.8	34.2	33.3	31.3	29.7	29.8	32.5	33.4	33.8	1.0	1.9	2.3
MENAP	–48.0	–46.9	–42.4	–39.4	–44.0	–48.2	–46.0	–39.0	–32.2	–30.7	–27.1	–23.4
Low-Income Developing Countries	**15.0**	**21.7**	**22.1**	**21.7**	**21.7**	**23.9**	**25.8**	**29.7**	**31.0**	**–5.0**	**4.5**	**5.7**

Source: IMF staff estimates and projections.

Note: All fiscal data country averages are weighted by nominal GDP converted to U.S. dollars at average market exchange rates in the years indicated and based on data availability. Projections are based on IMF staff assessments of current policies. For country-specific details, see Data and Conventions and Tables A, B, and C in the Methodological and Statistical Appendix. MENAP = Middle East, North Africa, and Pakistan.

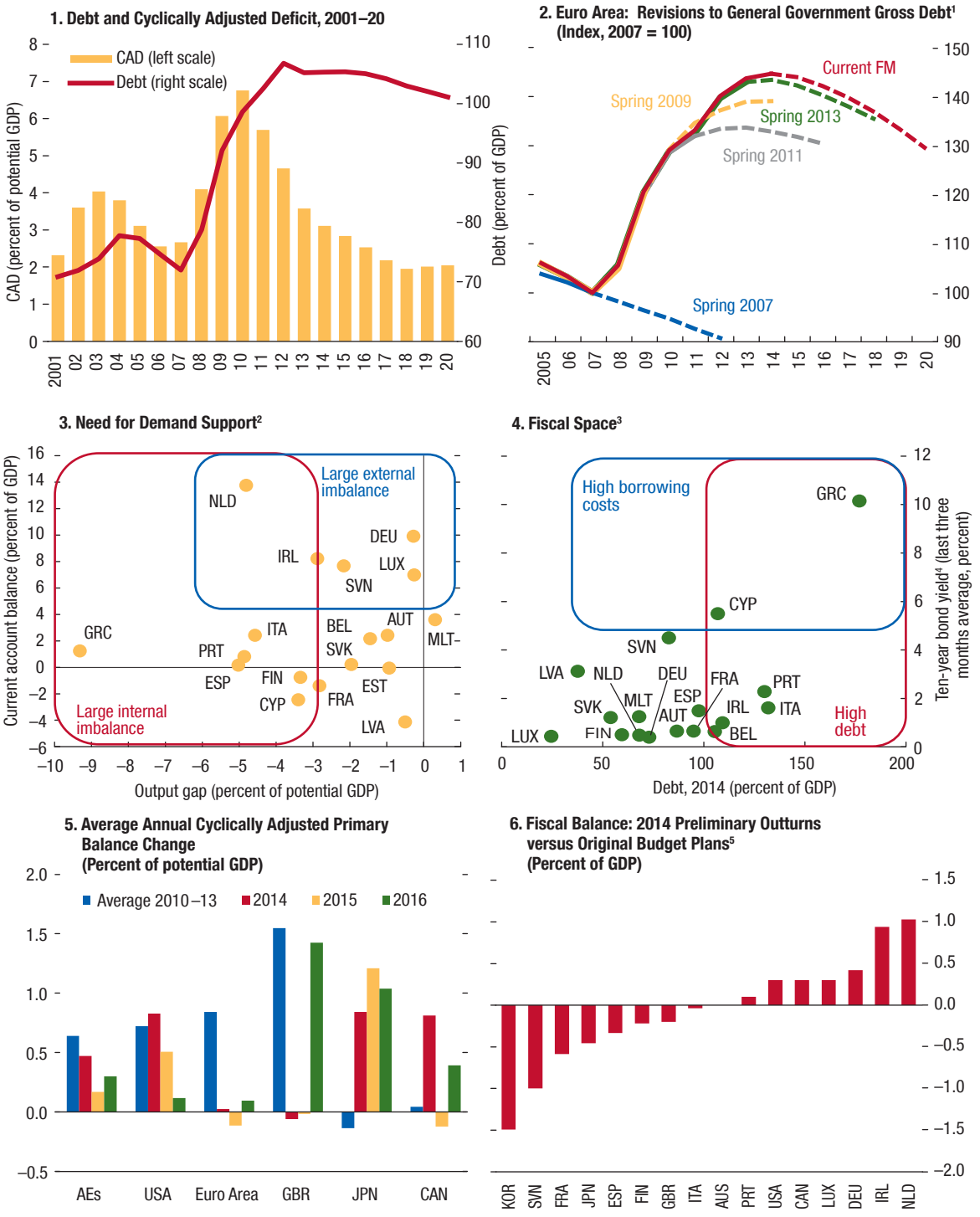
[1] For cross-country comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 System of National Accounts (Australia, Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

[2] Data for members of the European Union have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010).

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

Figure 1.2. Fiscal Trends in Advanced Economies

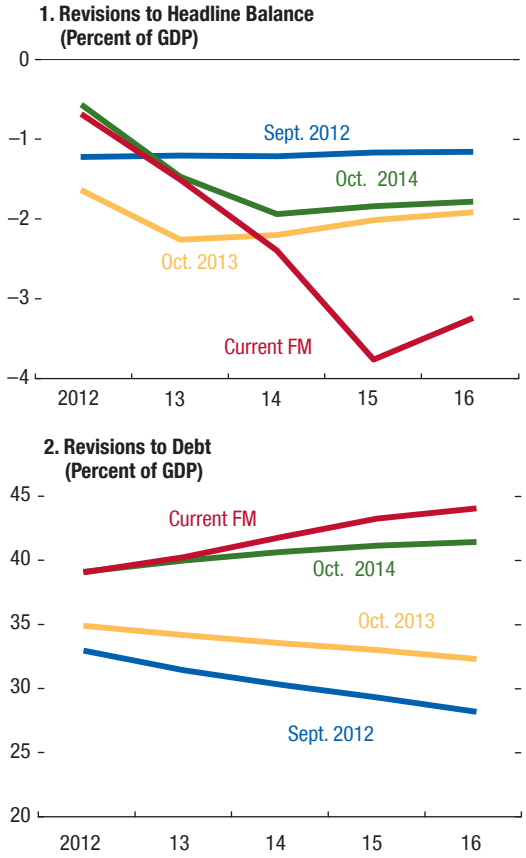
The average ratio of debt to GDP remains above 100 percent and is expected to decline only slowly, as very low inflation and slow growth complicate debt reduction efforts. The pace of fiscal consolidation has slowed to support economic activity. In the euro area, the fiscal space is lacking where demand support is needed the most.



Sources: Thomson Reuters Datastream; and IMF staff estimates.
Note: AEs = advanced economies; CAD = cyclically adjusted deficit; FM = *Fiscal Monitor*. Data labels in the figure use International Organization for Standardization (ISO) country codes.
[1] Data for members of the European Union have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010).
[2] The more negative the output gap, the larger the demand support needed.
[3] The higher the level of debt and the higher the cost of financing, the lower the fiscal space.
[4] For Cyprus: five-year government bond yield.
[5] For the United States and Canada, the 2014 budget target for the general government corresponds to IMF staff estimates as reported in the April 2014 *Fiscal Monitor*; for all other countries, data come from countries' budget laws and budget execution documents.

Figure 1.3. Fiscal Trends in Emerging Market and Middle-Income Economies

On average, fiscal deficits continue to increase for emerging market and middle-income economies, largely driven by revenue losses of oil exporters. New bouts of financial market volatility, capital outflows, and exchange rate depreciation have also affected the fiscal position of some of these economies.



Source: IMF staff estimates.
Note: FM = *Fiscal Monitor*.

Emerging Market and Middle-Income Economies: Financial Volatility and Lower Export Prices Stretch Already Thin Fiscal Buffers

The average deficit for the group of emerging market and middle-income economies as a whole increased in 2014 for the second year in a row and is projected to increase further in 2015, to about 3¾ percent of GDP (Table 1.1a). The trend is driven largely by oil exporters, although deficits also increased in many oil importers, albeit at a slower pace (Figure 1.3). New bouts of financial market volatility, capital outflows, and exchange rate depreciation have occurred in a number of emerging market and middle-income economies. The cost of financing has increased considerably in some of these countries (Brazil, Ecuador, Russia). Debt ratios, while generally moderate (about 42 percent of GDP), are in many cases well above their precrisis levels and thus will constrain fiscal policy space in the future.

With sharply lower oil prices, most oil exporters are projected to record sizable deficits in 2015 (Algeria, Angola, Azerbaijan, Libya, Russia, Saudi Arabia, Venezuela). Some countries have begun to implement fiscal tightening, while others are accommodating the shock through higher deficits and exchange rate depreciation. In Russia, support to the economy could also come from off-budget stimulus through resources from the National Wealth Fund and issuance of guarantees.

The fiscal stance, including off-budget stimulus, continues to be accommodative in China. Last year, strength in infrastructure spending helped to cushion slowing investment elsewhere. Available data are not sufficient to reliably update the estimate of the augmented fiscal deficit (which includes off-budget activity by local government financing vehicles). A new budget law is being implemented this year that is expected to strengthen fiscal management, oversight, and transparency at the local government level going forward.

After its overall fiscal deficit doubled in 2014, Brazil announced an ambitious fiscal adjustment for 2015–16 to bring the primary balance back to a surplus of 1.2 percent of GDP in 2015 and at least 2 percent of GDP thereafter (from a primary deficit of 0.6 in 2014). Increases in fuel taxes and a reduction in electricity subsidies have already been approved.

Other emerging market and middle-income economies, including Croatia, Egypt, Malaysia, Mexico, Morocco, and South Africa, continued or embarked on fiscal adjustment. This follows a substantial widening of debt and deficits in the aftermath of the Arab Spring in Egypt and Morocco. Some economies supported these steps with fiscal savings from lower oil subsidies and efforts to build a broader tax base. For example, Malaysia recently introduced a goods and services tax (GST), which will help broaden the tax base and reduce reliance on volatile oil and gas revenue. India is also moving toward introducing a GST as well as measures to improve revenue administration, but they are not included in the fiscal year 2015/16 budget and their timing remains uncertain. The new budget envisages a slowdown in the pace of fiscal consolidation, although the spending mix has improved, with a

clear emphasis on infrastructure spending and further reduction in fuel subsidies.

Low-Income Developing Countries: Resisting Headwinds from Lower Growth and Lower Commodity Prices

Many low-income developing countries share the fiscal challenges of emerging market and middle-income economies, particularly those related to lower oil and commodity prices and volatility in financial markets. Growth in low-income developing countries will also be weaker than expected, although it remains relatively strong. Since October, countries in this group with access to international markets, especially in sub-Saharan Africa, have experienced capital outflows, domestic currency depreciation, and increases in bond yields (Figure 1.4, panels 1–2). The impact has been most severe in Nigeria, which is also suffering the consequences of the sharp decline in oil revenues, and Ghana, which is facing significant balance of payments challenges.

Immediate fiscal policy response to these developments has varied. Countries where high budget deficits or public debt constrain fiscal policy choices (Ghana, Honduras, Nigeria) have initiated spending adjustments. But some commodity exporters (such as Bolivia) still have sufficient fiscal space to smooth the impact on spending.

For the group as a whole, the fiscal deficit is expected to increase in 2015 (Table 1.1a). Revenue losses in oil and commodity exporters are expected to be only partially offset by spending restraint and by fiscal consolidation in commodity importers, particularly in Asia and Latin America. Public finances in many oil-importing low-income developing countries are expected to improve as the decline in oil prices lowers energy subsidies, while a few may suffer revenue losses as a result of lower value-added taxes (VATs) and tariffs (Zambia). Some countries may also be affected by negative spillovers from oil exporters. For example, most countries with access to financing through Petrocaribe[2] are already experiencing a decline in financing flows due to lower oil prices. Should Venezuela's fragile public finances no longer be able to support this arrangement, countries that are large recipients of these concessional loans or lack alternative sources of financing (Haiti, Nicaragua) may be further affected.

With a few exceptions, debt sustainability is not an immediate risk in low-income developing countries, reflecting strong growth and past debt relief initiatives. The average debt-to-GDP ratio is relatively low (about 30 percent) and is projected to be stable in the medium term (Table 1.2).

In West Africa, the Ebola outbreak continues to raise daunting fiscal challenges. The total expected output loss during 2014–15 in Guinea, Liberia, and Sierra Leone is, on average, more than 10 percent of GDP. The loss of revenue and increase in expenditures in these three Ebola-affected countries over the same period is expected to exceed 10 percent of GDP, resulting in widening fiscal deficits (Figure 1.4, panel 3). While other countries in the region will also incur higher spending in prevention efforts (for example, Burkina Faso), the impact on the rest of sub-Saharan Africa is likely to be limited. The international community has provided support through a combination of concessional loans, grants, and technical assistance. In addition to providing budget support, the IMF established the Catastrophe Containment and Relief Trust (CCR) to provide debt relief to countries facing catastrophic disasters, including but not limited to public health disasters.[3] Guinea, Liberia, and Sierra Leone are expected to benefit from the CCR in amount equivalent to $100 million. However, financing gaps for 2015–17 remain sizable (Figure 1.4, panel 4): donor aid is still needed to help consolidate advances against the epidemic and preserve critical growth-enhancing public spending.

Fiscal Risks

The following risks emerge as particularly daunting in the near term:

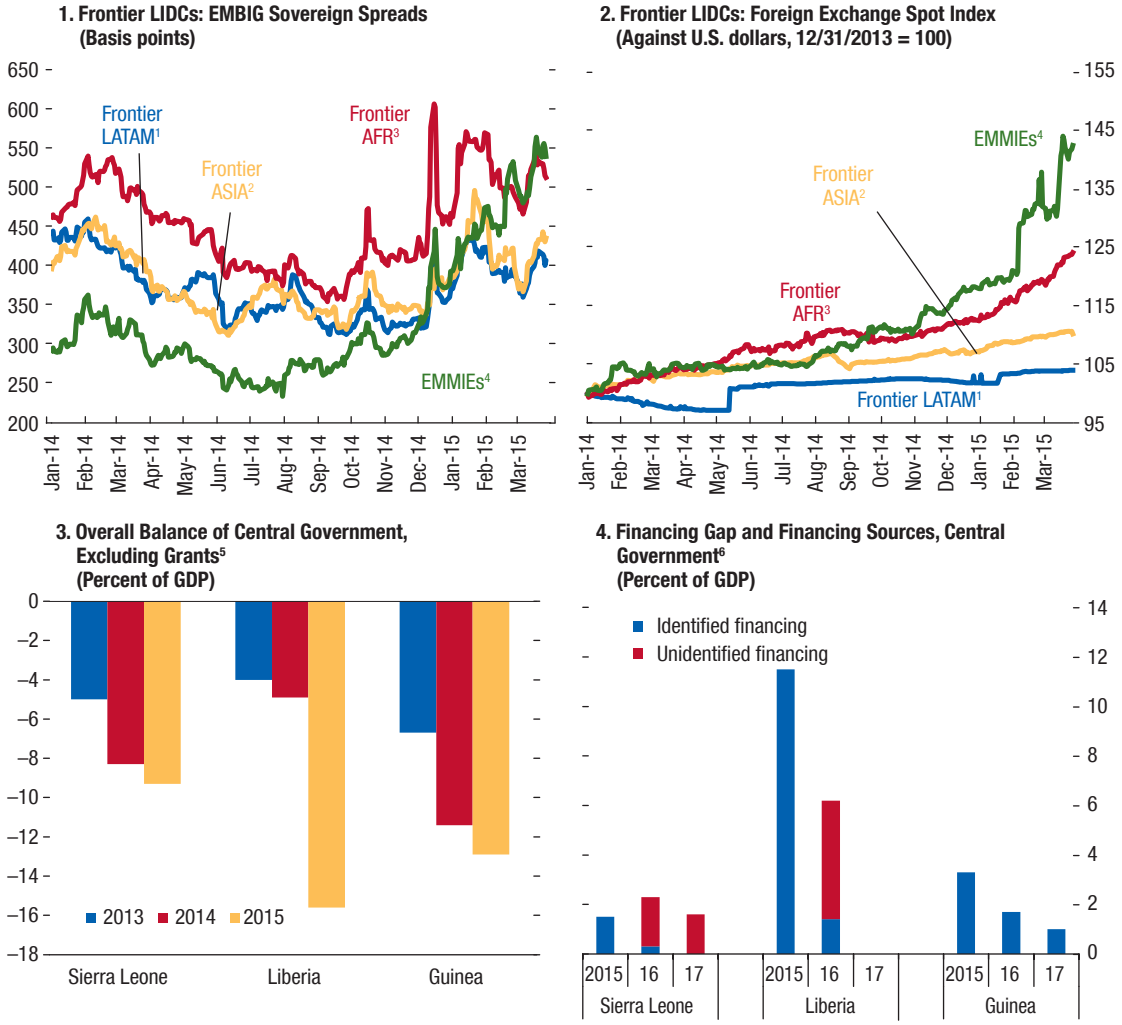
- *Low growth and protracted low inflation (or outright deflation):* In the euro area and Japan, a spiral of entrenched sluggish growth, protracted undershooting from the inflation target, and constraints on monetary policy at the zero lower bound for nominal interest rates would have serious implications for public finances, with the possibility of continuously growing debt ratios. The recent improvement in the economic situation and the adoption of quantitative

[2] Petrocaribe, a multilateral agreement between Venezuela and 17 countries from the Caribbean and Central America, provides members with access to concessional financing for purchases of oil from Venezuela.

[3] The Catastrophe Containment and Relief Trust started operation in February 2015. http://www.imf.org/external/np/sec/pr/2015/pr1553.htm.

Figure 1.4. Fiscal Trends in Low-Income Developing Countries

Many low-income developing countries face weakened (yet still strong) growth; they are being challenged by lower oil and commodity prices and volatility in the financial markets.



Sources: Bloomberg L.P.; J.P. Morgan; Thomson Reuters Datastream; IMF staff reports; and IMF staff estimates.
Note: AFR = Africa; EMBIG = Emerging Markets Bond Index Global; EMMIEs = emerging market and middle-income economies; LATAM = Latin America; LIDCs = low-income developing countries.
[1] Bolivia and Honduras.
[2] Mongolia and Vietnam.
[3] Côte d'Ivoire, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Senegal, Tanzania, and Zambia.
[4] Argentina, Brazil, Chile, Hungary, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, South Africa, Turkey, and Ukraine.
[5] Liberia: data refer to fiscal years. Sierra Leone: data are expressed as a percentage of non-iron ore GDP.
[6] Liberia: data refer to fiscal years and exclude Ebola-related support; financing gap for fiscal year 2016 could be partially covered using the funding from the Rapid Credit Facility; no data are available for fiscal year 2017. Sierra Leone: data are expressed as a percentage of non-iron ore GDP.

easing by the European Central Bank has reduced this risk in the euro area recent months. Low growth and low inflation could also affect public finances in some emerging market and developing economies. Further declines in oil prices would amplify this problem.

- *Geopolitical risks and policy uncertainty:* Events in Europe (including in Russia/Ukraine), the Middle East, and some parts of Africa could adversely affect confidence and lead to disruptions in global trade and financial transactions, with important fiscal implications. In addition, financial stress could

Table 1.3. Selected Advanced Economies: Gross Financing Need, 2015–17
(Percent of GDP)

	2015			2016			2017		
	Maturing Debt	Budget Deficit	Total Financing Need	Maturing Debt[1]	Budget Deficit	Total Financing Need	Maturing Debt[1]	Budget Deficit	Total Financing Need
Australia	2.3	3.3	5.6	1.8	2.7	4.5	2.8	2.0	4.8
Austria	5.8	1.7	7.5	5.7	1.7	7.4	6.8	1.5	8.3
Belgium	16.8	2.9	19.7	16.5	2.1	18.6	16.9	1.3	18.2
Canada	10.0	1.7	11.7	11.0	1.3	12.3	9.7	0.9	10.6
Czech Republic	6.4	1.4	7.8	7.0	1.2	8.2	6.4	1.2	7.6
Denmark	6.9	2.3	9.1	5.2	2.1	7.3	4.5	1.9	6.4
Finland	5.7	2.4	8.1	6.6	1.8	8.4	8.4	1.2	9.5
France	13.3	3.9	17.3	14.7	3.5	18.2	13.8	2.8	16.6
Germany	6.1	–0.3	5.8	6.2	–0.4	5.8	3.7	–0.4	3.4
Iceland	2.4	–0.1	2.4	10.3	–0.1	10.3	1.3	–1.2	0.1
Ireland	7.8	2.4	10.2	6.7	1.5	8.2	5.6	0.6	6.2
Italy	18.8	2.6	21.4	18.2	1.7	19.8	17.8	1.1	18.9
Japan	46.5	6.2	52.7	46.0	5.0	50.9	38.7	4.3	43.0
Korea	3.3	–0.3	2.9	3.4	–0.6	2.7	2.7	–0.9	1.9
Lithuania	7.1	1.4	8.4	5.9	1.6	7.5	4.5	1.6	6.1
Malta	4.4	1.8	6.3	6.4	1.6	8.0	5.7	1.5	7.2
Netherlands	9.4	1.4	10.8	7.8	0.5	8.3	10.2	0.3	10.5
New Zealand	4.6	0.0	4.6	2.1	–0.5	1.6	5.9	–1.0	4.9
Portugal	17.0	3.2	20.1	14.7	2.8	17.5	14.2	2.5	16.7
Slovak Republic	4.0	2.6	6.6	6.4	2.3	8.7	6.7	1.8	8.5
Slovenia	5.3	4.0	9.2	10.7	3.4	14.2	7.4	3.4	10.8
Spain	17.2	4.3	21.5	19.0	2.9	21.9	17.3	2.5	19.8
Sweden	5.8	1.3	7.1	4.9	0.6	5.5	4.9	0.4	5.4
Switzerland	2.2	0.4	2.7	3.1	0.2	3.3	2.4	0.2	2.6
United Kingdom	7.4	4.8	12.2	7.1	3.1	10.2	7.4	1.5	8.9
United States[2]	15.8	4.2	20.0	16.4	3.9	20.3	14.4	3.4	17.8
Average	15.7	3.5	19.1	15.9	2.9	18.8	14.0	2.4	16.4

Sources: Bloomberg L.P.; and IMF staff estimates and projections.
Note: For most countries, data on maturing debt refer to central government securities. For some countries, general government deficits are reported on an accrual basis. For country-specific details, see Data and Conventions and Table A in the Methodological and Statistical Appendix.
[1] Assumes that short-term debt outstanding in 2015 and 2016 will be refinanced with new short-term debt that will mature in 2016 and 2017, respectively. Countries that are projected to have budget deficits in 2015 or 2016 are assumed to issue new debt based on the maturity structure of debt outstanding at the end of 2014.
[2] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.

reemerge in the euro area, triggered by policy uncertainty associated with Greece or political turbulence, and reintensify the links between banks and sovereigns and the real economy.

- *Financial market volatility and tighter financing conditions:* With low borrowing costs and continued consolidation in some large economies, financing needs are declining in advanced economies to their lowest levels since 2010 (Table 1.3). In emerging market economies, financing needs remain above the levels of 2011–13 (Table 1.4). Surges in financial volatility could prompt capital outflows in emerging market economies as investors deleverage, transform maturity, or change the risk profile of their portfolio. At the same time, surprises about the prospective normalization of monetary policy in the United States could adversely affect government financing costs in many emerging market economies and frontier low-income developing countries.

A Supportive Role for Fiscal Policy

Many advanced economies face a triple threat from interrelated challenges: low growth, low inflation (or

Table 1.4. Selected Emerging Market and Middle-Income Economies: Gross Financing Need, 2015–16
(Percent of GDP)

	2015			2016		
	Maturing Debt	Budget Deficit	Total Financing Need	Maturing Debt	Budget Deficit	Total Financing Need
Argentina	6.6	4.1	10.7	6.1	4.0	10.1
Brazil	7.8	5.3	13.1	9.3	4.7	14.0
Chile	0.9	2.1	3.0	0.7	1.9	2.6
China	2.4	1.9	4.4	1.8	2.2	3.9
Colombia	3.2	3.2	6.4	2.3	2.6	4.9
Croatia	16.2	4.8	21.1	14.6	3.8	18.5
Dominican Republic	3.9	2.4	6.4	3.1	2.2	5.3
Ecuador	3.1	5.4	8.5	2.6	4.8	7.4
Egypt[1]	50.1	11.8	61.9	50.4	9.4	59.8
Hungary	20.3	2.7	23.0	16.5	2.5	19.0
India	3.7	7.2	10.9	3.4	7.1	10.5
Indonesia	1.6	2.3	3.9	1.8	2.1	3.9
Malaysia	6.0	3.5	9.4	6.8	2.9	9.6
Mexico	6.0	4.1	10.1	6.3	3.5	9.7
Morocco	12.1	4.3	16.4	11.7	3.5	15.2
Pakistan	25.2	4.7	29.9	24.3	3.8	28.1
Peru	1.1	1.7	2.8	1.4	1.4	2.7
Philippines	5.7	0.9	6.6	6.2	1.0	7.2
Poland	7.7	2.9	10.6	7.4	2.3	9.7
Romania	6.4	1.8	8.2	6.5	1.7	8.2
Russia	1.4	3.7	5.1	1.3	2.6	3.9
South Africa	7.2	4.2	11.4	7.7	3.4	11.2
Sri Lanka	13.7	6.7	20.4	9.9	7.4	17.3
Thailand	7.9	1.9	9.9	7.9	2.0	9.9
Turkey	4.3	1.4	5.7	5.2	0.9	6.1
Ukraine	13.1	4.2	17.3	9.1	3.7	12.8
Uruguay	14.3	2.8	17.1	13.8	2.9	16.8
Average	4.8	3.3	8.0	4.6	3.1	7.6

Source: IMF staff estimates and projections.
Note: Data in the table refer to general government data. For some countries, general government deficits are reported on an accrual basis. For country-specific details, see Data and Conventions and Table B in the Methodological and Statistical Appendix.
[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

deflation in some cases), and high debt. A lasting solution to the debt overhang problem is not possible without higher growth and moderate inflation. This underscores the need to continue monetary stimulus and accelerate structural reforms to catalyze growth. Combining structural reforms with demand support would bring forward investment and raise expectations of future growth. A greater push for structural reforms is also needed in emerging market economies and low-income developing countries to boost potential growth and reduce vulnerabilities. Furthermore, financial volatility and the prospect of tighter external financing conditions put a premium on building resilience and creating policy buffers, particularly if they help reduce external imbalances. In all cases, fiscal policy should have a supportive role. The modality will, however, depend on country-specific circumstances, including the size of government debt and market access risks.

Use fiscal policy flexibly to support growth

In the absence of relevant risks that may lead to market pressure, negative temporary shocks to growth should not trigger additional fiscal consolidation efforts. Countries should let automatic stabilizers play fully and should consider measures to increase their efficiency. As discussed in Chapter 2, automatic stabilizers account for a large share of the stabilizing effects of fiscal policy, and the induced reduction in macroeconomic volatility is good for medium-term growth. In addition, countries with fiscal space could use it to support growth. For example, in the United States and Germany, where infrastructure investment needs are well documented, such

investment would raise aggregate demand in the short term and potential output in the medium term (October 2014 *World Economic Outlook*). Countries that are more constrained should pursue more growth-friendly fiscal rebalancing, including budget-neutral tax reforms, to support growth while ensuring debt sustainability. In the euro area, flexibility under the Stability and Growth Pact should be used to promote investment and structural reforms to support growth. Effective and coordinated policy action at the EU level would help, including by enhancing long-term confidence. Meanwhile, in countries where mounting fiscal risks may lead to market pressure, rebuilding fiscal buffers should be a priority.

In oil exporters, the government's financial assets, if large enough, can be used to gradually adjust to the shock from lower oil prices and weaker global growth. Allowing for exchange rate depreciation will also help cushion the impact of the oil price shock. However, adjustments in expenditures are unavoidable where gross debt is high, the government's accumulated financial assets are low, there are immediate market pressures, or the exchange rate lever is constrained. In these countries, expenditures will need to be prioritized to avoid cuts that fall disproportionately on productive spending.

Given the possibility of a prolonged period of lower oil prices, in most oil exporters, the focus of policy should gradually shift toward lasting reforms, such as broadening taxation to create a non-oil fiscal base, improving natural resource management, and, where needed, reducing expenditures to sustainable levels. These reforms will increase exporters' future fiscal resilience to oil price fluctuations and facilitate the use of countercyclical fiscal policy and automatic stabilizers in the future.

In economies with oil subsidies, the windfall gains from lower prices may provide some fiscal space, especially for growth-enhancing spending, including infrastructure. But in economies where macroeconomic vulnerabilities have increased and slack is limited, it should also be used to rebuild fiscal buffers. In addition, policymakers should take into account the volatility of oil prices and the uncertainty about the duration of the current low-price environment.

Seize the opportunity created by falling oil prices

The decline in oil prices presents a golden opportunity to reform energy subsidies and taxes. Energy tax reforms would reduce the adverse environmental side effects of energy consumption through more rational pricing, and the revenues received could be used to lower other taxes (such as on labor), meet fiscal consolidation needs, or fund growth-enhancing spending. High taxes on coal and road fuels, in particular, are warranted across developed and developing economies alike to charge for carbon emissions, detrimental health effects from local air pollution, road congestion, and accidents. For example, current U.S. fuel taxes are estimated to be less than one-fourth of their efficient levels (Parry and others 2014). At the global level, getting energy prices right would yield substantial benefits—a reduction of about 20 percent in carbon emissions and of about 60 percent in deaths from fossil fuel air pollution, and gains in revenue would be substantial at 2½–3 percent of GDP, on average. The numbers vary across countries—for example, coal-intensive China could see revenue gains of about 6 percent of GDP. Finance ministries have a critical role to play not only in championing and administering carbon taxes and broader energy price reforms, but also in ensuring that revenues are put to good use (Lagarde 2014).[4]

In developing economies, further reform of energy subsidies could provide space for growth-enhancing spending in education, health, and infrastructure, as well as for programs to compensate the poor. Box 1.2 discusses ways to reform energy subsidies and describes recent country experiences. More than 20 countries have recently taken steps to decrease or eliminate energy subsidies. However, these are not permanent solutions unless they address the core problem of how governments determine energy prices. Moving toward deregulating domestic oil prices while international oil prices are falling can lead to permanent fiscal improvement, as well as to significant longer-term economic and environmental gains. Countries should, however, have in place social safety nets that can be expanded in times of large increases in international oil prices to help protect low-income households.

For countries that cannot move to full oil price deregulation, due to political economy or other considerations, an attractive interim solution may be to adopt an automatic fuel-pricing mechanism, possibly with short-term price smoothing (Coady and others 2012). A number of countries (including Chile, Peru, and some sub-Saharan African countries) have already adopted such mechanisms. This approach allows both increases and decreases in oil prices, but caps these changes. This ensures that international oil prices can be fully passed through to domestic consumers in the medium term while protecting domestic consumers from sudden price

[4] For more information about the IMF's environment work, see imf.org/environment.

increases. It also helps contain the effects of higher international fuel prices on the budget.

Strengthen institutional frameworks for managing fiscal policy

Bold action is needed to improve the frameworks to manage public finances as part of a comprehensive approach to macroeconomic policies that facilitates sustainable growth. Fiscal frameworks anchor fiscal policy and provide guidance toward its medium-term objectives. They help enhance the play of automatic stabilizers over the course of the business cycle and thus reduce output volatility and raise medium-term growth. Chapter 2 shows that in the absence of strong fiscal frameworks, many countries tend to suppress the impact of automatic stabilizers in good times, possibly contributing to significant public debt buildup. Well-grounded fiscal frameworks are particularly necessary in countries where levels of public debt are high and the burden of age-related spending is expected to increase (Box 1.3).

- In Japan, an explicit, concrete medium-term fiscal plan could help respond flexibly to short-term shocks to the economy, including through temporary, targeted stimulus when growth underperforms.
- In the euro area, efforts should be made to simplify the increasingly complicated fiscal governance framework, while enhancing its credibility and fostering greater compliance. A streamlined framework, which should be subject to further discussion, could center on a single anchor (such as the ratio of public debt to GDP ratio) and a single operational target linked to the anchor (such as an expenditure rule with a debt brake).[5]
- In the United States, in the face of rapidly increasing spending related to the aging of the population, forging agreement on a credible medium-term fiscal consolidation plan is a high priority. Furthermore, reform of the tax code, focused on streamlining and simplification, is long overdue. Most of the measures in the president's proposed fiscal year 2016 budget are a step in the right direction, including expanding the base and lowering the business tax rate; capping deductions and reducing loopholes, particularly at the higher end of the income distribution; and expanding the earned income tax credit.
- In emerging market and developing economies, frameworks for managing fiscal policy must be framed to address an environment of volatile commodity prices, capital flows, and exchange rates. This would require enhancing fiscal transparency and analyzing and managing fiscal risks. In some cases, the frameworks would need to take into account risks from natural disasters and climate change. In frontier low-income countries, strong multiyear budget frameworks with effective commitment controls and institutional oversight are crucial to ensure increased discipline when countries borrow externally. Improvements in fiscal institutions, including those involved in revenue administration and in planning and executing public investment, can help improve revenue mobilization and the efficiency of spending.[6]

[5] See IMF forthcoming (b).

[6] See for example Chakraborty and Dabla-Norris (2009), Dabla-Norris and others (2010, 2011), and Gupta and others (2011). A forthcoming IMF policy paper (IMF forthcoming (c)) examines how fiscal institutions can be strengthened to improve the efficiency of public investment in advanced economies, emerging markets, and low-income developing countries.

Box 1.1. Past, Present, and Future Patterns in Revenues

During the global financial crisis, revenue-to-GDP ratios fell sharply in advanced economies (by 1 percent of GDP, on average) to levels comparable to those observed in the early 2000s (Figure 1.1.1). Lower receipts from corporate income taxes (CIT) and, to a lesser extent, personal income taxes explain most of the decline. In Japan and New Zealand, for example, CIT revenues fell by 2 percentage points of GDP or more.[1]

Total revenue rebounded from 2010 to 2014, and the average revenue-to-GDP ratio exceeded precrisis levels in 2013. The increase could have been higher if tax compliance had not worsened as a result of the crisis (IMF forthcoming (a)). Most revenue components (taxes on goods and services, personal income taxes, and social security contributions) rose, reflecting the implementation of tax hikes (largely focused on the personal income tax and the value-added tax) and the resumption of economic growth.[2] One exception is the CIT, which has not yet returned to its precrisis average. Four factors have likely contributed to the hysteresis of the CIT in advanced economies. First, about half of advanced economies cut the CIT rate permanently at least once after 2008. Second, loss carry-forward has likely been reducing the tax base since the crisis. Organisation for Economic Co-operation and Development countries in which gross operating surpluses fell the most in 2009 are also countries in which CIT recovered the least between 2009 and 2013 (Figure 1.1.2). Third, the share of gross operating surpluses to GDP declined in most advanced economies during 2008–13 (0.6 percentage points, on average). Finally, asset price declines, a proxy for the contribution of the financial sector to government revenues, appear to be associated with changes in CIT revenues.

Average revenue ratios are projected to decline slightly to around precrisis levels over the medium term as consolidation efforts come to rely more on expenditure measures (October 2014 *Fiscal Monitor*). CIT revenues can be expected to remain relatively flat if cuts to tax rates remain permanent and if there

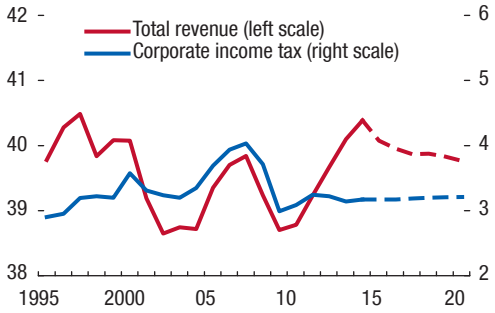
[1] Other country-specific factors besides the crisis contributed to the CIT decline in individual countries, but for all countries the peak and trough of the CIT overlap closely with the period of the global financial crisis.

[2] Between 2010 and 2013, 21 advanced economies took measures to raise personal income taxes (increasing the rate, expanding the base, or both) and 18 countries took measures to raise the value added tax (October 2013 *Fiscal Monitor*).

Figure 1.1.1. Advanced Economies: Total Revenue and Corporate Income Tax

(Percent of GDP, unweighted averages)

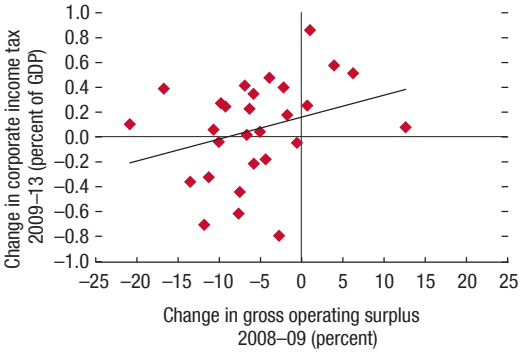
During the global financial crisis, revenue-to-GDP ratios fell sharply in advanced economies. Total revenue has since rebounded, but the increase could have been higher if tax compliance had not suffered as a result of the crisis.



Sources: IMF, Fiscal Affairs Department Tax Policy database; and IMF staff estimates.
Note: Corporate income tax average is based on a sample of 32 advanced economies; projections for 2015–20 are based on IMF staff estimates when available, or assume a GDP elasticity of one, when not. Dashed lines show projections.

Figure 1.1.2. OECD Countries: Corporate Income Tax versus Gross Operating Surplus

Corporate income tax revenue fell during the global financial crisis and has not yet returned to precrisis levels. Losses incurred during 2008–09, proxied by the change in gross operating surpluses, contributed to the decline.



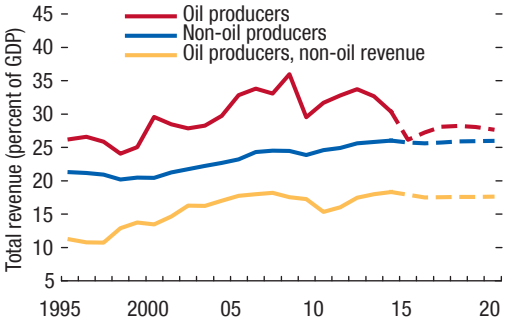
Sources: Organisation for Economic Co-operation and Development (OECD); IMF, Fiscal Affairs Department Tax Policy database; and IMF staff estimates.
Note: Gross operating surplus (OECD, national accounts data) includes gross fixed income.

Box 1.1 *(continued)*

Figure 1.1.3. Emerging Market and Developing Economies: Total Revenue

(Percent of GDP, unweighted averages)

Revenue dynamics differ greatly for oil producers and non-oil producers. Oil producers experienced sharp revenue declines during the global financial crisis and as a result of falling oil prices. In contrast, total revenues continue on a positive upward path for non-oil producers, with only temporary effects from the crisis.



Sources: IMF, Fiscal Affairs Department Tax Policy database; and IMF staff estimates.
Note: Dashed lines show projections.

are still losses to carry forward. Nonetheless, there is significant uncertainty around these estimates.

In developing economies, revenue dynamics differ greatly for oil and non-oil producers (Figure 1.1.3). For oil producers, ratios of total revenue to GDP fell sharply in 2009 (by 6.5 percent of GDP, on average) and 2013–14 (by 3.5 percent of GDP, on average), reflecting oil price declines. Total revenue to GDP is projected to remain low, at pre-2000 levels, over the medium term. Conversely, for non-oil producers, the precrisis positive trend growth in total revenues halted only temporarily during the global financial crisis, and revenues to GDP are now at an all-time high. Revenue ratios are projected to keep increasing, although at a slower pace than before the crisis, largely as a result of downward revisions to growth projections (April 2015 *World Economic Outlook*).

Box 1.2. Reforming Energy Subsidies

The decline in global energy prices provides a golden opportunity for countries to reform energy subsidies and raise energy taxes to better account for the negative externalities from fossil fuel consumption. How can countries move forward in this area? Earlier work by the IMF (Clements and others 2013), drawing on the IMF's technical assistance experience, identifies six key ingredients for successful energy subsidy reform (Figure 1.2.1).[1]

First, a comprehensive reform plan, which clearly articulates the reform's long-term objectives, is needed. Second, price increases should be appropriately phased and sequenced. The prices of products such as gasoline that are more heavily consumed by upper-income groups should generally be increased first; products such as kerosene that are more heavily consumed by the poor should be raised later. Third, improvements should be made in the efficiency of state-owned enterprises in the energy sector to help reduce their fiscal burden. Fourth, mitigating measures should be undertaken to protect the poor. Targeted cash or near-cash transfers, such as vouchers, are the preferred approach. Fifth, energy pricing should be depoliticized to make reforms durable. An automatic price mechanism, which incorporates a smoothing rule to prevent sharp increases in domestic prices, can be introduced, and implementation should be carried out by an independent body. Sixth, an effective communication strategy should be put in place to inform the public about the size of subsidies as well as the potential benefits of subsidy reform, such as the scope to reallocate spending to other priorities, such as health and education.

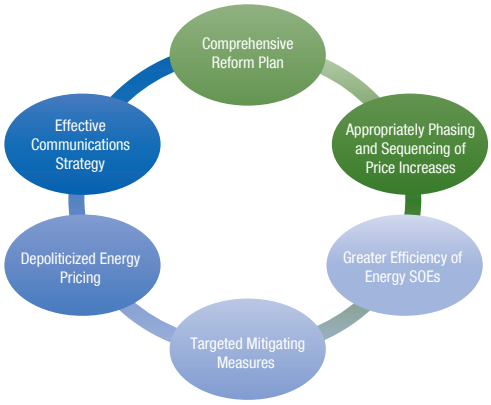
A number of countries have recently taken steps to reduce energy subsidies, including Angola, Bahrain, Cameroon, Côte d'Ivoire, Egypt, India, Indonesia, Jordan, Kuwait, Malaysia, Morocco, Sudan, Thailand, Tunisia, United Arab Emirates, and Yemen. Recent experiences with energy pricing reform in Côte d'Ivoire, Indonesia, Malaysia, and Yemen help illustrate some of the features behind successful reforms.

In Indonesia, prices were increased in two steps between mid-2013 and 2015: first, administered prices for gasoline and diesel were raised and second, gasoline subsidies were removed, and diesel subsidies were capped at Rp 1,000 per liter. Several factors have contributed to the success of the effort:

[1] The IMF offers a free online course on subsidy reform. See https://www.edx.org/course/energy-subsidy-reform-imfx-esrx.

Figure 1.2.1. Six Elements of Successful Energy Reforms

Falling energy prices create an opportunity to reform energy subsidies. Recent country experience points to six components that characterize successful reform efforts.



Source: Clements and others (2013).
Note: SOEs = state-owned enterprises.

- The price increases were appropriately sequenced. Gasoline and diesel prices were increased by 44 percent and 22 percent, respectively, in 2013, and 31 percent and 36 percent, respectively, in 2014. The 2014 price increase paved a way for the removal of gasoline subsidies and the introduction of the per liter subsidy cap for diesel in January 2015. The price for liquefied petroleum gas, on the other hand, was kept largely unchanged, because the fuel is heavily consumed by poor households.
- An effective communication campaign helped the public understand the rationale for reform. For example, President Joko Widodo announced the price hike in a televised speech, explaining the need to reallocate public spending from fuel subsidies to infrastructure.
- To mitigate negative income shocks to the poor, low-income households (the bottom 25 percent of the income distribution) have received cash transfers after each price hike.

In December 2014, Malaysia took advantage of the sharp decline in international oil prices by eliminating fuel subsidies on regular unleaded gasoline and diesel. This culminated a reform effort that began with the

Box 1.2 *(continued)*

liberalization of prices for premium gasoline in 2010 and included additional price increases in regular unleaded gasoline and diesel in 2013 and 2014. Prices for unleaded gasoline and diesel are now set monthly to fully reflect changes in international oil prices. Factors that contributed to the reform success include:

- *Well-sequenced fuel price increases.* Subsidies were first eliminated on premium gasoline, which is more heavily consumed by upper-income groups. Prices of regular unleaded gasoline and diesel were increased in several phases, with increases in September 2013 and October 2014 of about 11 percent each. This created an opportunity such that when declining international prices helped close the gap between international and domestic prices, the authorities were able to move to a managed float regime ahead of their timetable.
- *Mitigating measures.* These included an increase in cash transfers through the Malaysia People's Aid (BR1M) program. The 2015 budget also calls for increased cash transfers to poorer households. At the same time, the authorities are reviewing overlapping and fragmented cash transfer programs to improve their targeting.
- *Strong communication.* The path to success was paved by effective and early communication. In 2013, press statements by the prime minister highlighted some of the problems associated with subsidies and the gains from reform. They also explained the mitigation measures that were envisaged for low-income groups.

Côte d'Ivoire adopted an automatic pricing mechanism with smoothing in 2013. This allows domestic fuel prices to follow international prices with no need to apply subsidies if international prices increase. Two main factors contributed to the success of the reform:

- To improve acceptance of the reform by shareholders and the public, all stakeholders were invited to discuss the reform, and TV and radio campaigns were broadcast.
- To mitigate the potential impact on poor households, the pricing formula sets a maximum price for diesel.

Côte d'Ivoire's effort also illustrates the challenges to reforming energy subsidies in low-income developing countries. Like many other such countries, it does not have well-targeted cash transfers that can be used to compensate low-income households for increases in energy prices, because it lacks administrative capacity to design and manage such programs. Under such conditions, governments will need to rely on a careful sequencing of price increases to ensure that the negative effects on low-income groups can be contained. Governments may also need to rely on other offsetting instruments, such as school meals, subsidies for mass transit, or reductions in health and education fees.

In Yemen, prices of gasoline, diesel, and kerosene increased during the second half of 2014, by 20, 50, and 100 percent, respectively. While the government's reform efforts met some opposition from the public, two factors played an important role in solidifying progress toward removing subsidies over the medium term:

- Social transfers to the poor—through the Social Welfare Fund (SWF)—increased by 50 percent in late 2014 to mitigate the impact of higher fuel prices. The authorities started working with the World Bank to improve the targeting of the SWF.
- The government committed to the adoption of an automatic fuel pricing mechanism in 2015 and requested technical assistance from the IMF.

Box 1.3. The Pressure of Age-Related Spending on Public Debt in Advanced Economies

Bringing public debt ratios to safer levels is an important long-term challenge in advanced economies. Reaching this goal will become more difficult as populations age over the next 30 to 40 years and spending on health and pensions is expected to increase. How much would this rise in age-related spending add to public debt burdens, assuming no offsetting changes in fiscal policy or reforms? The additional public debt burden can be assessed by examining the net present value (NPV) of these spending increases. Over the 2015–50 period, age-related spending increases are estimated at about 81 percent of GDP (Figure 1.3.1). This compares with median public debt of 71 percent of GDP in 2014 (55 percent of GDP in 2011).

On average for the group of advanced economies, the NPV of expected increases in age-related spending has declined relative to earlier IMF staff projections due to two main factors:

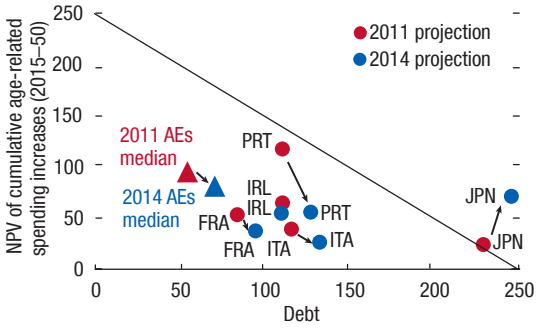
- Some of the decline reflects pension reforms since 2011. For the countries that implemented reforms between 2011 and 2014, the NPV of pension spending increases declined by 10 percentage points of GDP, on average. This group includes several economies that increased retirement ages or tightened early retirement rules (Canada, Czech Republic, France, Greece, Ireland, Italy, Netherlands, Portugal, Slovenia, Spain, United Kingdom); modified benefit formulas to better link contributions to benefits (Ireland, Slovenia, Spain); introduced progressive reductions to pensions (Greece, Ireland, Italy, Portugal); or changed the indexation of benefits (Czech Republic, Spain).
- However, the bulk of the decline reflects the slowdown in the growth of health care spending in recent years. Spending growth has declined because of across-the-board reductions in national health budgets, cuts in prices for pharmaceuticals and other medical goods, reduced payments to providers, and cuts in wages and salaries of health care workers (Clements, Gupta, and Shang 2014). Few economies have undertaken fundamental reforms to improve the efficiency of health spending; however, such spending will still rise significantly over the longer term. And in some economies, expected increases in health spending are higher than projected earlier. For example, in Japan, the projected increase is related mainly to a much steeper age-spending profile than previously estimated.

In sum, while the projected burden of age-related spending has been revised down, it is still expected to be significant. Policy reforms—taking into account both efficiency and equity concerns—will be critical for laying the foundation for credible medium-term fiscal frameworks (April 2014 *Fiscal Monitor*).

Figure 1.3.1. Age-Related Spending Increases and Gross Debt

(Percent of GDP)

The impact on public debt of population aging in advanced economies can be assessed using the net present value of increased spending on such items as health and pensions.



Source: IMF staff estimates.
Note: AEs = advanced economies; NPV = net present value. Data labels in the figure use International Organization for Standardization (ISO) country codes.

References

Chakraborty, S., and E. Dabla-Norris. 2009. "The Quality of Public Investment." IMF Working Paper 9/154, International Monetary Fund, Washington.

Clements, B., 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., S. Gupta, and B. Shang. 2014. "Bill of Health." *Finance and Development* 51 (4): 22–25.

Coady, D., J. Arze del Granado, L. Eyraud, H. Jin, V. Thakoor, A. Tuladhar, and L. Nemeth. 2012. "Automatic Fuel Pricing Mechanisms with Price Smoothing: Design, Implementation, and Fiscal Implications." Technical Notes and Manuals 10/15, International Monetary Fund, Washington.

Dabla-Norris, E., R. Allen, L. Zanna, T. Prakash, E. Kvintradze, V. C. Lledo, I. Yackovlev, and S. Gollwitzer. 2010. "Budget Institutions and Fiscal Performance in Low-Income Countries." IMF Working Paper 10/80, International Monetary Fund, Washington.

Dabla-Norris, E., J. Brumby, A. Kyobe, Z. Mills, and C. Papageorgiou. 2011. "Investing in Public Investment: An Index of Public Investment Efficiency." IMF Working Paper 11/37, International Monetary Fund, Washington.

Gupta, S., A. Kangur, C. Papageorgiou, and A. Wane. 2011. "Efficiency-Adjusted Public Capital and Growth." IMF Working Paper 11/217, International Monetary Fund, Washington.

International Monetary Fund (IMF). Forthcoming (a). "Current Challenges in Revenue Mobilization: Improving Tax Compliance." Board Paper, Fiscal Affairs Department, International Monetary Fund, Washington.

———. Forthcoming (b). "Fiscal Governance in the European Union: Proposals for Medium-Term Reform." Washington.

———. Forthcoming (c). "Making Public Investment More Efficient." Board Paper, Fiscal Affairs Department, International Monetary Fund, Washington.

Lagarde, C. 2014. "Moving Ahead with Carbon Pricing: A Call to Finance Ministers." *COP20 Climate Change: The New Economy*. Paper prepared for the United Nations Climate Change Conference, Lima, December 1–12.

Parry, I., D. Heine, S. Li, and E. Lis. 2014. *Getting Energy Prices Right: From Principle to Practice*. Washington: International Monetary Fund.

CHAPTER 2

CAN FISCAL POLICY STABILIZE OUTPUT?

Fiscal policy is often used to smooth fluctuations in economic activity, particularly in advanced economies. Because it reduces macroeconomic volatility, fiscal policy can boost real GDP growth. Specifically, a plausible increase in fiscal stabilization—measured as the sensitivity of the overall budget balance to the output gap—could boost annual growth rates by 0.1 percentage point in developing economies and 0.3 percentage point in advanced economies. Automatic stabilizers are an important component of fiscal stabilization, but many countries tend to suppress their impact in good times, leading to a significant buildup of public debt. Fiscal frameworks that promote fiscal stabilization through the cycle can foster more stable and higher growth while supporting debt sustainability. Countries seeking higher fiscal stabilization should avoid undermining automatic stabilizers with procyclical measures. Those seeking to enhance automatic stabilizers should do so without unduly increasing the size of the public sector or creating undesirable distortions (such as high marginal tax rates).

Interest in how taxes and public spending can be used to cushion economic downturns and curb excesses often increases when the ability to use monetary policy for that purpose weakens or disappears. For example, options for national monetary policy can weaken when the room for monetary maneuvering is constrained by interest rates that approach the zero lower bound, or can disappear when countries deliberately abandon independent monetary policies to join a currency union or to adopt a fixed exchange rate.

A need to rely more heavily on government budgets to stabilize economic activity immediately raises the question of how best to do this. There is a broad consensus that *automatic stabilizers*—variations in taxes and transfers that occur automatically in response to changes in output and employment—have an important role to play (Baunsgaard and Symansky 2009). Automatic stabilizers include business and personal taxes and such transfers as unemployment benefits, food and housing supports, and other similar social support mechanisms. Because most tax payments by individuals or corporations move in sync with income and spending, they reduce disposable income during upswings and boost it during slowdowns. Likewise, certain social transfers increase during economic downturns and decrease when growth picks up. Automatic stabilizers help ensure a timely and predictable fiscal reaction that effectively absorbs some of the shocks to disposable income and private expenditure.

There is less agreement about whether governments should use discretionary measures beyond automatic stabilizers to limit fluctuations of macroeconomic conditions. The fiscal response of the advanced economies to the global financial crisis showed the importance of discretionary actions in mitigating the effects on activity of a severe and protracted slump. However, it also illustrated one of the limitations of discretionary fiscal measures, namely that "they come too late to fight a standard recession" (Blanchard, Dell'Ariccia, and Mauro 2010, 15).

Against this backdrop, this chapter examines experience with fiscal stabilization during the past three decades in a broad sample of 85 advanced, emerging market, and developing economies in order to draw lessons and implications for the future conduct of fiscal policy. It seeks to disentangle the respective roles of automatic stabilizers and other sources of fiscal reaction, such as discretionary policy decisions. The chapter addresses the following specific questions:[1]

- How stabilizing is fiscal policy? Does its contribution to smoothing output fluctuations vary across countries or groups of countries or between different phases of the business cycle?
- What is the relative importance of automatic stabilizers?

[1] So far, postcrisis policy discussions have focused on the experience of advanced economies with discretionary fiscal measures, including the stimulus packages of 2009–10 (see the April 2012 and April 2014 *Fiscal Monitor*), the subsequent consolidations (see the October 2010 *World Economic Outlook*), and the potential benefits of boosting public investment (see the October 2014 *World Economic Outlook*). Fatàs and Mihov (2013) and the April 2014 *Regional Economic Outlook: Western Hemisphere* are among the few other studies that also examine automatic stabilizers.

- What is the impact of fiscal stabilization on the level and volatility of economic growth?
- Are there adverse side effects to using fiscal policy to pursue economic stabilization? And are there ways to mitigate them?

The main findings can be summarized as follows:

- Fiscal policies have generally been more stabilizing in advanced economies than in emerging market and developing economies. This largely reflects the latter's specific features, such as less potent fiscal instruments, and the prominence of policy objectives other than output stability.
- Automatic stabilizers are an effective tool for fiscal stabilization. However, other discretionary fiscal measures are often introduced to suppress automatic stabilizers in good times, preventing the building (or restoration) of fiscal buffers that can be used during downturns and contributing to unhealthy accumulation of public debt over time. In addition, automatic stabilizers can also be associated with certain government activities and funding means with undesirable side effects (such as high marginal tax rates and extensive subsidies).
- A number of countries have strengthened fiscal stabilization over time. This reflects their efforts to avoid measures that run counter to the operation of automatic stabilizers as well as deliberate efforts to top up automatic stabilizers with discretionary actions.
- Fiscal stabilization reduces the volatility of growth over the business cycle. An advanced economy moving from average to strong fiscal stabilization could potentially lower the overall volatility of growth by about 20 percent, and an emerging market or developing economy could reduce growth volatility by about 5 percent.
- Because it dampens volatility, greater fiscal stabilization is associated with higher medium-term growth. An average strengthening of fiscal stabilization—that is, an increase in the fiscal stabilization measure by one standard deviation in the sample—could on average boost annual growth rates by 0.1 percentage point in developing economies and 0.3 percentage point in advanced economies.

What can be done to fully reap the potential benefits of more stabilizing fiscal policies? The conduct of fiscal policy could in many cases better incorporate the impact of fiscal measures on output in relation to the state of the business cycle. Specifically:

- The shortcomings of discretionary stabilization—including decision and implementation lags—can be mitigated, as suggested by the effective use of nonautomatic stabilization measures in a number of countries. One possibility is to rely more on temporary and well-targeted adjustments in tax or transfer parameters, such as the duration of unemployment benefits or the extent of investment deductions, or to move quickly to identify easy-to-implement capital and maintenance spending.
- Avoiding procyclical actions would allow countries to take better advantage of automatic stabilizers—which should be allowed to operate as freely in bad times (when they are most needed) as in good times (when rebuilding fiscal buffers is essential). In many countries, this could substantially increase fiscal stabilization without affecting the size and design of existing government programs. It could also help ensure that public debt remains at sustainable levels.
- Policymakers should be aware that automatic stabilizers can have adverse side effects. For instance, the stabilization dividend from more generous unemployment insurance should be weighed against the weakening of individual incentives to find work. Practical measures can be taken to boost stabilizers while mitigating such side effects. Depending on the state of the economy, these could include making certain tax deductions or exemptions, such as the investment tax credit or the mortgage interest deduction, less procyclical. Introducing automatic adjustments in certain entitlements, such as the duration of unemployment benefits, can be envisaged. Longer duration could temporarily apply during downturns, avoiding permanent effects on incentives to work.
- Sound fiscal institutions can help. Well-designed fiscal rules and medium-term frameworks can promote good expenditure control over the cycle and promote a flexible response to variations in output. They can also enable continued access to financing by supporting a credible commitment to long-term sustainability.

The next section briefly describes basic concepts and the empirical approach. This is followed by an overview of fiscal stabilization and its determinants. The chapter concludes with a discussion of the dividends of fiscal stabilization and draws policy implications.

How Fiscal Policy Influences Economic Activity

To stabilize output in the near term, governments can affect economic activity and jobs by influencing domestic demand for goods and services.[2] They can do this directly by changing public investment and consumption or indirectly by adjusting taxes and transfers. The impact of fiscal policy on output is greater when monetary policy works in the same direction as the fiscal stance.

The change in the overall budget balance (the difference between revenue collection and spending) provides a good approximation of the short-term impact of fiscal measures on demand (see, for example, Blanchard 1993). The budget balance captures the difference between the resources subtracted from private sector income (mainly through taxation) and what the budget contributes to aggregate expenditure in a given year.[3] A decline in the budget balance reflects a positive fiscal contribution to aggregate demand.

To be stabilizing, the fiscal balance needs to increase when output rises and to decrease when it falls. That way, fiscal policy generates additional demand when output is weak and subtracts from demand when the economy is booming. Therefore, a measure of the stabilizing (or destabilizing) role of fiscal policy is the average change in the overall fiscal balance (in percent of GDP) that is associated with a 1 percentage point variation in output.[4] The resulting "stabilization coefficient" is positive when the average fiscal policy response is stabilizing and is negative when it is not (Box 2.1).

The exercise warrants a number of caveats. The stabilization coefficient quantifies the relationship between the change in policies as implemented and the variation in economic activity. Because the variation in economic activity already incorporates the impact of the fiscal policy response to the original yet unobservable output shocks, the coefficient likely underestimates the actual size of the response.[5] On the other hand, the stabilization coefficient could overestimate the size of the fiscal response because it also captures the impact on the budget of other economic and financial variables that move along with output, such as asset prices and interest rates (see, for example, Bénétrix and Lane 2013).

Despite estimation challenges, the stabilization coefficient is a useful metric to gauge the overall contribution of fiscal policy to output stability. It takes into account the fact that many revenue and expenditure items respond to the state of the economy even though the underlying provisions or programs were primarily designed for other reasons than output stabilization, including redistributive or other economic or political motives. Monitoring the relationship between the budget balance and the output gap would help policymakers understand how much their action contributes to output stability, including in comparison to other countries. Policymakers could usefully set benchmarks for the coefficient as a way to explicitly incorporate output stabilization in the conduct of fiscal policy.

The stabilization coefficients are used throughout this chapter to: (1) assess the extent of fiscal stabilization in the sample; (2) evaluate the relative contribution of automatic stabilizers; (3) explore potential determinants of fiscal stabilization; and (4) quantify the impact of fiscal stabilization on output volatility and medium-term growth. The estimated relationships between policies and macroeconomic outcomes are not necessarily causal. The reason is that the policy response to any disturbance affecting the economy is influenced by the nature of the disturbance itself, blurring the direction of causality between policies and outcomes. To the extent possible, econometric techniques were selected to minimize that risk (Annex 2.1).

Furthermore, even when output stabilization is beneficial, it is not always a priority or even a desirable objective for fiscal policy. In some countries, the overarching policy goal may be to restore sustainable public finances through a credible consolidation, particularly if low credibility limits access to or raises the cost of borrowing. Even when access to financing

[2] Of course, many fiscal instruments—such as specific features of tax and transfer systems—influence individual decisions to work and invest and thus affect the aggregate supply. However, supply-side fiscal measures primarily serve the economic-efficiency objective of public finances, even though they have implications for the strength of automatic stabilizers.

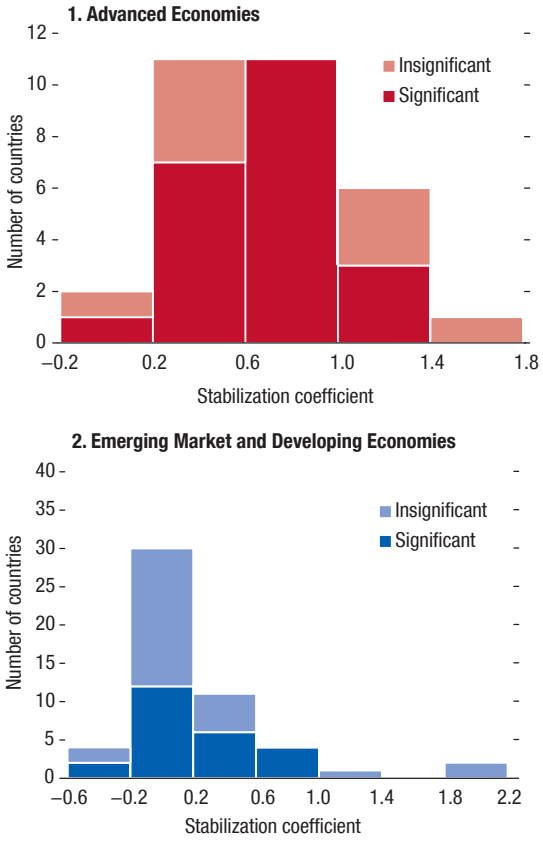
[3] Because economic agents are forward looking, fiscal policy should also affect aggregate demand through future anticipated deficits and the stock of public debt (Blanchard and Summers 1984; Blanchard 1985). The evidence reported in this chapter focuses on the overall fiscal balance, but the results carry through when a measure of the fiscal balance augmented by expectations is used (Furceri and Jalles forthcoming).

[4] More specifically, the estimates capture the sensitivity to the output gap. See Box 2.1.

[5] The downward bias is evident from panel regressions: average fiscal stabilization coefficients are larger for both advanced and emerging and developing economies when corrections for the effect of fiscal policy on the output gap are implemented. Annex 2.1 discusses data sources and methodologies and presents the detailed results.

Figure 2.1. Distribution of Fiscal Stabilization Coefficients

Fiscal policy appears to contribute more to output stability in advanced economies than in emerging market and developing economies. However, the quality of available data may complicate efforts to estimate output gaps in the latter economies.



Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: "Significant" is defined as a coefficient with a *p*-value less than 0.10. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.

is not constrained, fiscal policy may be directed to the pursuit of valuable objectives other than stabilization. For instance, in many emerging market and developing economies, high-quality fiscal expansions can promote economic development and help meet social needs that clearly trump cyclical considerations.

What Shapes Fiscal Stabilization?

Fiscal stabilization, as measured by the stabilization coefficients, appears to be much more widespread among advanced economies than among emerging market and developing economies. Fiscal policy has played a stabilizing role in about three-fourths of advanced economies (Figure 2.1), compared with slightly more than one-fourth of emerging market and developing economies. In about two-thirds of the latter, there is no systematic relationship between the output gap and the fiscal balance. Those weaker results could partly reflect data quality issues, including the difficulty of estimating output gaps in these countries.

The difference is even more pronounced when looking only at the countries for which there is clear evidence of fiscal stabilization (those for which stabilization coefficients are precisely estimated). However, there is also considerable heterogeneity across countries (Figure 2.2). Interestingly, three oil exporters (Algeria, Kuwait, Norway) exhibit strongly stabilizing fiscal policies, as demonstrated by extremely large coefficients. Saved commodity revenues provide buffers that prevent procyclical adjustments in spending because the fiscal balance can more easily absorb even very large swings in oil prices and other shocks. However, this is far from being a systematic feature of other oil and commodity exporters, whose fiscal policy appears to be either weakly stabilizing or even destabilizing (the coefficient is negative). This could indicate a tendency to spend windfalls rather than saving them for stabilization purposes.

Automatic versus Discretionary Fiscal Stabilization

Fiscal stabilization involves a response to output fluctuations that can be automatic or not. Nonautomatic responses include discretionary actions that occur when policymakers take deliberate measures to offset shocks to economic activity. Automatic responses occur through taxes and transfers that automatically vary with output in a way that stimulates aggregate demand during downturns and moderates it during upswings. The stabilizing impact is automatic because taxes are generally levied on amounts that contract and expand in sync with output and income and because certain social transfers, such as unemployment benefits, are designed to expand during downturns. The resulting changes in tax payments and received transfers help shield disposable income from macroeconomic shocks without explicit policy action.

Automatic stabilizers are generally perceived to be the most efficient tool for fiscal stabilization. Operating in real time, they do not suffer from the information, decision, and implementation lags that often impair

the timeliness and relevance of discretionary actions during normal business cycles (Blanchard, Dell'Ariccia, and Mauro 2010). In addition, there is less risk that political and other factors will prevent the necessary retrenchment of such measures when growth rebounds (Baunsgaard and Symansky 2009).

Although the main strength of automatic stabilizers is their timeliness and predictability, automaticity also has its drawbacks. First, not all the automatic adjustments embedded in government budgets contribute to stabilizing output. Some may be inherently destabilizing, such as indexation rules applied to certain expenditure items (including wages or pensions), many tax deductions (including those for mortgage interest payments or certain types of investment), and the earmarking of proceeds from particular taxes for particular spending programs. Through such channels, a booming economy automatically stimulates public expenditure and dampens tax revenues.

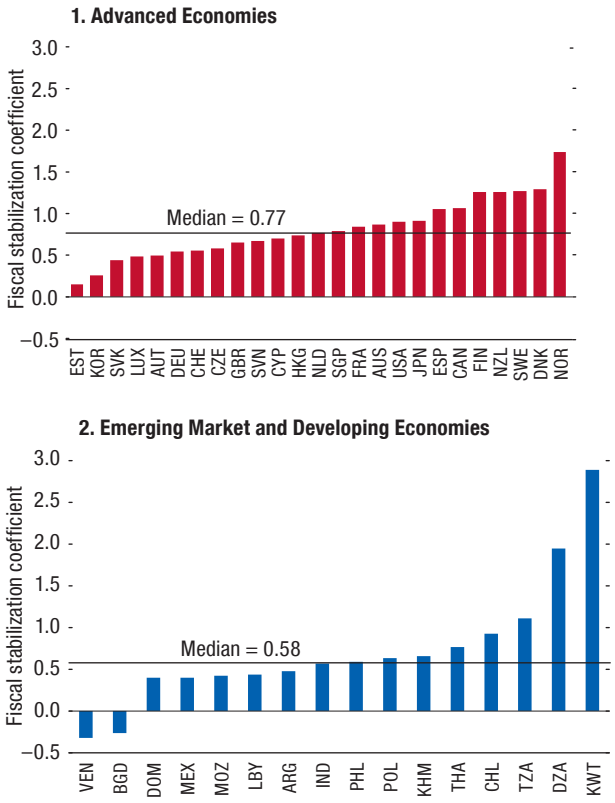
Second, automatic stabilizers on their own do not always deliver an adequate fiscal response to output shocks. This is the case when persistent disturbances originate on the supply side of the economy. For instance, leaving fiscal policy on automatic pilot could unduly delay the necessary reallocation of productive capital and workers following a permanent shock to a particular sector. Even when a shock is broader and affects aggregate demand rather than a particular sector, the scope of automatic stabilizers may be suboptimal, given that they generally emanate from decisions motivated by equity or other considerations (Blanchard, Dell'Ariccia, and Mauro 2010).

The magnitude of automatic stabilizers can be measured by their impact on the overall fiscal balance in response to a given change in economic activity. The most common proxy is the ratio of public expenditure to GDP (Galí 1994; Fatás and Mihov 2001). Assuming that tax revenues evolve strictly in proportion to nominal GDP and that nominal public spending is set by budget law and broadly invariant to real-time movements in output, changes in the overall balance (as a percent of GDP) will mirror those in the ratio between nominal expenditure and nominal GDP. For example, if the ratio of expenditure to GDP is 50 percent, a 1 percentage point contraction in GDP will automatically translate into a deterioration of the overall balance by 0.5 percent of GDP.

In practice, however, the influence of automatic stabilizers on the overall balance can be larger or smaller than suggested by the expenditure ratio depending on specific features of an economy's tax and transfer systems. Measures that can be more stabilizing include certain spending items, such as unemployment benefits and other social transfers that automatically vary with economic activity. More progressive taxes can help stabilize disposable income because they change proportionately more than output and pretax income.[6] Measures that can be less stabilizing include nontax revenues that are loosely related to nominal GDP,

Figure 2.2. Selected Fiscal Stabilization Coefficients

Among countries for which there is clear evidence of fiscal stabilization, there are large cross-country differences in the extent of fiscal stabilization in both advanced and emerging market and developing economies.

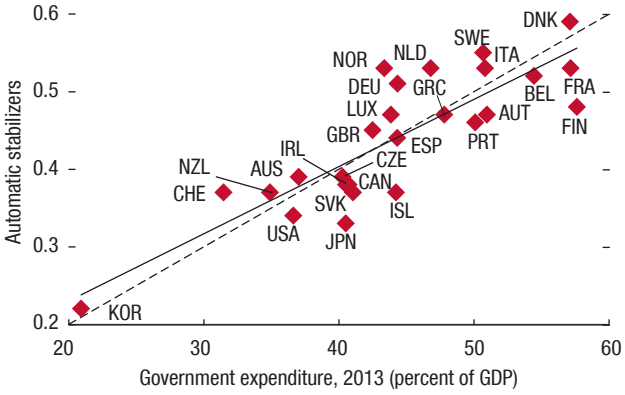


Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Only statistically significant coefficient estimates at the 10 percent level or lower are displayed. Coefficients result from country-specific ordinary least squares regressions of the overall budget balance on the output gap. The bars show the estimated impact of a 1 percentage point increase in the output gap on the overall balance-to-GDP ratio. Data labels in the figure use International Organization for Standardization (ISO) country codes.

[6] A strictly proportional tax ensures only that relative variations in disposable and pretax incomes are the same.

Figure 2.3. Advanced Economies: Government Size and Automatic Stabilizers

The extent of automatic stabilizers is strongly correlated with the relative size of public expenditures.

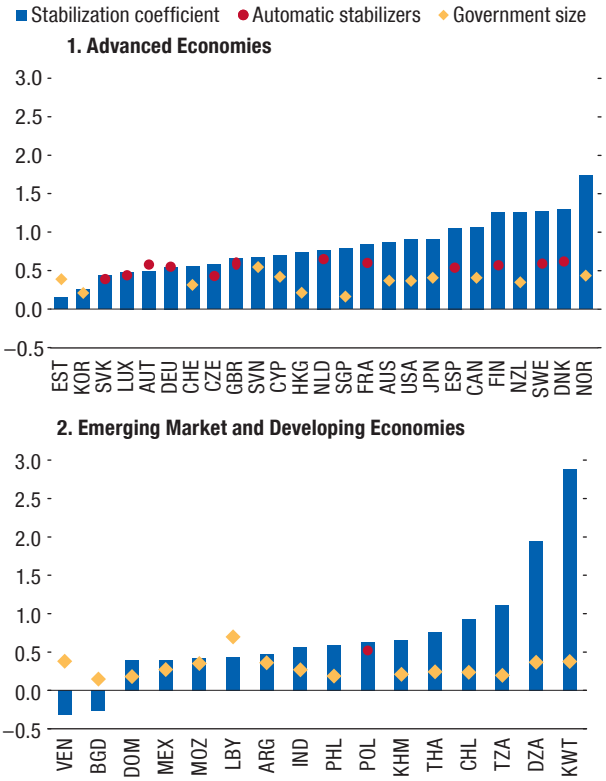


Sources: European Commission; Girouard and André 2005; Mourre, Astarita, and Princen 2014; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: The solid line shows an ordinary least squares regression line, and the dashed line shows a 45-degree line. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 2.4. Selected Countries: Fiscal Stabilization and Automatic Stabilizers

(Percent of GDP)

Automatic stabilizers contribute more to overall fiscal stabilization in advanced economies than in emerging market and developing economies.



Sources: European Commission; Girouard and André 2005; Mourre, Astarita, and Princen 2014; Organisation for Economic Co-operation and Development; Price, Dang, and Guillemette 2014; and IMF staff estimates.
Note: See Figure 2.2 for an explanation of the stabilization coefficient. Automatic stabilizers report 2014 estimates where available and 2005 estimates elsewhere. Government size refers to the 2013 general government expenditure-to-GDP ratio. Data labels in the figure use International Organization for Standardization (ISO) country codes.

specific taxes that are infrequently indexed, and taxes that are collected with delays.

Detailed analyses of tax codes and expenditure programs allow for automatic stabilizers to be estimated (see Girouard and André 2005, and OECD 2014, for most advanced economies). While these estimates do not necessarily coincide with the size of government, they remain strongly correlated with the relative size of public expenditure (Figure 2.3). As a result, public expenditures can be used as a proxy by default when more granular estimates do not exist.[7]

The Relative Impact of Automatic Stabilizers

Comparing the size of automatic stabilizers with the stabilization coefficients gives an indication of their relative contribution to overall fiscal stabilization, since other fiscal policy changes can either reinforce or counter their impact on the fiscal balance (Figure 2.4). In advanced economies, automatic stabilizers are often sizable, reflecting relatively large public sectors and well-developed social programs. They account for more than one-half of overall fiscal stabilization in about 60 percent of the advanced economies in the sample. In the emerging market and developing economies, automatic stabilizers account for only about 30 percent of total fiscal stabilization.[8] The median contribution of automatic stabilizers to overall fiscal stabilization among the countries in the sample slightly exceeds two-thirds in advanced economies and one-third in the others.

Even when automatic stabilizers account for a large share of overall fiscal stabilization, the extent to which they are allowed to play out is ultimately a policy

[7] The underlying assumption of proportionality between tax revenues and nominal GDP does not apply with equal strength to all shocks on economic activity. In particular, during the global financial crisis, revenues fell more than proportionately to GDP, particularly in countries experiencing booms in asset prices or real estate.

[8] Note that these contributions are an upper bound, given the likely underestimation of stabilization coefficients.

choice. Figure 2.5 confirms that the link between overall stabilization and the size of automatic stabilizers is relatively loose. The influence of automatic stabilizers on the fiscal stance seems to be systematically suppressed in some countries and reinforced in others. Canada, Japan, New Zealand, Singapore, and the United States seem to routinely top up a below-average level of automatic stabilizers to deliver broader countercyclical fiscal outcomes. The Nordic countries, which have an above-average level of automatic stabilizers, also exhibit strongly stabilizing fiscal outcomes over and above the impact of automatic stabilizers. The three oil exporters discussed earlier (Algeria, Kuwait, Norway) stand out because fiscal stabilization is much greater than implied by the extent of their automatic stabilizers. Of the 48 countries with meaningful fiscal stabilization, fiscal stabilization is broadly in line with the size of their automatic stabilizers only in 14 (12 advanced and 2 emerging market and developing economies).[9]

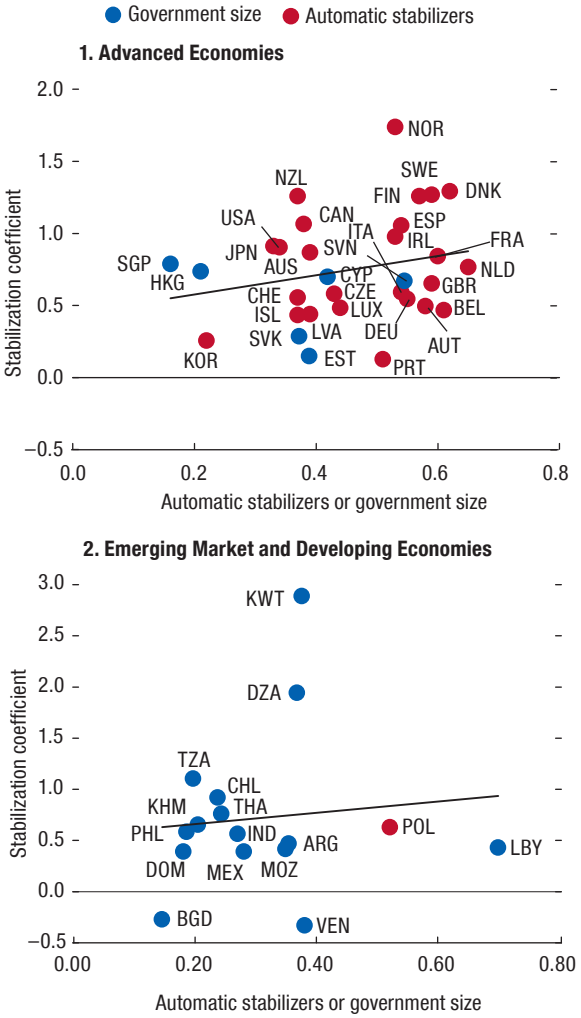
A closer analysis of the determinants of fiscal stabilization confirms that the latter does not mechanically reflect the magnitude of automatic stabilizers.[10] In advanced economies, the size of government spending and the relative share of social spending in total outlays have the expected positive influence on stabilization coefficients (Figure 2.6), in line with the well-documented countercyclical behavior of social expenditures (Auerbach and Feenberg 2000; Cohen and Follette 2000; Darby and Mélitz 2008; Furceri 2010; Afonso and Jalles 2013). However, the quantitative effect of a given increase in automatic stabilizers on fiscal stabilization is small. This result is consistent with the fact that the primary purpose of these programs is not their stabilizing properties. On average over the sample, countries with smaller fiscal stabilizers have managed to provide more stabilization through other means. Interestingly, various indicators of financial stress or debt-financing costs—aimed at capturing the potential impact of borrowing constraints—do not appear to have any impact on stabilization coefficients (Annex 2.1). Thus on average from 1980 to 2013, access to borrowing has not prevented advanced economies from providing the desired levels of fiscal stabilization.

[9] The criterion for identifying these countries is that the ratio between the size of their automatic stabilizers and their fiscal stabilization coefficient ranges between 0.8 and 1.2.

[10] Time-varying stabilization coefficients are used here to capture the possibility that some of these determinants change over time (such as government size or the design of unemployment insurance programs). A panel analysis allows the most meaningful determinants of fiscal stabilization to be isolated and minimizes the risk of omitting important explanatory factors by taking into account unobserved country-specific characteristics, as well as common developments across countries. Annex 2.1 provides methodological details.

Figure 2.5. Automatic Stabilizers and Fiscal Stabilization: Cross-Country Correlations

Policy choices affect the influence of automatic stabilizers on overall fiscal stabilization. Discretionary measures tend to suppress stabilizers in some countries and to reinforce them in others.

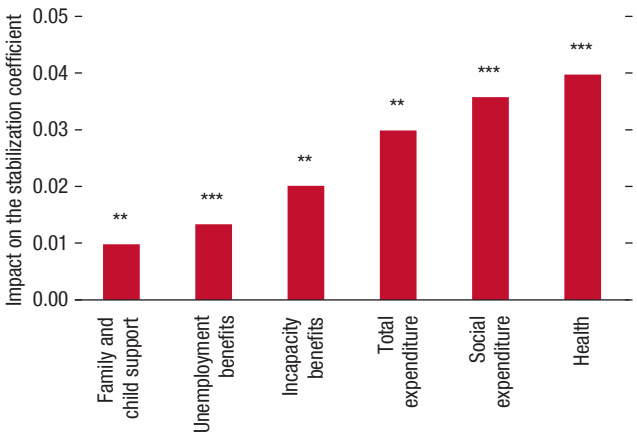


Sources: European Commission; Girouard and André 2005; Organisation for Economic Co-operation and Development; Price, Dang, and Guillemette 2014; and IMF staff estimates.
Note: See Figure 2.2 for an explanation of the stabilization coefficient. Automatic stabilizers report 2014 estimates where available and 2005 estimates elsewhere. Government size refers to the 2013 general government expenditure-to-GDP ratio. The black line shows an ordinary least squares regression line. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 2.6. Advanced Economies: Determinants of Fiscal Stabilization

(Impact of a 10 percent increase in selected outlays on stabilization coefficients)

The size of government spending and the relative share of social spending have positive but relatively small effects on fiscal stabilization in advanced economies.



Sources: European Commission; International Country Risk Guide; Organisation for Economic Co-operation and Development; and IMF staff estimates.

Note: Figure estimates reflect panel weighted least squares, with weights inversely proportional to the estimation error of the stabilization coefficients. Additional conditioning variables include output volatility, openness, GDP per capita, and the government debt-to-GDP ratio. Country and time fixed effects are also included. For a list of advanced economies, see Economy Groupings in the Methodological and Statistical Appendix.

** $p < 0.05$; *** $p < 0.01$.

In emerging market and developing economies, no robust link could be found between stabilization coefficients and their potential determinants—including the size of automatic stabilizers and, most surprisingly, indicators of borrowing conditions. This could mean that fiscal stabilization is not a policy priority in many of these countries, regardless of the borrowing constraints they may face, or that fiscal stabilization is enabled through funding from other sources such as saved commodity revenues, aid, and official financing.

A related question is whether the marked increase in the size of government and the extent of social programs in advanced economies during the 1980s and 1990s (see Figure 2.7, panels 3–6) is associated with a steady and widespread rise in stabilization coefficients (Debrun, Pisani-Ferry, and Sapir 2008). A comparison of stabilization coefficients in these advanced economies at two points in time (1995 compared with 1980; 2013 compared with 1995) shows that the coefficients change rather infrequently. In many countries—those on the 45 degree line in Figure 2.7, panels 1 and 2—larger automatic stabilizers did not translate into greater fiscal stabilization. Yet when they occurred, the changes in the coefficient tended to be large. During the first half of the sample period (Figure 2.7, panel 1), fiscal policy in Finland, Japan, Norway, and the United Kingdom appears to have become more stabilizing, while in the second half of the sample period, the most notable increases occurred in Korea, Norway, and the United States (Figure 2.7, panel 2).[11] In both cases, fiscal policy outside automatic stabilizers either became more actively stabilizing or interfered less or not at all with automatic stabilizers. An important caveat, however, is that the rise in stabilization coefficients could also reflect, at least in part, a greater budgetary impact of financial and asset price cycles.

Fiscal Stabilization and the Business Cycle

Do countries pursue fiscal stabilization to the same extent during downturns as upturns? Downturns triggered by weak aggregate demand provide the best environment for an effective fiscal response, but recoveries present opportunities to withdraw fiscal support to aggregate demand. Symmetry in the fiscal response between good and bad times is important for three main reasons: (1) rebuilding buffers ahead of the next cyclical downturn; (2) reducing the risk of overheating; and (3) avoiding a ratcheting up of public debt over successive cycles.

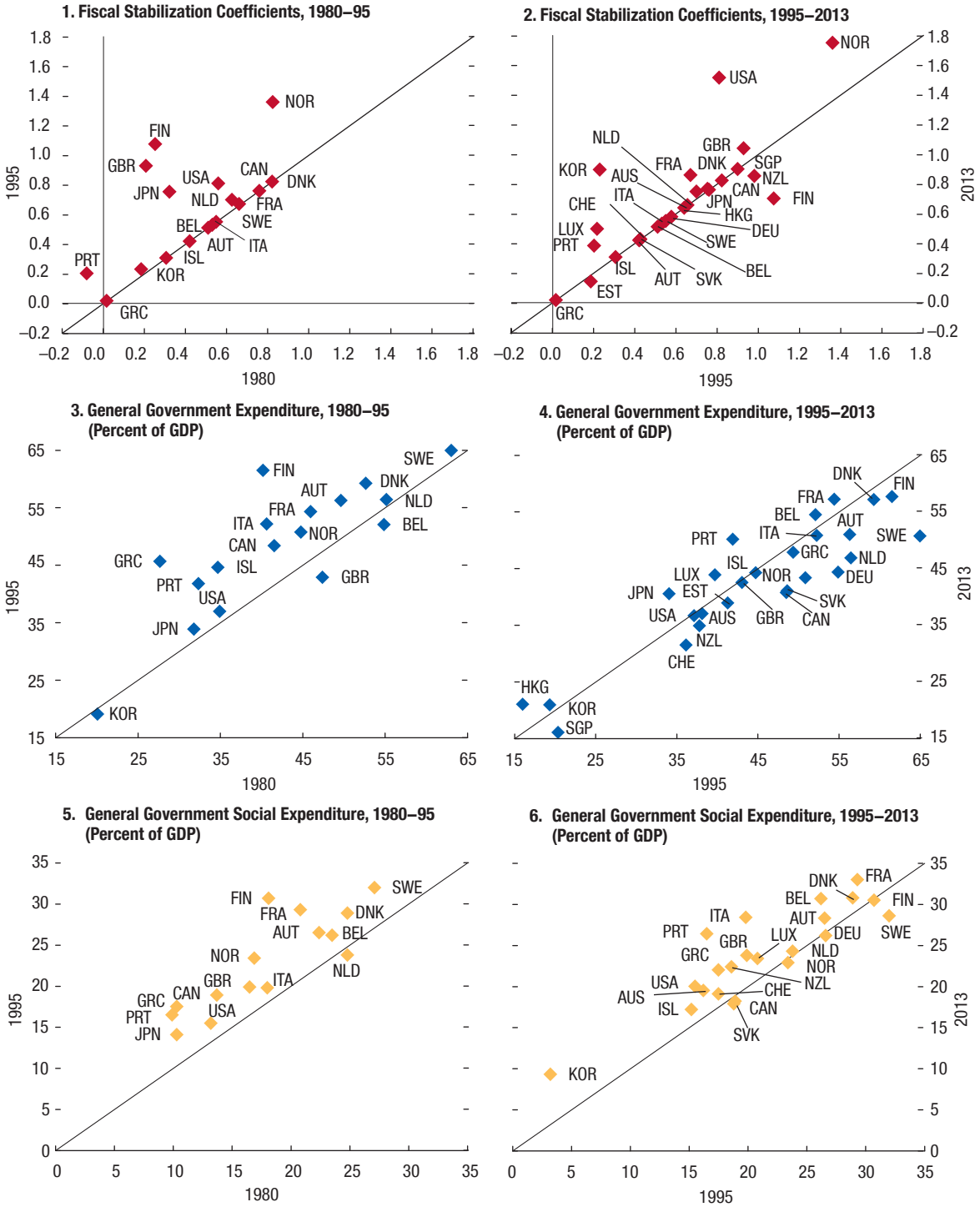
Fiscal stabilization tends to operate mostly during recessionary episodes and is virtually absent during expansions (Figure 2.8, panel 1).[12] Automatic stabilizers have the expected countercyclical effect regardless of country group, although the effect is clearly smaller in emerging market and developing economies (Figure 2.8, panel 2). Comparing the results for overall and automatic stabilization, changes in fiscal policy unrelated to automatic stabilizers seem weakly related to

[11] Interestingly, some of these shifts toward more stabilizing fiscal policies coincide with reduction in the room for monetary policy maneuver. In Japan, the stabilization coefficient rose from 0.6 in 1991 to 0.8 in 1997, when policy rates fell from 7.5 percent to less than 0.5 percent. In the United States, the coefficient rose steadily from 1.1 to 1.5 between 2000 and 2013, while monetary policy rates hovered around 2 percent during 2001–04, and close to zero since 2008. Finally, in France, the stabilization coefficient increased from 0.7 to 0.9 since it joined the euro area in 1999; Portugal and Luxembourg share this pattern.

[12] For the purpose of this exercise, the impulse related to automatic stabilizers has been estimated in the same fashion as the fiscal stabilization coefficient, using the cyclical balance (instead of the overall balance) as the variable to explain in the econometric model. See Annex 2.1 for details.

Figure 2.7. Advanced Economies: Fiscal Stabilization Coefficients and General Government Expenditure over Time

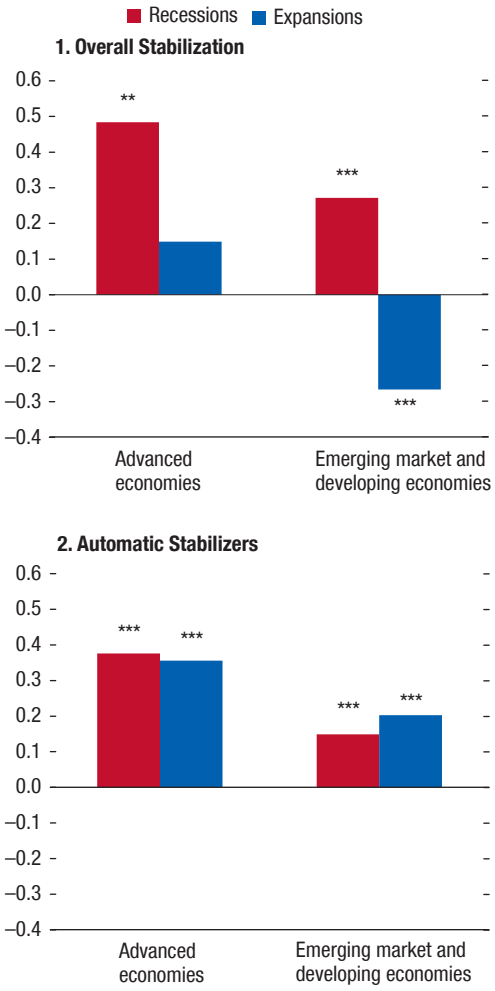
The extent of fiscal stabilization is relatively stable over time, but when it does change, the shift tends to be large.



Sources: European Commission; Mauro and others 2013; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: The time-varying coefficients model, shown in panels 1 and 2, has a two-sided alternative to the Kalman-Bucy one-sided filter (Schlicht 1985, 1988; and Appendix 2.1). The first observation comes after 1980 for the following countries: Australia (1988), Estonia (1995), Germany (1991), Hong Kong SAR (1991), Israel (1998), Luxembourg (1990), Singapore (1990), Slovak Republic (1995), and Switzerland (1983). Data labels in the figure use International Organization for Standardization (ISO) country codes. The solid line shows a 45-degree line.

Figure 2.8. Fiscal Stabilization over the Cycle

Fiscal stabilization tends to be more pronounced during recessions and is virtually absent during expansions.



Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Recessions and expansions are defined using an approach equivalent to the smooth transition autoregressive model developed by Granger and Terasvirta (1993). The figure displays ordinary least squares regressions with country and time fixed effects and robust standard errors. To reduce heterogeneity in the panel, commodity exporters have been excluded. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.
** $p < 0.05$; *** $p < 0.01$.

the cycle during downturns—likely averaging out cases in which governments top up stabilizers and cases that offset them—but have procyclical effects during expansions. In emerging market and developing economies, fiscal policy is on average procyclical (the coefficient is negative) during expansions, fueling aggregate demand when the economy is already growing above potential. That strong asymmetry between different phases of the cycle explains in part why the country-specific estimates of fiscal stabilization—which cannot differentiate between recessions and recoveries because of the small sample size—are smaller and statistically less significant in emerging market and developing than in advanced economies.

Various factors can explain the procyclical bent of fiscal policies in good times. First, a rapidly growing pool of revenues complicates efforts to keep a tight lid on total expenditure, as individual ministries compete for resources. Second, because potential output is unobservable, policymakers might be tempted to interpret temporary revenue gains as permanent, leading to higher spending or tax cuts that further fuel booming aggregate demand. Third, a countercyclical fiscal policy may simply be inappropriate. For emerging market and developing economies, good times often translate into easier access to financing and therefore provide an opportunity to deliver on key priorities for growth and poverty reduction. For instance, many low-income countries would likely be better off enhancing their economic and social infrastructure regardless of the cycle in order to boost potential growth. At the same time, slower growth could provide an opportunity to strengthen efforts to mobilize domestic tax revenues and reduce dependence on unpredictable aid flows and commodity-related revenues.

More fundamentally, the desirability for any country of seeking to smooth fluctuations in economic activity depends on the nature of the output shocks and in particular on whether these shocks reflect permanent variations in potential output (supply driven) or the more short-lived fluctuations in aggregate demand that usually shape the business cycle. In principle, fiscal measures can mitigate the impact of shocks that affect aggregate demand, whereas other shocks—such as those that affect relative prices—may not always warrant a fiscal response.

Assessing the sensitivity of stabilization coefficients to different types of shocks is hindered by the difficulty in identifying the nature of such shocks, and any formal analysis of the issue is bound to be tentative. One approach is to identify pure "demand" disturbances using the method of Blanchard and Quah (1989), whose underlying assumption is that "supply" disturbances permanently affect output. Another approach is simply to differentiate between the sensitivity of the fiscal balance to changes in the output

gap or changes in real GDP growth. The underlying presumption is that growth gyrations reflect a mix of supply and demand disturbances, whereas the output gap is expected to mirror the dynamics of temporary demand disturbances. Given the data available, the analysis here is conducted only for advanced economies and is based on the estimated relationship between the overall balance and each variable of interest (all shocks, demand shocks only, real growth, and output gap). Both empirical approaches suggest that the response of the budget balance is stronger in the face of demand shocks (Figure 2.9). The question as to whether this differentiated fiscal policy response reflects deliberate decisions or intrinsic properties of automatic stabilizers would be worth a detailed investigation, although it is beyond the scope of this chapter.[13]

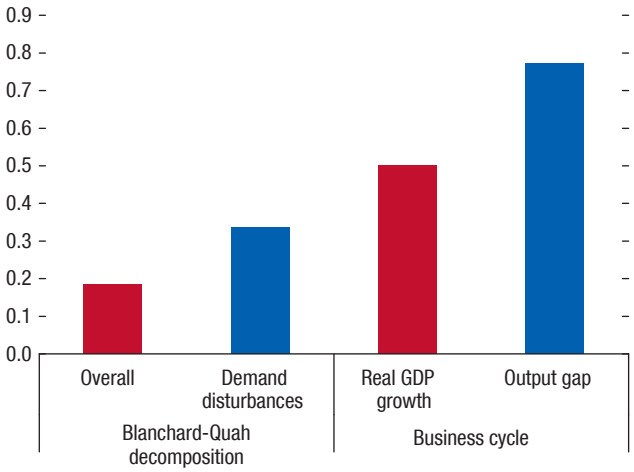
Overall, the picture that emerges is that fiscal stabilization policies seem asymmetric through the cycles.[14] Countries tend to deliver fiscal stabilization when it is expected to be more needed—that is, during cyclical downturns when aggregate demand lags potential output. But during expansions, fiscal policy changes unrelated to automatic stabilizers seem to systematically interfere with automatic stabilizers, particularly in emerging market and developing economies. The failure to mitigate economic recoveries or booms implies not only a higher risk of overheating followed by a bust; it can undermine long-term public debt dynamics if left unchecked. Illustrative simulations suggest that a systematic asymmetric response whereby half of cyclical revenue windfalls is spent during good times while the deficit fully absorbs shortfalls in bad times would be associated with a non-negligible upward drift in the debt-to-GDP ratio (Figure 2.10). Under fairly benign macroeconomic assumptions, asymmetric stabilization could, after 20 years, lead to a debt-to-GDP ratio much higher than with symmetric stabilization.

[13] The fiscal impact of a supply shock through automatic stabilizers is likely to be specific to each shock. For instance, an oil price increase could initially trigger higher energy tax revenues, followed by lower indirect taxes if private expenditure ultimately suffers. Likewise, a broad-based wage increase—also a negative supply shock—would initially trigger a fiscal contraction (higher tax payments), followed by an expansion, if and when job losses materialize. In both cases, the net short-term fiscal effect would be unclear.

[14] Budina and others (2015) find that the asymmetry is even larger when the real estate cycle drives the recovery.

Figure 2.9. Advanced Economies: Fiscal Stabilization and Demand Shocks

The budget balance appears to respond more strongly to demand shocks in advanced economies.



Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: The bars represent simple averages of country-specific point estimates.

Potential Payoffs from Fiscal Stabilization

This section analyzes the link between fiscal stabilization and two of its expected dividends: reduced volatility of output and higher medium-term growth.

Does Fiscal Stabilization Reduce Output Volatility?

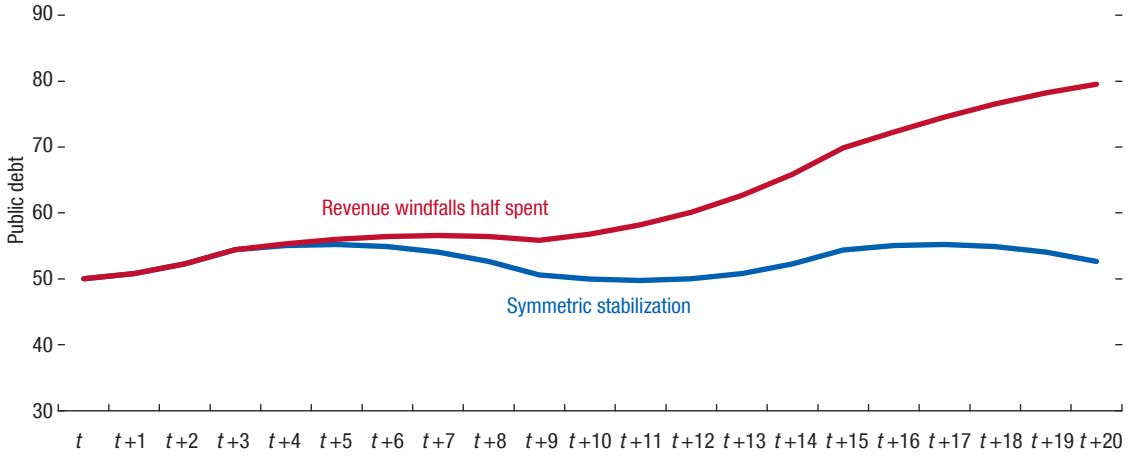
The eventual success of fiscal stabilization depends on how much of a given variation in the fiscal balance ultimately makes its way into GDP. This is a tricky question because of the circularity between output and automatic stabilizers: output affects the budget balance, which in turn affects output. Conventional fiscal multipliers[15] cannot be used here because their estimation requires prior identification of changes in the budget balance that are unrelated to economic activity (Devries and others 2011; April 2012 *Fiscal Monitor*).

Extending Galí (1994), Fatás and Mihov (2001), and Debrun and Kapoor (2010)—who focus on automatic stabilizers—the empirical strategy adopted here is to directly estimate the relationship between fiscal stabilization and output volatility—calculated as the standard deviation of real GDP growth over a fixed period of time. Broad cross-country correlations suggest that greater fiscal stabilization is in general associated with

[15] The fiscal multiplier measures the ratio of a change in GDP to the change in the budget balance that caused it.

Figure 2.10. Asymmetric Stabilization: Unpleasant Public Debt Arithmetic
(Percent of GDP)

A tendency to spend revenue windfalls during good times and to allow budget balances to reflect revenue shortfalls during bad times leads to an upward drift in the ratio of debt to GDP over time.



Source: IMF staff estimates.
Note: The simulations are based on the stock-flow identity between debt and the overall balance. Other assumptions are nominal potential growth of 4 percent, an automatic stabilization coefficient of 0.5, an implicit interest rate on public debt of 5 percent, and symmetric cycles with the output gap smoothly oscillating between –2 and 2 percent. No fiscal adjustment is built into the scenario. *t* denotes the initial year of the simulation.

lower growth volatility (Figure 2.11, panels 1 and 2). However, there is a marked difference between advanced economies and emerging and developing economies regarding the contribution of automatic stabilizers: in advanced economies, the correlation between government size and output volatility is negative, as expected, while in emerging and developing economies, this correlation vanishes (Figure 2.11, panels 3 and 4).

The contrast between the country groups is even sharper after taking into account a broad range of the potential determinants of growth volatility (see Annex 2.1). Comparing the results for countries of "average" fiscal stabilization (the median in the distribution of stabilization coefficients) with those of countries with "strong" fiscal stabilization (the third quartile in the distribution of stabilization coefficients) can provide a sense of magnitude. Moving from average to strong fiscal stabilization could on average decrease growth volatility by about 20 percent in advanced economies, but only by 5 percent in emerging market and developing economies (Figure 2.12).

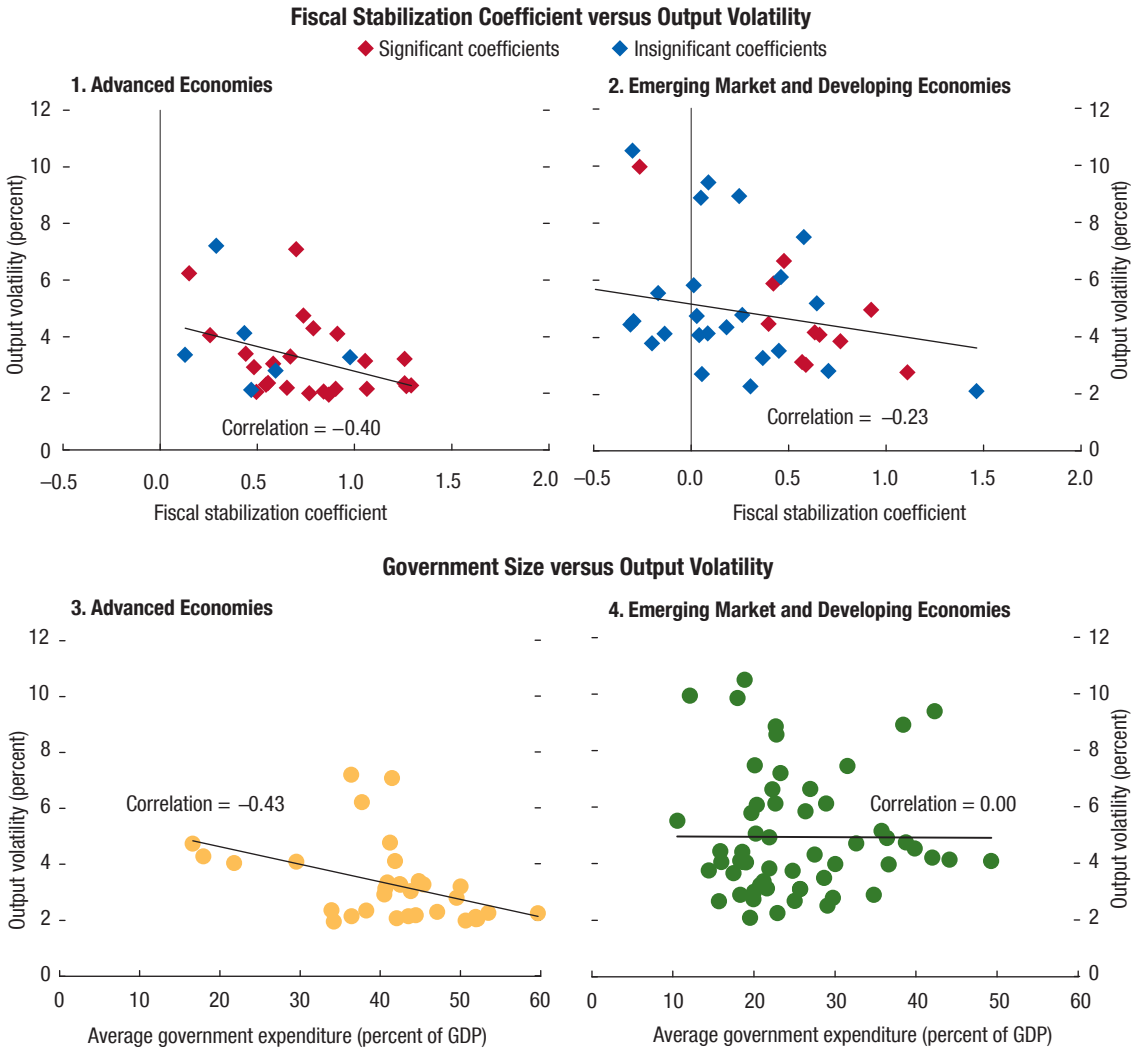
Higher levels of total government spending—the proxy for automatic stabilizers—are associated with lower growth volatility in advanced economies, but with higher growth volatility in emerging market and developing economies. These contrasting results point to the existence of inefficiencies often associated with large governments. A larger government sector could magnify the impact of inefficient public interventions (such as distortive subsidies, high marginal tax rates, red tape, or inadequate regulations), undermining an economy's resilience. Also, bigger governments tend to take fiscal actions that have a larger macroeconomic impact, irrespective of the cycle, which in turn can translate into greater growth volatility (Figure 2.13). Overall, while the stabilizing effect of government size generally dominates in advanced economies, the impact of inefficiencies on the economy's resilience appears to overcome automatic stabilizers in emerging market and developing economies.

Growth volatility may be affected by the design of automatic stabilizers or the ability of policymakers to let them play freely. For instance, at a given size of government, more progressive taxes, fewer procyclical tax deductions, and a greater share of social outlays in total expenditure would increase the effect of automatic stabilization on growth volatility. A look at potential determinants of the stabilizing effect of automatic stabilizers shows that three variables appear to matter (Figure 2.14):[16]

[16] The data needed for this analysis are available only for advanced economies.

Figure 2.11. Fiscal Stabilization and Output Volatility: Cross-Country Correlations, 1980–2013

In advanced economies, larger governments and greater fiscal stabilization are associated with lower output volatility. In emerging market and developing economies, there is no apparent link between output volatility and government size.

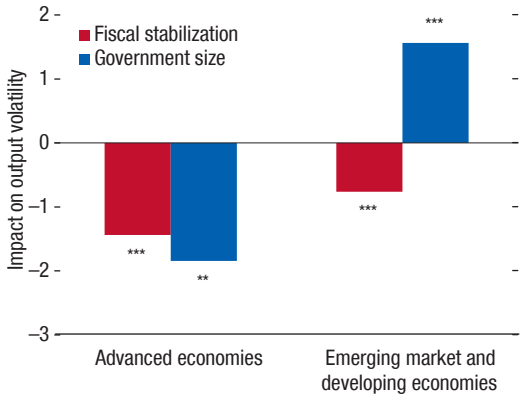


Sources: European Commission; Mauro and others 2013; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Output volatility is defined as the standard deviation of the real GDP growth rate over the sample period. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.

- The adoption of a fiscal policy rule aimed at capping public debts, budget deficits, or public expenditures more than doubles the intensity of the negative link between government size and output volatility. One reason is that fiscal rules, when properly designed and implemented, better preserve fiscal space (room for policy maneuver), which can then be used when needed for stabilization purposes. By constraining policy discretion, well-designed fiscal rules can encourage greater reliance on automatic stabilizers and foster a systematically less procyclical stance.
- Openness to trade also matters. An increase in trade flows by 10 percent of GDP is associated with a doubling of the dampening effect of government size on growth volatility. The underlying idea is that more open economies are intrinsically more susceptible to external shocks, which creates public demand for fiscal stabilization and larger government (Rodrik 1998). The argument may also extend

Figure 2.12. Impact of Fiscal Stabilization and Government Size on Output Volatility
(Percent)

After taking into account potential determinants of output volatility, greater fiscal stabilization appears to dampen volatility by a significant amount in advanced economies and by a lesser but still noticeable amount in emerging market and developing economies.

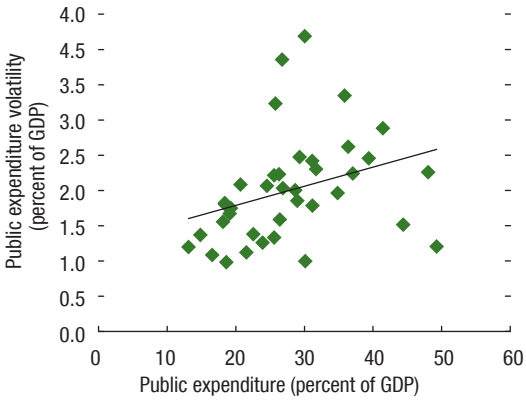


Sources: Mauro and others 2013; World Bank; and IMF staff estimates.
Note: Estimates are based on Arellano-Bond (1991) system generalized method of moments. Output volatility is defined as the standard deviation of the real GDP growth rate over five-year fixed windows. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.
** $p < 0.05$; *** $p < 0.01$.

Figure 2.13. Emerging Market and Developing Economies: Government Size and Output Volatility

In emerging market and developing economies, larger governments tend to exhibit greater expenditure volatility. In turn, more volatile government spending is associated with more unstable output.

1. Government Size and Public Expenditure Volatility



2. Public Expenditure and Output Volatility

Sources: European Commission; Mauro and others 2013; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Volatility is defined by the average of a five-year rolling window of the standard deviation of the relevant variable, which corresponds to real GDP growth for output. The black line shows an ordinary least squares regression line. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.

to the composition of tax and expenditure, which more open economies might deliberately make more stabilizing at a given size of government.[17]

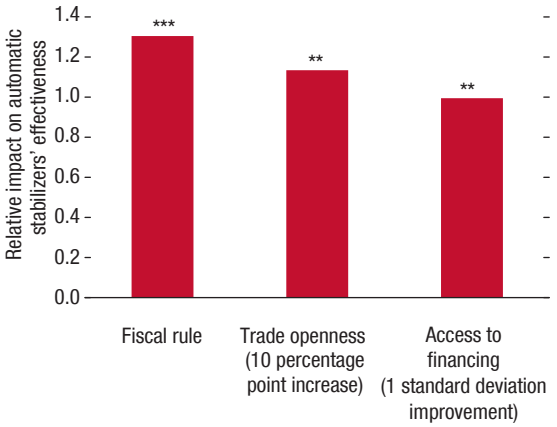
- Easier financing conditions—captured by an index of a country's ability to finance its official, commercial, and trade debt obligations—seem to increase the mitigating effect of government size on output volatility. This result indicates that countries facing easier financing conditions may rely relatively more on automatic stabilizers to provide fiscal stabilization than countries with less stable financing conditions, which would have to rely more on nonautomatic stabilization measures when conditions allow.

To sum up, fiscal policy can substantially reduce output volatility. However, certain costs potentially associated with large governments can negate the benefits of automatic stabilizers in emerging market and developing economies. By contrast, automatic stabilizers seem to have a strong moderating effect on output variations in advanced economies. More broadly, easier financing conditions and fiscal rules—both contributing to fiscal space—seem to create conditions that allow stabilizers to operate more freely.

[17] Direct statistical tests of this conjecture, such as assessing the impact of social spending, proved inconclusive.

Figure 2.14. Advanced Economies: Factors that Boost the Effectiveness of Automatic Stabilizers

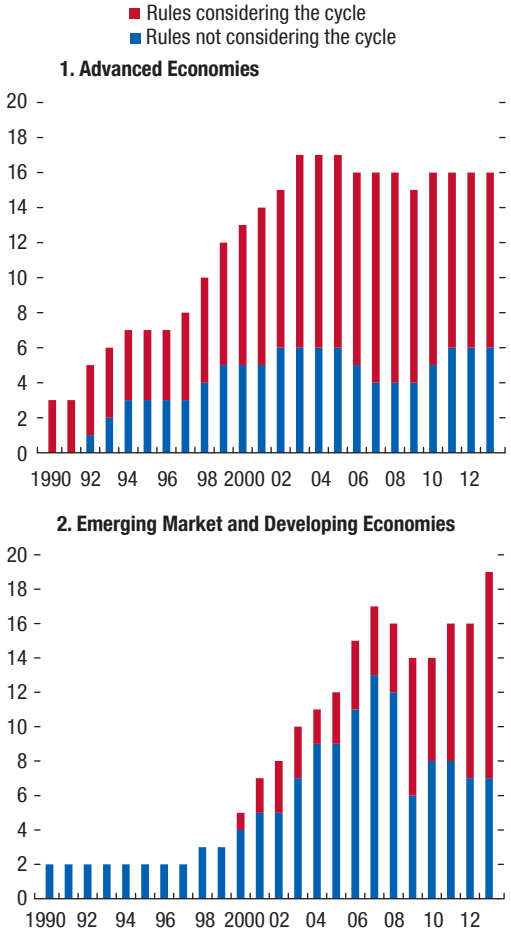
Three factors appear to affect the impact of automatic stabilizers on output volatility: a fiscal policy rule to constrain policy discretion, openness to trade, and a country's ability to access financing.



Sources: IMF Fiscal Rules database; World Bank; and IMF staff estimates.
Note: Figure estimates use weighted least squares, with weights inversely proportional to the estimation error of the effectiveness coefficients. The number on the vertical axis is the ratio of the estimated impact of the scenario specified on the horizontal axis to the average effectiveness coefficient. For a list of advanced economies, see Economy Groupings in the Methodological and Statistical Appendix.
** $p < 0.05$; *** $p < 0.01$.

Figure 2.15. Budget Balance Rules: Contingent on the Economic Cycle?
(Number of rules)

In advanced economies, deficit caps embedded in fiscal rules often vary with the state of the economy, leaving room for automatic stabilizers to operate more freely. A similar trend is apparent in emerging market and developing economies after the global financial crisis.



Source: IMF Fiscal Rules database.
Note: Rules refer to national budget balance rules. They are considered to take into account the cycle if their target is specified in cyclically adjusted or structural terms or if they are associated with a well-specified escape clause.

This analysis has two important policy implications:

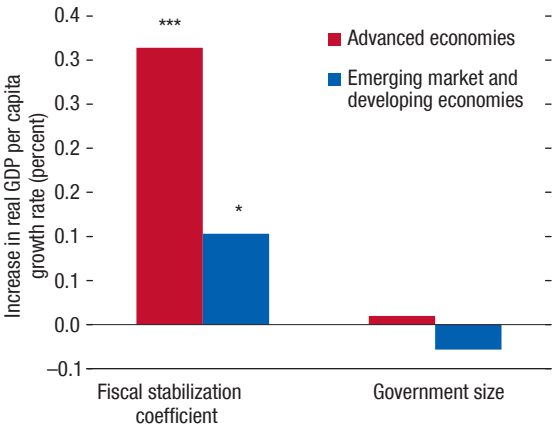
- First, fiscal frameworks aimed at cementing governmental commitment to debt sustainability should explicitly incorporate the flexibility needed to allow for fiscal stabilization in bad times while enforcing strict control over expenditure in good times. This can be achieved by the use of escape clauses or the formulation of such limits in cyclically adjusted terms, as is the case in a growing number of countries (Figure 2.15).
- Second, because automatic stabilizers have adverse side effects, efforts to enhance their effectiveness should focus on modalities that minimize inefficiencies. For instance, raising marginal tax rates to make the tax system more progressive or expanding social transfers could potentially have an adverse impact on individual incentives to work and create jobs. Alternative options discussed in Box 2.2 could include measures to reduce the procyclicality inherent to certain tax deductions (investment or mortgage interest payments) or conditioning the parameters of certain transfers (such as the replacement rate of lost labor income or the maximum duration of unemployment benefits) on the state of the economy or the labor market.

Does Lower Volatility Lead to Higher Medium-Term Growth?

A large body of research suggests that volatility may have detrimental effects on long-term growth (Ramey and Ramey 1995), at least for countries with less well-

Figure 2.16. Fiscal Stabilization and Medium-Term Growth

Lower output volatility induced by greater fiscal stabilization can boost medium-term economic growth by about 0.3 percentage point a year in advanced economies and 0.1 percentage point in emerging market and developing economies.



Sources: European Commission; Mauro and others 2013; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.
** $p < 0.10$; *** $p < 0.01$.

developed financial markets (Aghion and Marinescu 2008). Because lower macroeconomic uncertainty can encourage investment and boost social capital, the greater output stability attributable to fiscal stabilization could have positive repercussions on the level of growth.[18]

The existing empirical evidence on the links between fiscal stabilizers and growth is mixed. While more activist fiscal policy (which is often procyclical) has been associated with lower growth (Fatás and Mihov 2003, 2013), large governments (which translates into higher automatic stabilization) can also be detrimental to growth (Afonso and Furceri 2010; Afonso and Jalles 2012, forthcoming).

Did the lower output volatility induced by fiscal stabilization have positive consequences for growth in the sample considered here?[19] The empirical relationships between fiscal stabilization and volatility on the one hand and between volatility and growth on the other suggest that stronger fiscal stabilization is good for growth. Specifically, increasing the fiscal stabilization coefficient by one standard deviation (about 0.1) could boost medium-term growth, through its effect on output volatility, by about 0.3 percentage point in advanced economies and by 0.1 percentage point in emerging market and developing economies (Figure 2.16). [20]

Conclusion

The analyses in this chapter extend a large body of research showing that fiscal policy is an effective tool for smoothing fluctuations in output. When the ability to use monetary policy to stabilize output is more limited, exploiting the stabilizing potential of fiscal policy can yield important benefits—provided, of course, that output stabilization is an appropriate policy priority and that available financing leaves room for policy changes.

The findings in this chapter remain subject to the inherent difficulty of establishing causal relationships between policy variables and economic outcomes. However, they suggest that fiscal policies often contribute to output stabilization. In advanced economies, fiscal stabilization has been the norm, and it has been strengthened over time in a number of countries. In contrast, fiscal policy has rarely been stabilizing in emerging market and developing economies, reflecting in part the nature of their growth dynamics (largely supply driven), and the priority given to developmental needs over aggregate demand management. Countries that use fiscal policy to stabilize output tend to do so when it is most effective—that is, during periods of economic slack (when demand trails potential output) and in response to short-lived output variations. However, fiscal policy is generally not used to mitigate booms. In fact, it is instead used to counteract the operation of stabilizers in good times. Pursuing fiscal stabilization only in bad times can undermine public debt sustainability because governments fail to take advantage of stronger growth to lower deficits and to rebuild fiscal buffers in preparation for future downturns.

Automatic stabilizers play a central role in fiscal stabilization. They account for up to two-thirds

[18] As Chapter 4 of the April 2015 *World Economic Outlook* suggests, depressed private investment observed after the global economic and financial crisis is likely to be less related to uncertainty than that before the crisis.

[19] The sample consisted of panel data using five-year fixed windows. See Annex 2.1 for details.

[20] In addition to showing that fiscal stabilization is good for economic growth, this exercise suggests that the measure of fiscal stabilization is not influenced by output volatility (see Annex 2.1).

of overall fiscal stabilization in advanced economies and one-third in emerging market and developing economies—albeit with substantial differences across countries. Because stabilizers are largely proportional to government size and the relative importance of certain social transfers, they can be associated with significant adverse side effects.

Fiscal stabilization moderates the variability of output, with positive repercussions on medium-term growth, particularly in advanced economies. In these countries, beefing up fiscal stabilization (by one standard deviation of the fiscal stabilization measure) could conceivably boost medium-term growth by about 0.3 percentage point. Easier financing conditions and fiscal rules—which help create room for fiscal maneuvering—foster an environment in which automatic stabilizers can operate more freely.

Overall, countries willing and able to use fiscal policy as a stabilization tool can benefit from letting automatic stabilizers play freely during both downturns and upturns. Mitigating growth accelerations as much as decelerations would augment the contribution of fiscal policy to output stability and growth and suppress a source of upward pressure on public debt. When automatic stabilizers fall short of stabilization needs, governments could consider options to better incorporate stabilization measures into the design of taxes and transfers. Last, but not least, sound fiscal institutions in the form of well-designed fiscal rules and medium-term frameworks can promote fiscal stabilization by enabling uninterrupted access to borrowing at favorable conditions, ensuring expenditure control over the entire cycle, and leaving flexibility to respond to output shocks.

Annex 2.1. Empirical Methodology

This annex provides details on data sources and empirical methodologies used in this chapter. It also displays the quantitative results discussed in the main text.

Data Sources

The primary sources for this chapter are the IMF's *International Financial Statistics* (IFS), *Balance of Payments Statistics*, *Direction of Trade Statistics*, World Economic Outlook database, *Global Data Source,* and fiscal rules and exchange rate regime databases; the European Commission's AMECO database; the World Bank's *World Development Indicators*; the Macro Data Guide Political Constraint Index Dataset (POLCON); and *International Country Risk Guide* data.

Data for all variables of interest are collected on an annual basis from 1970 to 2013, where available.

Fiscal Stabilization—Conceptual Framework and Measurement

Measuring the stabilizing effect of fiscal policy first requires assessing how fiscal policy affects aggregate demand. The budget-balance-to-GDP ratio is an appropriate proxy for the effect of fiscal policy on aggregate demand (see, for example, Blanchard 1993). The fiscal stabilization coefficients are obtained from simple regressions of the overall budget balance on the output gap.

$$OB_{it} = \alpha + \beta \times gap_{it} + \varepsilon_{it}, \qquad \text{(A2.1.1)}$$

in which β captures the degree of fiscal stabilization. This equation is estimated by ordinary least squares for each country for which at least 17 yearly observations are available. To explore whether fiscal stabilization varies depending on the phase of the business cycle, the Granger and Terasvirta (1993) smooth transition autoregressive (STAR) model is applied.[21] Because fiscal policy changes affect the output gap, the relationship (equation A2.1.1) is not causal, and the coefficient estimated by ordinary least squares is biased downward.

Instrumental variables estimates (using growth in trade partners or lagged output gaps as instruments) did not yield satisfactory results for most countries. Panel estimates nevertheless suggest the existence of a downward bias, although its magnitude cannot be ascertained (see Annex Figure 2.1.1).

Annex Tables 2.1.1a and 2.1.1b show the country-specific stabilization coefficients of equation (A2.1.1) for advanced and emerging market and developing economies, respectively.

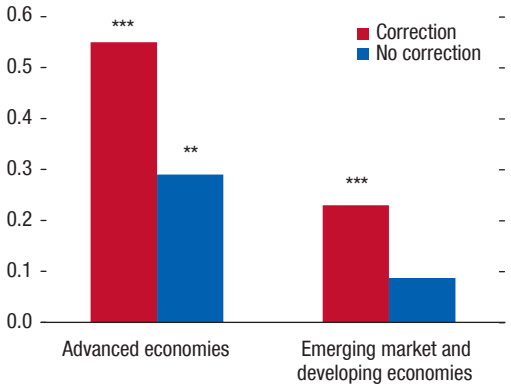
Determinants of Fiscal Stabilization

The determinants of overall fiscal stabilization are assessed by first re-estimating equation (A2.1.1) allowing for time-varying slope coefficients on the growth regressor. This is done using the time-varying coefficients model proposed by Schlicht (1985, 1988). Annex Table 2.1.2 shows the estimated coefficients for selected years (1980, 1995, 2013) in advanced

[21] The following regression is estimated: $OB_{it} = \alpha + \beta^R \times gap_{it} \times G(z_{it}) + \beta^E \times gap_{it} \times [1 - G(z_{it})] + \varepsilon_{it}$, with $G(z_{it}) = [exp(-\gamma z_{it})/(1 + exp(-z_{it}))]$, $\gamma > 0$, in which z is a normalized indicator of the state of the economy with zero mean and unit variance.

Annex Figure 2.1.1. Impact of the Output Gap on the Fiscal Balance
(Percent of GDP)

Panel estimates show that statistical corrections accounting for reverse causality between fiscal policy and output leads to higher stabilization coefficients on average. The country-specific fiscal stabilization coefficients discussed in the main text are thus likely to lie in the lower range of plausible estimates.



Source: IMF staff estimates.
Note: The underlying econometric specification corresponds to equation (A2.1.1) in Annex 2.1. "No correction" denotes an ordinary least squares regression with country and time fixed effects. "Correction" denotes a system generalized method of moments regression with country and time fixed effects, where the output gap has been instrumented by its own lags. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.
** $p < 0.05$; *** $p < 0.01$.

Annex Table 2.1.1a. Advanced Economies: Country-Specific Estimations

Dependent Variable: Overall Balance		
Regressor	GDP Growth	Output Gap
Australia	0.651***	0.869***
Austria	0.040	0.496***
Belgium	0.392	0.469
Canada	0.433	1.065***
Cyprus	0.468***	0.700*
Czech Republic	0.185*	0.582**
Denmark	0.215	1.292***
Estonia	0.201***	0.150*
Finland	0.425***	1.258***
France	0.646***	0.842***
Germany	0.176	0.545**
Greece	0.395**	–0.460
Hong Kong SAR	0.410**	0.737***
Iceland	0.678***	0.434
Ireland	1.232***	0.978
Italy	–0.608**	0.594
Japan	0.601***	0.912***
Korea	0.042	0.257**
Latvia	0.309***	0.288
Luxembourg	0.278**	0.484**
Netherlands	0.395**	0.767**
New Zealand	0.918***	1.258***
Norway	–0.149	1.737**
Portugal	0.132	0.129
Singapore	0.667***	0.789**
Slovak Republic	0.470***	0.441*
Slovenia	0.601**	0.671*
Spain	1.028***	1.055**
Sweden	0.369	1.268*
Switzerland	0.492**	0.556**
United Kingdom	0.537***	0.653*
United States	0.548**	0.903***

Source: IMF staff estimates.
Note: Fiscal stabilization coefficients are obtained from ordinary least squares regressions of the overall budget balance on either the output gap or the GDP growth for countries with at least 17 observations. Robust (clustered) standard errors were computed but are not shown. A constant term was included but is not reported for reasons of parsimony. See equation (A2.1.1) in Annex 2.1 for further details.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

economies. The estimated time-varying coefficients ($\widehat{FS}_{it}$) are used as dependent variables in the following regression:

$$\widehat{FS}_{it} = \alpha_i + \gamma_t + \delta X_{it} + \varepsilon_{it}. \qquad \text{(A2.1.2)}$$

α_i and γ_t denote country and time fixed effects, respectively. X_{it} is a vector of fiscal variables of interest, including government size (such as total public expenditures), social expenditures, and subcomponents (unemployment benefits, health spending, and so on) as a percent of GDP. Equation (A2.1.2) is estimated with the weighted least squares technique using the inverse of the standard deviation of $\widehat{FS}_{it}$. Annex Table 2.1.3 shows the impact of total social expenditures and their components on fiscal stabilization. The relevance of financing constraints was inspected by including, as a possible determinant of fiscal stabilization, alternative proxies such as a financial stress indicator (Cardarelli, Elekdag, and Kose 2009), sovereign bond yields, real effective interest rates on 10-year bonds, and a financial risk rating index (*International Country Risk Guide*). However, results were not conclusive.

The Macroeconomic Dividends of Fiscal Stabilization

Impact of Fiscal Stabilization on Output Volatility

The analysis extends the work by Fatás and Mihov (2001) and Debrun and Kapoor (2010). A dynamic panel approach is used to control unobserved country and time fixed effects. The empirical model is as follows:

$$\sigma_{it} = \alpha + \phi_0\sigma_{it-1} + \phi_1\widehat{FS}_{it} + \phi_2 FVOL_{it} + \sum_{j=1}^{J}\lambda_j X_{jit} + \theta_i + \Psi_t + v_{it}. \qquad \text{(A2.1.3)}$$

$i = 1, \ldots N$ denote countries, and $t = 1, \ldots T$ denote non-overlapping, five-year averages. σ_{it} is the standard

Annex Table 2.1.1b. Emerging Market and Developing Economies: Country-Specific Estimations

Dependent Variable: Overall Balance		
Regressor	GDP Growth	Output Gap
Algeria	0.722	1.946**
Argentina	0.343**	0.476*
Bangladesh	–0.071***	–0.264***
Benin	–0.423	–0.826
Bolivia	1.640***	0.705
Brazil	0.340**	0.263
Burkina Faso	–0.158	0.461
Cambodia	0.329*	0.659***
Chad	–0.059	0.221*
Chile	0.493***	0.925***
China	0.084	0.042
Colombia	0.492***	0.304
Democratic Republic of the Congo	0.017	–0.170
Republic of Congo	1.716***	0.549
Côte d'Ivoire	–0.017	0.240
Dominican Republic	0.428***	0.398**
Ecuador	0.320***	–0.079
Ethiopia	0.080***	0.014
Ghana	–0.074	–0.312
Guinea	0.847*	1.465
Haiti	–0.323**	–0.200
Hungary	–0.365	–0.135
India	0.127	0.569**
Indonesia	0.107***	0.128
Iran	0.131	–0.012
Kenya	0.258	0.367
Kuwait	0.763	2.889***
Libya	0.300***	0.437***
Madagascar	0.306**	0.085
Malaysia	0.269	0.450
Mexico	0.074	0.398***
Moldova	0.299***	0.247
Mongolia	0.275**	–0.295
Morocco	–0.009	0.181
Mozambique	0.313**	0.423*
Niger	0.363	0.579
Oman	–0.019	–0.479
Pakistan	0.322*	–0.535
Papua New Guinea	–0.180	0.030
Philippines	0.200	0.589***
Poland	0.293*	0.634**
Qatar	0.228	–0.010
Rwanda	0.161***	0.051
Sri Lanka	0.219**	0.055
Sudan	0.159	–0.301
Tanzania	–0.288	1.110*
Thailand	0.343***	0.766***
Uganda	0.053	–0.553
Ukraine	0.111	0.088
Uzbekistan	0.635	0.645
Venezuela	0.060	–0.324*
Yemen	0.100	–0.002

Source: IMF staff estimates.
Note: Fiscal stabilization coefficients are obtained from ordinary least squares regressions of the overall budget balance on either the output gap or the GDP growth for countries with at least 17 observations. Robust (clustered) standard errors were computed but are not shown. A constant term was included but is not reported for reasons of parsimony. See equation (A2.1.1) in Annex 2.1 for further details.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Annex Table 2.1.2. Advanced Economies: Time-Varying Coefficients of Fiscal Stabilization, Selected Years

	1980	1995	2013
Australia	. . .	0.655	0.655
Austria	0.420	0.420	0.420
Belgium	0.510	0.511	0.511
Canada	0.760	0.760	0.760
Czech Republic	. . .	0.427	0.427
Denmark	0.822	0.822	0.822
Estonia	. . .	0.186	0.142
Finland	0.253	1.074	0.701
France	0.660	0.670	0.858
Germany	. . .	0.577	0.577
Greece	0.017	0.017	0.017
Hong Kong SAR	. . .	0.639	0.639
Iceland	0.307	0.307	0.306
Italy	0.531	0.531	0.531
Japan	0.323	0.753	0.766
Korea	0.184	0.230	0.894
Luxembourg	. . .	0.216	0.496
Netherlands	0.626	0.698	0.852
New Zealand	. . .	0.698	0.748
Norway	0.824	1.359	1.750
Portugal	–0.081	0.202	0.384
Singapore	. . .	0.899	0.899
Slovak Republic	. . .	0.424	0.425
Sweden	0.550	0.550	0.550
United Kingdom	0.207	0.928	1.039
United States	0.560	0.809	1.515

Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: Estimates use the time-varying coefficient models by Schlicht (1985, 1988). Columns show selected years' coefficients by country.

deviation of real GDP growth; θ_t and Ψ_t denote country and period fixed effects. σ_{it-1} captures the persistence of output volatility. $\widehat{FS}_{it}$ denotes the estimated time-varying fiscal stabilization or government size (government expenditure in percent of GDP). $FVOL_{it}$ measures the residual volatility of fiscal policy. X_j's are control variables, including trade openness, real GDP per capita growth, private credit as percent of GDP, population size, inflation volatility, and the exchange rate regime. v_{it} is the error term. Potential endogeneity issues are addressed using standard instrumental variables techniques.[22] Annex Table 2.1.4 shows the impact of fiscal stabilization and government size on output volatility using both techniques.

Factors that Influence the Effectiveness of Automatic Stabilizers

The effectiveness of automatic stabilizers is also analyzed through a two-step approach. In the first step, time-varying effectiveness coefficients are estimated for each country following the model:

[22] The system generalized method of moments is used to address this potential bias. Following Fatás and Mihov (2013), institutional variables (lags of constraints on the executive, presidential, parliamentary, proportional, and majority electoral systems) are used as instrumental variables. As robustness checks, the within estimator with country fixed effects is also applied.

Annex Table 2.1.3. Determinants of Fiscal Stabilization

	Dependent Variable: Fiscal Stabilization									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Output Volatility	–0.037***	–0.038*	–0.039***	–0.038***	0.014	–0.048***	–0.045**	–0.033**	–0.043**	–0.013
	(0.010)	(0.021)	(0.013)	(0.010)	(0.012)	(0.014)	(0.016)	(0.015)	(0.017)	(0.023)
Trade Openness	0.005	0.035	0.025	0.092	–0.056	0.006	0.025	–0.041	0.016	–0.218***
	(0.090)	(0.085)	(0.095)	(0.093)	(0.101)	(0.099)	(0.096)	(0.103)	(0.096)	(0.035)
GDP per Capita	0.481***	0.577**	0.587***	0.558***	0.375	0.662***	0.673***	0.679***	0.669**	0.121
	(0.157)	(0.231)	(0.200)	(0.142)	(0.325)	(0.207)	(0.218)	(0.232)	(0.245)	(0.079)
Total Social Expenditure	0.358***									
	(0.066)									
Active Labor Market Policies		0.010								
		(0.041)								
Family			0.098**							
			(0.041)							
Health				0.397***						
				(0.099)						
Housing					0.010					
					(0.035)					
Incapacity						0.201**				
						(0.079)				
Old-Age							0.156			
							(0.095)			
Other Social Expenditure								0.068		
								(0.042)		
Survivors									0.003	
									(0.055)	
Unemployment Benefits										0.133***
										(0.027)
Observations	747	569	640	651	440	643	643	576	603	630
R^2	0.863	0.859	0.852	0.869	0.889	0.859	0.851	0.845	0.833	0.446

Sources: European Commission; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: Estimates are based on weighted least squares regression, with the multiplicative inverse of the standard error of the time-varying coefficient estimates of fiscal stabilization as weights. Robust standard errors are in parentheses. A constant term and time fixed effects were included but are not reported for reasons of parsimony.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

$$\sigma_{it,t+5} = \alpha + \phi_{1it}\, GS_{it} + \vartheta_{it}. \quad \text{(A2.1.4)}$$

$\sigma_{it,t+5}$ is the volatility of GDP growth, and GS_{it} denotes government size of country i in year t. Equation (A2.1.4) allows the estimation of a time-varying coefficient $\hat{\phi}_{1_{it}}$ by assigning greater weights to the observations closest to the reference year (see Aghion and Marinescu 2008).[23] In the second step, the coefficients $\hat{\phi}_{1_{it}}$ are regressed on variables that can potentially influence the effectiveness of automatic stabilizers:

$$\hat{\phi}_{1_{it}} = \gamma + \delta^k F^k_{it} + \sum_{j=1}^{j} \lambda_j X_{jit} + \theta_i + \Psi_t + \varepsilon_{it}. \quad \text{(A2.1.5)}$$

F^k_{it} denotes the factors of interest, including fiscal rules, financing constraints, and trade openness. δ^k captures the marginal impact on the effectiveness coefficients. The X_j's are control variables, including financial depth, inflation volatility, exchange rate regime, population size, and the volatility of fiscal policy. θ_i and Ψ_t are the country and year fixed effects, respectively. ε_{it} is the error term. Equation (A2.1.5) is estimated with the weighted least squares technique using the inverse of the standard deviation of $\hat{\phi}_{1_{it}}$. Annex Table 2.1.5 reports the estimates of the determinants of the time-varying estimates of the effectiveness of automatic stabilizers for non-oil advanced economies.

[23] In practice, the local Gaussian-weighted ordinary least squares are applied.

Impact of Fiscal Stabilization on Real Output Growth

This section examines the impact of fiscal stabilization on growth, through its effect on output volatility. A growth equation similar to that of Ramey and Ramey (1995) and Fatás and Mihov (2003) is estimated. The relationship is represented as follows:

Annex Table 2.1.4. Fiscal Stabilization, Government Size, and Output Volatility

Dependent Variable: Fiscal Stabilization								
	System Generalized Method of Moments				Within Fixed Effects			
	AEs (1)	EMDEs (2)	AEs (3)	EMDEs (4)	AEs (5)	EMDEs (6)	AEs (7)	EMDEs (8)
Fiscal Stabilization	–1.439***	–0.763***			–1.385***	–1.514**		
	(0.467)	(0.176)			(0.382)	(0.604)		
Government Size			–1.846**	1.564***			–2.369***	0.405
			(0.671)	(0.439)			(0.841)	(0.760)
Lagged Output Volatility	–0.162*	0.162***	–0.226**	0.172***	–0.163	–0.117	–0.177	–0.122
	(0.093)	(0.026)	(0.089)	(0.027)	(0.108)	(0.074)	(0.104)	(0.073)
Trade Openness	0.005**	0.009**	–0.001	–0.003	0.012**	0.013	0.012**	0.013
	(0.002)	(0.004)	(0.003)	(0.006)	(0.005)	(0.016)	(0.005)	(0.017)
GDP per Capita Growth	–0.047	–0.110***	–0.075	–0.061***	–0.242***	–0.155	–0.285***	–0.169
	(0.056)	(0.036)	(0.057)	(0.022)	(0.085)	(0.108)	(0.094)	(0.107)
Volatility Inflation	0.164***	0.046***	0.192***	0.060***	0.055	0.009	0.044	0.013
	(0.047)	(0.006)	(0.038)	(0.009)	(0.040)	(0.025)	(0.049)	(0.026)
Exchange Rate	0.203	–0.006	–0.249**	–0.151***	–0.028	0.166*	–0.031	0.179**
	(0.138)	(0.025)	(0.115)	(0.051)	(0.114)	(0.087)	(0.132)	(0.086)
Population	–0.022	0.148	0.003	0.19	–4.275**	–0.358	–3.910**	–0.666
	(0.145)	(0.092)	(0.326)	(0.115)	(1.751)	(0.902)	(1.752)	(0.934)
Credit-to-GDP ratio	0.042	1.957***	–0.127	1.561**	0.185	3.679**	–0.201	3.225**
	(0.391)	(0.463)	(0.322)	(0.623)	(0.339)	(1.390)	(0.361)	(1.341)
Fiscal Volatility	0.759***	0.154***	0.482***	0.104***	0.252**	–0.031	0.210*	–0.039
	(0.163)	(0.056)	(0.123)	(0.038)	(0.099)	(0.088)	(0.118)	(0.087)
Observations	154	143	154	143	154	143	154	143
R^2					0.369	0.27	0.358	0.243
Countries	29	42	29	42	29	42	29	42
Hansen test (*p*-value)	1.000	0.887	1.000	0.938				
AR(2)	0.887	0.318	0.336	0.13				
AR(1)	0.035	0.016	0.018	0.007				

Sources: World Bank; and IMF staff estimates.
Note: Estimates are based on Arellano and Bond (1991) system generalized method of moments. Robust standard errors are in parentheses. The Hansen test evaluates the validity of the instrument set; that is, it tests for over-identifying restrictions. AR(1) and AR(2) are *p*-values of the Arellano-Bond autocorrelation tests of first and second order (the null is no autocorrelation), respectively. The set of instruments includes the lags of constraints on the executive, presidential, parliamentary, proportional electoral, and majoritarian electoral systems. A constant term and time fixed effects were included but are not reported for reasons of parsimony. AEs = advanced economies; EMDEs = emerging market and developing economies, which include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

$$\Delta y_{it} = \alpha_i + \gamma_t + \theta\hat{\sigma}_{it} + \tau' X_{it} + \mu_{it}. \qquad \text{(A2.1.6)}$$

$i = 1, \ldots N$ denote countries and $t = 1, \ldots T$ denote non-overlapping five-year averages. y_{it} denotes the logarithm of real GDP per capita; $\hat{\sigma}_{it}$ is the part of output volatility driven by fiscal stabilization (that is, the fitted value of output volatility from a panel regression of the standard deviation of the output gap on the estimated measure of fiscal stabilization).[24] X_{it} denotes a vector of control variables, including the initial level of GDP per capita, government size, human capital, trade openness, price of investment, inflation rate, and output volatility. α_i, γ_t are country and time effects. μ_{it} is the error term.

The results presented in Annex Table 2.1.6 show that reduced volatility in output induced by fiscal stabilization has positive consequences for growth. In particular, an increase of one standard deviation in the measure of fiscal stabilization increases output growth, *through its effect on output volatility*, by about

[24]To correct for potential endogeneity, the fiscal stabilization coefficient is instrumented using the lags of constraints on the executive, presidential, parliamentary, proportional, and majority electoral systems; econometric tests validate the use of these instruments. Standard errors are also adjusted in a sequential two-step procedure to account for the use of an explanatory variable that is subject to a known measurement error (since it has been estimated).

Annex Table 2.1.5. Advanced Economies: Factors Driving the Effectiveness of Automatic Stabilizers

Dependent Variable: Automatic Stabilizers Effectiveness Coefficients ($\hat{\phi}_{1_{it}}$)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trade Openness	–0.00278***	–0.00294***	–0.00282***	–0.00304***	–0.00566**	–0.00270***	–0.00540**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
Credit-to-GDP ratio	0.00047	0.00059	0.00041	0.00045	0.00027	0.00054	–0.00020
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Inflation Volatility	–0.00762	–0.00673	–0.00716	–0.00694	0.00497	–0.00335	–0.00614
	(0.006)	(0.007)	(0.007)	(0.007)	(0.012)	(0.009)	(0.015)
Exchange Rate Regime	0.00572	0.00656	0.00465	0.00492	–0.00638	–0.00016	–0.00728
	(0.008)	(0.008)	(0.008)	(0.008)	(0.013)	(0.009)	(0.010)
Population	0.04470	0.14725	0.09089	0.10574	1.12236*	0.13997	0.41922
	(0.368)	(0.394)	(0.383)	(0.393)	(0.561)	(0.400)	(0.458)
Fiscal Volatility	0.00502	0.00186	0.00281	0.00229	–0.02067*	0.00048	–0.00651
	(0.007)	(0.008)	(0.007)	(0.008)	(0.011)	(0.008)	(0.009)
Fiscal Rule	–0.06912***						–0.06214***
	(0.023)						(0.020)
Expenditure Rule		–0.05839*					
		(0.029)					
Balanced Budget Rule			–0.06229**				
			(0.023)				
Debt Rule				–0.05631***			
				(0.018)			
Financial Stress Index					0.00041		–0.00008
					(0.003)		(0.003)
Financial Risk Rating						0.00662*	0.00877**
						(0.003)	(0.003)
Observations	651	651	651	651	483	678	422
R^2	0.623	0.597	0.613	0.606	0.588	0.562	0.689

Sources: European Commission; Organisation for Economic Co-operation and Development; the PRS Group; IMF Fiscal Rules database; and IMF staff estimates.
Note: Estimates are based on weighted least squares regression, with the multiplicative inverse of the standard error of the time-varying coefficient estimates of the effectiveness of automatic stabilizers as weights. Robust standard errors are in parentheses. A constant term and time fixed effects were included but are not reported for reasons of parsimony.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

0.3 percentage point in advanced economies and 0.1 percentage point in emerging and developing economies.[25]

In addition to showing that fiscal stabilization is good for economic growth, the results in the second column suggests that the measure of fiscal stabilization is not influenced by output volatility. If there was such influence, the relationship between growth and output volatility would not be affected by the instrumentation of the latter. Instead, the estimated effect of output volatility on growth changes sharply and in the expected direction (ordinary least squared estimates are biased toward zero) when fiscal stabilization is used as an instrument.

[25] An increase of one standard deviation in fiscal stabilization reduces output volatility by about 2 percent.

Annex Table 2.1.6. Fiscal Stabilization and Medium-Term Growth

Dependent Variable: Per Capita Real GDP Growth				
	All Countries	All Countries	Advanced Economies	Emerging Market and Developing Economies
Output Volatility	–0.707***			
	(0.108)			
Predicted Volatility		–1.373***	–1.478***	–0.485*
		(0.397)	(0.458)	(0.291)
Investment Price	1.937**	3.383**	0.468	3.200***
	(0.766)	(1.325)	(1.504)	(1.07)
Initial GDP per capita	–9.491***	–13.587***	–12.171***	–14.281***
	(1.428)	(1.207)	(2.42)	(1.404)
Human Capital	7.306***	8.651***	6.831***	13.140***
	(1.528)	(1.863)	(2.369)	(1.161)
Trade Openness	0.040***	0.021	0.01	0.056***
	(0.015)	(0.016)	(0.012)	(0.011)
Government Size	–0.177***	–0.039	0.01	–0.029
	(0.018)	(0.04)	(0.05)	(0.04)
Observations	266	199	98	101
Countries	79	61	21	40
Hansen test (*p*-value)	0.345	0.458	0.451	0.380

Source: IMF staff estimates

Note: Regressions are based on the difference generalized method of moments estimator a la Arellano and Bond (1991). "Predicted volatility" denotes the fitted values of a regression of output volatility on our measure of fiscal stabilization, where the latter is instrumented by the lags of constraints on the executive, presidential, parliamentary, proportional electoral, and majoritarian electoral systems. "Investment price" denotes the relative price of investment goods, retrieved from the Penn World Tables (PWT, Version 7.1). The PWT data are translated using investment-specific purchasing power parity exchange rates. Following Greenwood, Hercowitz, and Huffman (1988), and consistent with Hsieh and Klenow (2007), innovations in the relative price of investment were interpreted as reflecting investment-specific technology shocks. See the main text for details. The Hansen test evaluates the validity of the instrument set; that is, it tests for over-identifying restrictions. Robust standard errors are in parentheses. A constant term and country and time fixed effects were included, but not reported for reasons of parsimony. Emerging market and developing economies include emerging market and middle-income economies as well as low-income developing countries. For a list of countries in each group, see Economy Groupings in the Methodological and Statistical Appendix.

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Box 2.1. Fiscal Stabilization under Alternative Estimates of the Output Gap

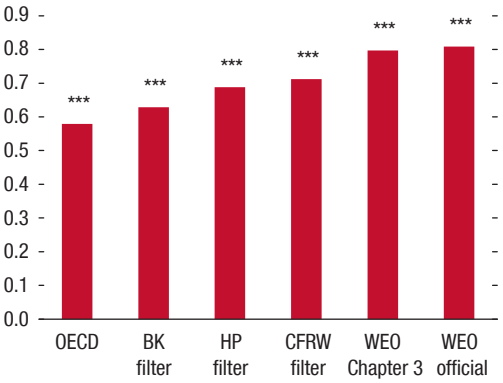
The stabilizing role of fiscal policy can be assessed by estimating the impact of changes in the output gap on the overall fiscal balance. Because the output gap is unobservable, it must be estimated using statistical techniques. This box assesses the sensitivity of stabilization coefficients to different measures of the output gap in a panel of 10 advanced economies from 1990 to 2014.[1]

These measures rely on alternative methodologies to estimate potential output: (1) statistical detrending, such as the Hodrick-Prescott filter, the Baxter-King filter, and the Christiano-Fitzgerald Random Walk filter; (2) estimation of structural relationships, such as the production function from the Organisation for Economic Co-operation and Development,[2] and the multivariate filter (see Chapter 3 of the April 2015 *World Economic Outlook*—WEO);[3] and estimates of the output gaps taken from the WEO database, which are based on assessments by IMF staff economists.

Stabilization coefficients obtained for the panel vary between 0.65 and 0.80 (Figure 2.1.1). Output gaps estimated using the three statistical detrending methods lead to coefficients between 0.65 and 0.70, whereas the two WEO output gaps lead to slightly higher numbers, of around 0.80.

Figure 2.1.1. Impact of the Output Gap on the Overall Fiscal Balance
(Percent of GDP)

Estimates of stabilization coefficients are relatively insensitive to the methodology used to calculate the output gap.



Sources: European Commission; Organisation for Economic Co-operation and Development (OECD); and IMF staff estimates.
Note: Estimates reflect within estimator with country and time fixed effects (with robust standard errors). BK = Baxter King; CFRW = Christiano-Fitzgerald Random Walk; HP = Hodrick Prescott; WEO = April 2015 *World Economic Outlook*.
*** $p < 0.01$.

Overall, estimates of the fiscal stabilization coefficient are not statistically different across alternative measures of the output gap. This reflects the fact that discrepancies between the various estimates are related to the level of the output gap whereas what matters for the estimation of the stabilization coefficients is the rate of change in the output gap over time.

[1] The sample size is dictated by the use of potential output estimates presented in Chapter 3 of the April 2015 *World Economic Outlook*.

[2] See Giorno and others (1995) for details.

[3] Under this approach, estimates of potential output are based on: (1) observations for GDP, inflation, and unemployment; (2) the structural relationships between inflation and unemployment (Phillips curve), and unemployment and output gaps (Okun's law); (3) projected data on growth and inflation to identify shocks, pin down potential growth, and address the end-of-sample problem; and (4) Bayesian estimation. The definition of potential output used in Chapter 3 of the April 2015 *WEO* is GDP consistent with stable inflation.

Box 2.2. Boosting the Effectiveness of Automatic Stabilizers

Automatic stabilizers effectively smooth output fluctuations without the usual limits associated with discretionary fiscal management (such as implementation delays and irreversibility). However, boosting automatic stabilizers could permanently increase government size and lead to efficiency loss. Based on Baunsgaard and Symansky (2009), this box summarizes possible instruments to automatically trigger stabilization without permanently increasing government size. Accordingly, the legal framework, such as the fiscal code, would include a provision that automatically accelerates fiscal stabilization when a recession threshold is reached and withdraws those measures following a recovery. This "automatizing" mechanism would prevent the need for a political decision and judgment at each phase of the economic cycle.

Tax deductions

Cyclical investment tax deductions: Automatic tax credits during recessions are stabilizing because they reduce the cost of capital and stimulate investment (Blanchard, Dell'Ariccia, and Mauro 2013). For instance, in Sweden, cyclical investment tax credits successfully served as countercyclical fiscal measures between the mid-1950s and the mid-1970s (Taylor 1982). During normal times, firms could deduct up to 40 percent of their taxable profit, allocate it to an investment fund, and draw on this fund freely for investment purposes during downturns.

Cyclical bonus depreciation: Under this measure, firms may automatically deduct from their taxable profits, as depreciation, a substantial portion of their new investment during recessions (Gravelle 2013). This measure seems to have boosted investment in the United States during the recent global financial crisis and, in particular, provided breathing space to the most liquidity-constrained firms (Zwick and Mahon 2014).

Cyclical loss-carry backward: As opposed to loss-carry forward, this measure automatically allows deduction of current corporate losses against past tax payments, leading to immediate refunds. It has been applied in some advanced countries including Canada, France, Germany, the United Kingdom, and the United States. This mechanism can provide hard-hit companies with immediate tax refunds during recessions.

Uniform personal income tax credits: Tax credits are preferable to deductions to encourage some socially valued activities (such as education and charitable contributions), while smoothing the economic cycle. The impact of tax credits on disposable income is fixed, whereas the impact of deductions declines during downturns. Uniform credits (that is, an equal credit for all individuals) are recommended because higher-income individuals receive higher effective tax relief under a deduction-based system (Batchelder, Goldberg, and Orszag 2006). This proposed measure applies when the personal income tax rate structure is progressive.

Cyclical property tax: To link the collection of property taxes more closely to the real estate cycle, governments could assess property values more frequently. In some cases, such as in Iceland and the Netherlands, this reassessment is carried out annually (Almy 2014). This mechanism would automatically contribute to smoothing the cycle by increasing tax collections during boom periods and reducing taxes during recessions.

Corporate income tax collections based on current-year estimated income: As opposed to a corporate income tax based on actual income of the previous year, this approach—which is already in use in many countries—allows linking tax collections to the current state of the economy more closely. The corporate income tax would be expected to play its stabilizing role more quickly as tax collections would be reduced more swiftly following initial signs of downturns and reversed more rapidly during recovery.

Expenditure

Automatic transfers to local governments: Subnational governments are often bound by balanced budget requirements, which fuel procyclicality, as local expenditure and revenue move together. Making transfers to local governments more contingent on the cycle would help mitigate the adverse impact of fiscal decentralization on macroeconomic stabilization. The legal fiscal framework could include such a provision, to be triggered when the severity of a downturn reaches a predetermined threshold.

Cyclical adjustment of unemployment benefits: Policymakers tend to enhance unemployment benefits (duration and amount) during recessions. However, such discretionary decisions often involve information, decision, and implementation lags. Different levels of generosity could be defined ahead of time, to be applied when specific thresholds on labor market indicators are reached. Such a mechanism would mitigate the risk of permanently increasing the generosity in the system.

Box 2.2 *(continued)*

The success of all these measures depends on appropriate design. Some countries have already experimented with some of these measures and found that they contributed to timely and effective fiscal stabilization without jeopardizing efficiency. The automatic triggers of these measures can include backward-looking indicators, such as a continuous decline in employment, or forward-looking indicators based on projections. The triggers should be appropriately selected: for instance, by an independent fiscal body, to minimize political interference and maximize technical expertise. The design should also prevent distortion of resource allocations, such as delayed investment in anticipation of a cyclical trigger. To that end, the tax administration would have to monitor closely anomalies in investment. Finally, tax administration capacity, fiscal space, and policy credibility should also be taken into account. For instance, in some emerging markets and developing countries with limited tax administration capacity, a corporate income tax based on current year income could be implemented, while a loss-carry backward would be more likely to lead to abuses.

References

Afonso, A., and D. Furceri. 2010. "Government Size, Composition, Volatility and Economic Growth." *European Journal of Political Economy* 26 (4): 517–32.

Afonso, A., and J. T. Jalles. 2012. "Fiscal Volatility, Financial Crises and Growth." *Applied Economics Letters* 19 (18): 1821–26.

———. 2013. "The Cyclicality of Education, Health, and Social Security Government Spending." *Applied Economics Letters* 20 (7): 669–72.

———. Forthcoming. "Economic Performance, Government Size and Institutional Quality." *Empirica*.

Aghion, P., and I. Marinescu. 2008. "Cyclical Budgetary Policy and Economic Growth: What Do We Learn from OECD Panel Data?" In *NBER Macroeconomics Annual 2007*, Vol. 22, edited by Daron Acemoglu, Kenneth Rogoff, and Michael Woodford. Chicago: University of Chicago Press.

Almy, R. 2014. "Valuation and Assessment of Immovable Property." OECD Working Papers on Fiscal Federalism, No. 19, Organisation for Economic Co-Operation and Development, Paris.

Arellano, M., and S. Bond. 1991. "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies* 58 (2): 277–97.

Auerbach, A. J., and D. R. Feenberg. 2000. "The Significance of Federal Taxes as Automatic Stabilizers." *Journal of Economic Perspectives* 14 (3): 37–56.

Batchelder, L., F. T. Goldberg, and P. Orszag. 2006. "Reforming Tax Incentives into Uniform Refundable Tax Credits." Policy Brief 156, Brookings Institution, Washington.

Baunsgaard, T., and A. Symansky. 2009. "Automatic Fiscal Stabilizers." IMF Staff Position Note 09/23, International Monetary Fund, Washington.

Bénétrix, A. S., and P. R. Lane. 2013. "Fiscal Cyclicality and EMU." *Journal of International Money and Finance* 34 (C): 164–76.

Blanchard, O. J. 1985. "Debt, Deficits and Finite Horizons." *Journal of Political Economy* 93 (2): 223–47.

———. 1993. "Suggestions for a New Set of Fiscal Indicators." In *The Political Economy of Government Debt*, edited by H. A. A. Verbon and F. A. A. M. Van Winden. Amsterdam: Elsevier Science.

Blanchard, O. J., and D. Quah. 1989. "The Dynamic Effects of Aggregate Demand and Supply Disturbances." *American Economic Review* 79 (4): 655–73.

Blanchard, O. J., and L. H. Summers. 1984. "Perspectives on High World Real Interest Rates." *Brookings Papers on Economic Activity* (2): 273–334.

Blanchard, O. J., G. Dell'Ariccia, and P. Mauro. 2010. "Rethinking Macro Policy." IMF Staff Position Note 10/03, International Monetary Fund, Washington.

———. 2013. "Rethinking Macro Policy II: Getting Granular." IMF Staff Discussion Note 13/03, International Monetary Fund, Washington.

Budina, N., B. Gracia, X. Hu, and S. Saksonovs. 2015. "Recognizing the Bias: Financial Cycles and Fiscal Policy." IMF Working Paper, Washington, forthcoming.

Cardarelli, R., S. Elekdag, and M. A. Kose. 2009. "Capital Inflows: Macroeconomic Implications and Policy Responses." IMF Working Paper 09/40, International Monetary Fund, Washington.

Cohen D., and G. Follette. 2000. "The Automatic Fiscal Stabilizers: Quietly Doing Their Thing." FRBNY *Economic Policy Review* (April): 35–67.

Darby, J., and J. Mélitz. 2008. "Social Spending and Automatic Stabilizers in the OECD." *Economic Policy* 23 (56): 715–56.

Debrun, X., and R. Kapoor. 2010. "Fiscal Policy and Macroeconomic Stability: New Evidence and Policy Implications." *Nordic Economic Policy Review* 1 (1): 35–70. See also IMF Working Paper 10/111, International Monetary Fund, Washington.

Debrun, X., J. Pisani-Ferry, and A. Sapir. 2008. "Government Size and Output Volatility: Should We Forsake Automatic Stabilization?" Economic Papers 316, European Commission, Brussels.

Devries, P., J. Guajardo, D. Leigh, and A. Pescatori. 2011. "A New Action-based Dataset of Fiscal Consolidation." IMF Working Paper 11/128, International Monetary Fund, Washington.

Fatás, A., and I. Mihov. 2001. "Government Size and Automatic Stabilizers: International and Intranational Evidence." *Journal of International Economics* 55 (1): 3–28.

———. 2003. "The Case for Restricting Fiscal Policy Discretion." *Quarterly Journal of Economics* 118 (4): 1419–47.

———. 2013. "Policy Volatility, Institutions and Economic Growth." *Review of Economics and Statistics* 95 (2): 362–76.

Furceri, D. 2010. "Stabilization Effects of Social Spending: Empirical Evidence from a Panel of OECD Countries." *The North American Journal of Economics and Finance* 21 (1): 34–48.

Furceri, D., and J. Jalles. 2015. "Fiscal Stabilization: Determinants and Effects." IMF Working Paper, International Monetary Fund, Washington, forthcoming.

Galí, J. 1994. "Government Size and Macroeconomic Stability." *European Economic Review* 38 (1994): 117–32.

Giorno, C., P. Richardson, D. Roseveare, and P. van den Noord. 1995. "Estimating Potential Output, Output Gaps and Structural Budget Balances." Working Paper 152, Economics Department, Organisation for Economic Co-operation and Development, Paris. http://dx.doi.org/10.1787/533876774515.

Girouard, N., and C. André. 2005. "Measuring Cyclically-Adjusted Budget Balances for OECD Countries," Working Paper 434, Economics Department, Organisation for Economic Co-operation and Development, Paris.

Granger, C. W. J., and T. Terasvirta. 1993. *Modelling Nonlinear Economic Relationships.* Oxford, United Kingdom: Oxford University Press.

Gravelle, J. G. 2013. "Using Business Tax Cuts to Stimulate the Economy." Congressional Research Service, Washington.

Greenwood, J., Z. Hercowitz, and G. Huffman. 1988. "Investment, Capacity Utilization, and the Real Business Cycle." *American Economic Review* 78 (3): 402–17.

Hsieh, C-T, and P. J. Klenow. 2007. "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics* 124 (4): 1403–48.

Mauro, P., R. Romeu, A. J. Binder, and A. Zaman. 2013. "A Modern History of Fiscal Prudence and Profligacy." IMF Working Paper 13/5, International Monetary Fund, Washington.

Mourre, G., C. Astarita, and S. Princen. 2014. "Adjusting the Budget Balance for the Business Cycle: The EU Methodology." European Economy–Economic Papers 536, Directorate General Economic and Monetary Affairs, European Commission, Brussels.

Organisation for Economic Co-operation and Development (OECD). 2014. "New Tax and Expenditure Elasticity Estimates for EU Budget Surveillance." Working Paper 1174, Economics Department, Paris.

Price R., T. Dang, and Y. Guillemette, 2014. "New Tax and Expenditure Elasticity Estimates for EU Budget Surveillance." Working Paper 1174, Paris.

Ramey, G., and V. Ramey. 1995. "Cross-Country Evidence on the Link between Volatility and Growth." *American Economic Review* 85 (5): 1138–51.

Rodrik, D. 1998. "Why Do More Open Economies Have Bigger Governments?" *Journal of Political Economy* 106 (5): 997–1032.

Schlicht, E. 1985. *Isolation and Aggregation in Economics*. New York: Springer-Verlag.

———. 1988. "Variance Estimation in a Random Coefficients Model." Paper presented at the Econometric Society European Meeting, Munich, 1989.

Taylor, J. 1982. "The Swedish Investment Funds System as a Stabilization Policy Rule." *Brookings Papers on Economic Activity* (1): 57–106.

Zwick, E., and J. Mahon. 2014. "Do Financial Frictions Amplify Fiscal Policy? Evidence from the Business Investment Stimulus." Department of Economics, Harvard University, Cambridge, Massachusetts.

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	Cabo 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	St. Kitts and Nevis

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

Code	Country name
ROU	Romania
RUS	Russia
RWA	Rwanda
SAU	Saudi Arabia
SDN	Sudan
SEN	Senegal
SGP	Singapore
SLB	Solomon Islands
SLE	Sierra Leone
SLV	El Salvador
SMR	San Marino
SOM	Somalia
SRB	Serbia
STP	São Tomé and Príncipe
SUR	Suriname
SVK	Slovak Republic
SVN	Slovenia
SWE	Sweden
SWZ	Swaziland
SYC	Seychelles
SYR	Syria
TCD	Chad
TGO	Togo
THA	Thailand
TJK	Tajikistan
TKM	Turkmenistan
TLS	Timor-Leste
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TUV	Tuvalu
TWN	Taiwan Province of China
TZA	Tanzania
UGA	Uganda
UKR	Ukraine
URY	Uruguay
USA	United States
UZB	Uzbekistan
VCT	St. 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.
Break-even fiscal oil price	Price of oil that is sufficient to ensure that total revenues are equal to or greater than government spending.
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 (that is, net of automatic stabilizers).
Cyclically adjusted primary balance (CAPB)	Cyclically adjusted balance excluding net interest payments.
Fiscal buffer	Fiscal space created by saving budgetary resources and reducing public debt in good times.
Fiscal coefficient	Sensitivity of the overall budget balance to a change in economic activity.
Fiscal devaluation	A revenue-neutral shift from employers' social contributions toward value-added tax.
Expenditure elasticity	Elasticity of expenditure with respect to the output gap.
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 space	Extent to which a government can allocate resources for a given purpose without prejudice of liquidity or long-term public debt sustainability.
Fiscal stabilization	Contribution of fiscal policy to output stability through its impact on aggregate demand.
Fiscal stimulus	Discretionary fiscal policy actions (including revenue reductions and spending increases) adopted in response to a 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; includes social security funds, and does not include public corporations or quasicorporations.

Term	Definition
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 programs; and other accounts payable. (See the IMF's 2001 *Government Finance Statistics Manual* and *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 specified otherwise. (Strictly speaking, 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 to 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 corresponding to debt instruments. These financial assets are monetary gold and special drawing rights; currency and deposits; debt securities; loans, insurance, pensions, and standardized guarantee programs; and other accounts receivable. In some countries, the reported net debt can deviate from this definition based on available information and national fiscal accounting practices.
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 and borrowing, defined as the difference between revenue and total expenditure, using the IMF's 2001 *Government Finance Statistics Manual* (GFSM 2001). Does not include policy lending. For some countries, the overall balance is still based on the GFSM 1986, which defines it 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.
Potential output	Estimate of the level of GDP that can be reached if the economy's resources are fully employed.
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-off operations and other factors whose cyclical fluctuations do not coincide with the output cycle (for instance, asset and commodity prices and output composition effects).

METHODOLOGICAL AND STATISTICAL APPENDIX

This appendix comprises five sections: Data and Conventions provides a general description of the data and conventions used to calculate economy group composites. Fiscal Policy Assumptions summarizes the country-specific assumptions underlying the estimates and projections for 2015–20. 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 April 3, 2015.

Data and Conventions

Country-specific data and projections for key fiscal variables are based on the April 2015 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 database are listed in the respective tables and figures.

The country classification in the *Fiscal Monitor* divides the world into three major groups: 35 advanced economies, 40 emerging market and middle-income economies, and 40 low-income developing countries. The seven largest advanced economies in terms of GDP (Canada, France, Germany, Italy, Japan, United Kingdom, United States) constitute the subgroup of major advanced economies, often referred to as the Group of Seven (G7). The members of the euro area are also distinguished as a subgroup. Composite data shown in the tables for the euro area cover the current members for all years, even though the membership has increased over time. Data for the EU member countries have been revised following the adoption of the new European System of National and Regional Accounts (ESA 2010). The low-income developing countries are those designated eligible for the Poverty Reduction and Growth Trust (PRGT) in the 2013 PRGT-eligible review and whose per capita gross national income was less than the PRGT income graduation threshold for "non-small" states—that is, twice the operational threshold of the International Development Association, or $2,390 in 2011, as measured by the World Bank's Atlas method. Zimbabwe is included in the group. Emerging market and middle-income economies include those not classified as advanced economies or low-income developing countries. See "Economy Groupings" for more details.

All fiscal data refer to the general government, where available, and to calendar years, except for Bangladesh, Côte d'Ivoire, Egypt, Haiti, Hong Kong SAR, India, Lao P.D.R., Pakistan, Qatar, Singapore, and Thailand, for which they refer to the fiscal year.

Composite data for country groups are weighted averages of individual-country data, unless specified otherwise. 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 2001 *Government Finance Statistics Manual* (GFSM 2001). The overall fiscal balance refers to net lending (+) and 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 whose statistical data are maintained on a separate and independent basis.

Argentina: Total expenditure and the overall balance account for cash interest only. The GDP data are officially reported data as revised in May 2014. On February 1, 2013, the IMF issued a declaration of censure, and in December 2013 called on Argentina to implement specified actions to address the quality of its official GDP data according to a specified timetable. On December 15, 2014, the Executive Board recognized the implementation of the specified actions it had called for by end-September 2014 and the steps taken by the Argentine authorities to remedy the inaccurate provision of data. The Executive Board will review this issue again as per the calendar specified in December 2013 and in line with the procedures set forth in the Fund's legal framework. Consumer price data from December 2013 onward reflect the new national CPI (IPCNu), which differs substantively from the preceding CPI (the CPI for the Greater Buenos Aires Area, CPI-GBA). Because of the differences in geographical coverage, weights, sampling, and methodology, the IPCNu data cannot be directly compared to the earlier CPI-GBA data. Following a declaration of censure by the IMF on February 1, 2013, the public release of a new national CPI by end-March 2014 was one of the specified actions in the IMF Executive Board's December 2013 decision calling on Argentina to address the quality of its official CPI data. On December 15, 2014, the Executive Board recognized the implementation of the specified actions it had called for by end-September 2014 and the steps taken by the Argentine authorities to remedy the inaccurate provision of data. The Executive Board will review this issue again as per the calendar specified in December 2013 and in line with the procedures set forth in the Fund's legal framework.

Australia: For cross-country comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 System of National Accounts (2008 SNA) (Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Bangladesh: Data are on a fiscal year basis.

Brazil: In tables for General Government (GG) indicators, Brazil entries correspond to the nonfinancial public sector—which includes the federal, state, and local governments, as well as public enterprises (excluding Petrobras and Eletrobras)—and are consolidated with the sovereign wealth fund. Revenue and expenditures of federal public enterprises are added in full to the respective aggregates. Transfers and withdrawals from the sovereign wealth fund do not affect the primary balance. Disaggregated data on gross interest payments and interest receipts are available from 2003 only. Before 2003, total revenue of the GG excludes interest receipts; total expenditure of the GG includes net interest payments. Gross public debt includes the Treasury bills on the central bank's balance sheet, including those not used under repurchase agreements. Net public debt consolidates GG and central bank debt. The national definition of general government gross debt excludes government securities held by the central bank, except the stock of Treasury securities used for monetary policy purposes by the central bank (those pledged as security reverse repurchase agreement operations). According to this national definition, gross debt amounted to 58.9 percent of GDP at the end of 2014.

Canada: For cross-country comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 SNA (Australia, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

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

China: Public debt data include central government debt as reported by the Ministry of Finance, explicit local government debt, and shares—ranging from 14 percent to 19 percent, according to the National Audit Office estimate—of government-guaranteed debt and liabilities the government may incur. IMF staff estimates exclude central government debt issued for the China Railway Corporation. Relative to the authorities' definition, the consolidated general government net borrowing includes: (1) transfers to and from stabilization funds; (2) state-administered state-owned enterprise funds and social security contributions and expenses (about 1¼ percent to 1½ percent of GDP a year since 2008); and (3) off-budget spending by local governments (estimated by net local government bonds issued by the central government on their behalf). Deficit numbers do not include some expenditure items, mostly infrastructure investment financed off budget through land sales and local government-financing vehicles. The fiscal balances are not consistent with reported debt because no time series of data in line with the National Audit Office debt definition is published officially.

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.

Egypt: Data are on a fiscal year basis.

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

Haiti: Data are on a fiscal year basis.

Hong Kong SAR: Data are on a fiscal year basis. Cyclically adjusted balances include adjustments for land revenue and investment income. For cross-country comparability, gross and net debt levels reported by national statistical agencies for countries that have adopted the 2008 SNA (Australia, Canada, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

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

India: Data are on a fiscal year basis.

Ireland: The general government balances between 2010 and 2016 reflect the impact of banking sector support and other one-off measures. The fiscal balance estimates excluding these measures are –13.3 percent of GDP for 2010; –8.6 percent of GDP for 2011; –8.0 percent of GDP for 2012; –6.1 percent of GDP for 2013; –4.1 percent of GDP for 2014; –2.5 percent of GDP for 2015; and –1.5 percent of GDP for 2016. Cyclically adjusted balances reported in Tables A3 and A4 exclude financial sector support and other one-off measures and correct for real output, equity, house prices, and unemployment cycles.

Japan: Gross debt is equal to total unconsolidated financial liabilities for the general government. Net debt is calculated by subtracting financial assets from financial liabilities for the general government.

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.

Qatar: Data are on a fiscal year basis.

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 to be 0.04 percent of GDP for 2010; 0.5 percent of GDP for 2011; 3.7 percent of GDP for 2012; 0.5 percent of GDP for 2013. For 2014 includes one-offs of 0.27 percent of GDP, of which financial sector support of 0.1 percent of GDP.

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 sizeable 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 2.4 percent of GDP for 2009; 0.3 percent of GDP for 2010; 0.2 percent of GDP for 2011; 0.1 percent of GDP for 2012; and zero for 2013. For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditure under the 2008 SNA recently adopted by the United States, but this is not true for countries that have not yet adopted the 2008 SNA. Data for the United States may thus differ from data published by the U.S. Bureau of Economic Analysis (BEA). In addition, gross and net debt levels reported by the BEA and national statistical agencies for other

countries that have adopted the 2008 SNA (Australia, Canada, Hong Kong SAR) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Fiscal Policy Assumptions

Historical data and projections of key fiscal aggregates are in line with those of the April 2015 *World Economic Outlook*, unless noted otherwise. For underlying assumptions other than on fiscal policy, see the April 2015 *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 fiscal forecast is based on the projections for GDP growth, exports and imports, and the nominal exchange rate.

Australia: Fiscal projections are based on the 2014–15 Budget, and the 2014–15 Mid-Year Economic and Fiscal Outlook (released on December 15, 2014). Updated projections were released in the Intergenerational Report (released on March 5, 2015).

Austria: Projections take into account the authorities' medium-term fiscal framework, as well as associated further implementation needs and risks. For 2014, the creation of a defeasance structure for Hypo Alpe Adria Bank is assumed to increase the general government debt-to-GDP ratio by 5½ percentage points and the deficit by 1.8 percentage points.

Belgium: Projections reflect the authorities' 2015 budget, adjusted for differences in the IMF staff's macroeconomic framework and assumptions about fiscal developments in the federal, regional, and local governments.

Brazil: For 2014, outturn estimates are based on the information available as of February 2015. Projections for 2015 take into account the 2015 budget approved by Congress in March 2015, and recent announcements made by the authorities; any measures still to be identified as of end-March 2015 to meet the annual fiscal target are assumed to be on the expenditure side. In outer years, projections are consistent with the announced primary surplus objectives

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 2014 (the fiscal year 2014/15 budget) and 2014 provincial budgets, as available. The IMF staff makes adjustments to this forecast 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 fourth quarter of 2014.

Chile: Projections are based on the authorities' budget projections and include adjustments to reflect the IMF staff's projections for GDP and copper prices. They also include the official yield estimate of the tax reform submitted to Congress in April 2014.

China: The pace of fiscal consolidation is likely to be more gradual, reflecting reforms to strengthen social safety nets and the social security system announced at the Third Plenum reform agenda.

Croatia: Projections are based on the macro framework and authorities' medium-term fiscal guidelines.

Cyprus: Projections are on a cash basis, based on the latest information on the budget, fiscal measures, and the IMF staff's macroeconomic assumptions.

Czech Republic: Projections are based on the authorities' budget forecast for 2014–15, with adjustments for the IMF staff's macroeconomic projections. Projections for 2015 onward are based on unchanged policies.

Denmark: Projections for 2014–15 are aligned with the latest official budget estimates and the underlying economic projections, adjusted where appropriate for the IMF staff's macroeconomic assumptions. For 2016–20, the projections incorporate key features of the medium-term fiscal plan as embodied in the authorities' 2014 Convergence Program submitted to the European Union.

Egypt: Fiscal projections are based mainly on budget sector operations.

Estonia: Projections are cash and not accrual based. They incorporate the authorities' 2014 budget, adjusted for newly available information and for the IMF staff's macroeconomic scenario.

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

France: Projections for 2015 reflect the budget law. For 2016–17, they are based on the multiyear budget, adjusted for differences in assumptions on macro and financial variables and revenue projections. Historical fiscal data reflect the September 2014 revision by the statistical institute of both fiscal accounts and the May 2014 revision of the national accounts.

Germany: The IMF staff's projections for 2015 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 2014 and the medium term are consistent with the policies needed to achieve the fiscal targets underlying the program supported by the Extended Fund Facility as agreed under the Fifth Review of the program.

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

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 in the 2015 budget.

India: Historical data are based on budgetary execution data. Projections are based on available information about 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 staff projections are based on a moderate tax policy and administration reforms, fuel subsidy pricing reforms introduced in January 2015, and a gradual increase in social and capital spending over the medium term in line with fiscal space.

Ireland: Fiscal projections are based on the 2015 budget. 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 Central Bureau of Statistics. The historical data, together with the announced fiscal consolidation plan by the authorities, form the basis of the IMF staff's medium-term fiscal projections.

Italy: Fiscal projections incorporate the government's announced fiscal policy, as outlined in the draft 2015 Stability Law, adjusted for different growth outlooks and estimated impacts of measures. Sovereign yields have fallen significantly since the 2015 Stability Law was passed and IMF staff have assumed that the savings from a lower interest bill will be used to pay down debt. Estimates of the cyclically adjusted balance include the expenditure to clear capital arrears in 2013, which are excluded from the structural balance. After 2014, the IMF staff projects convergence to a structural balance in line with Italy's fiscal rule, which implies corrective measures in some years, as yet unidentified.

Japan: The projections include fiscal measures already announced by the government, including consumption tax increases, earthquake reconstruction spending, and the stimulus package.

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

Korea: The medium-term forecast incorporates the government's announced medium-term consolidation path.

Malaysia: Fiscal year 2014 data is based on actual outturn. Fiscal year 2015 projections are based on the budget numbers. For 2015 and the remainder of the projection period, the IMF staff assumes that the authorities undertake subsidy reform and introduce a goods and services tax in 2015.

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

Malta: Projections are based on the latest Stability Programme Update by the authorities and budget documents, adjusted for the IMF staff's macroeconomic and other assumptions.

Mexico: Fiscal projections for 2015 are in line with the approved budget; projections for 2016 onward assume compliance with the rules established in the Fiscal Responsibility Law.

Moldova: Fiscal projections are based on the 2015 budget, discussions with the authorities, and IMF staff projections.

Mozambique: Fiscal projections assume a moderate increase in revenue as a percentage of GDP and a commensurate increase in domestic primary spending. They account for a lower aid flow, with the contribution from grants declining.

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

Netherlands: Fiscal projections for 2015–20 are based on the authorities' Bureau for Economic Policy Analysis budget projections, after adjustments for differences in macroeconomic assumptions. Historical data were revised following the release of revised macro data in June 2014 by the Central Bureau of Statistics because of the adoption of the European System of National and Regional Accounts (ESA 2010) and the revision of data sources.

New Zealand: Fiscal projections are based on the authorities' 2014 Half Year Economic and Fiscal Update and on IMF staff estimates.

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

Norway: Fiscal projections are based on the authorities' 2015 amended budget. Structural and cyclically adjusted balances are based on the non-oil balance.

Philippines: Fiscal projections assume that the authorities' fiscal deficit target will be achieved in 2015 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, current data, and fiscal space in each year.

Poland: Beginning in 2005, data are on the basis of the European System of National and Regional Accounts 2010 (ESA 2010) and are on an accrual basis. Projections are based on the 2015 budget and its execution up to the third quarter of 2014. Projections also take into account the effects of the 2014 pension changes.

Portugal: For 2014, the general government fiscal balance projection does not include one-off transactions arising from banking support and other operations related to government-owned enterprises, pending decisions on their statistical classification by the Instituto Nacional de Estatística (INE)/Eurostat. Projections for 2014–15 remain consistent with the authorities' EU budgetary commitments, subject to additional measures to be approved in the forthcoming 2015 budget. Projections thereafter are based on IMF staff estimates, under the assumption of unchanged policies.

Romania: The 2015 cash deficit projection is based on the approved budget for 2015.

Russia: Projections for 2015–20 are based on the oil-price-based fiscal rule introduced in December 2012, with adjustments by IMF staff.

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 differ from 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 the 13th-month pay awards every three years in accordance with the lunar calendar; projections assume that, to adjust to lower oil prices, capital spending falls as a percent of GDP over the medium-term as large-scale projects currently being implemented are completed.

Senegal: Estimates are based on program targets for 2015–16, and mostly debt sustainability analysis considerations thereafter. Fiscal accounts are shown in accordance with the IMF's *Government Finance Statistics Manual 2001* methodology.

Singapore: Projections are based on budget numbers for fiscal years 2014/15 and 2015/16 and unchanged policies thereafter.

Slovak Republic: Projections are based on revenue and expenditure from the authorities' 2015 budget and IMF staff estimates.

South Africa: Fiscal projections are based on the authorities' 2015 Budget Review.

Spain: For 2015 and beyond, fiscal projections are based on the measures specified in the Stability Programme Update 2014–17, the 2015 budget plan issued in October 2014, and the 2015 budget approved in December 2014.

Sri Lanka: Projections are based on the authorities' medium-term fiscal framework and staff's preliminary assessment of the revised 2015 budget.

Sweden: Fiscal projections take into account the authorities' projections based on the December 2014 forecasts. The impact of cyclical developments on the fiscal accounts is calculated using the 2005 Organisation for Economic Co-operation and Development elasticity in order to take into account output and employment gaps.

Switzerland: The projections assume that fiscal policy is adjusted as necessary to keep fiscal balances in line with the requirements of Switzerland's fiscal rules.

Thailand: For the projection period, the IMF staff assumes an implementation rate of 50 percent for the planned infrastructure investment programs.

Turkey: Fiscal projections assume that both current expenditures and capital spending will be above what is indicated in the authorities' 2015–17 Medium-Term Programme, based on current trends and policies.

United Kingdom: Fiscal projections are based on the U.K. Treasury's 2015 Budget published in March 2015. However, on the revenue side, the authorities' projections are adjusted for differences between IMF staff forecasts of macroeconomic variables (such as GDP growth) and the forecasts of these variables assumed in the authorities' fiscal projections. On the expenditure side, given uncertainties pertaining to the May elections, a slightly slower pace of consolidation than that in the Budget is assumed for FY2016/17 and beyond, though fiscal projections are fully consistent with the fiscal mandates. In addition, IMF staff data exclude public sector banks and the effect of transferring assets from the Royal Mail Pension Plan to the public sector in April 2012. Real government consumption and investment are part of the real GDP path, which, according to the IMF staff, may or may not be the same as the path projected by the U.K. Office for Budget Responsibility.

United States: Fiscal projections are based on the January 2015 Congressional Budget Office baseline, adjusted for the IMF staff's policy and macroeconomic assumptions. The baseline incorporates the key provisions of the Bipartisan Budget Act of 2013, including a partial rollback of the sequester spending cuts in fiscal years 2014 and 2015. The rollback is fully offset by savings elsewhere in the budget. In fiscal years 2016 through 2021, the IMF staff assumes that the sequester cuts will continue to be partially replaced, in portions similar to those agreed under the Bipartisan Budget Act for fiscal years 2014 and 2015, with back-loaded measures generating savings in mandatory programs and additional revenues. 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). The fiscal projections are adjusted to reflect the IMF staff's forecasts of key macroeconomic and financial variables and different accounting treatment of financial sector support and defined-benefit pension plans and are converted to a general government basis. Historical data start in 2001 for most series because data compiled according to the *Government Finance Statistics Manual 2001* may not be available for earlier years.

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

Yemen: Hydrocarbon revenue projections are based on IMF staff assumptions for oil and gas prices and authorities' projections of production of oil and gas. Nonhydrocarbon revenues largely reflect authorities' projections, as do most of the expenditure categories, with the exception of fuel subsidies, which are projected based on a price consistent with revenues.

Definition and Coverage of Fiscal Data

Economy Groupings

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

Advanced Economies	Emerging Market and Middle-Income Economies	Low-Income Developing Countries	G7	G20[1]	Advanced G20[1]	Emerging G20
Australia	Algeria	Bangladesh	Canada	Argentina	Australia	Argentina
Austria	Angola	Benin	France	Australia	Canada	Brazil
Belgium	Argentina	Bolivia	Germany	Brazil	France	China
Canada	Azerbaijan	Burkina Faso	Italy	Canada	Germany	India
Cyprus	Belarus	Cambodia	Japan	China	Italy	Indonesia
Czech Republic	Brazil	Cameroon	United Kingdom	France	Japan	Mexico
Denmark	Chile	Chad	United States	Germany	Korea	Russia
Estonia	China	Democratic Republic of the Congo		India	United Kingdom	Saudi Arabia
Finland	Colombia	Republic of Congo		Indonesia	United States	South Africa
France	Croatia	Côte d'Ivoire		Italy		Turkey
Germany	Dominican Republic	Ethiopia		Japan		
Greece	Ecuador	Ghana		Korea		
Hong Kong SAR	Egypt	Guinea		Mexico		
Iceland	Hungary	Haiti		Russia		
Ireland	India	Honduras		Saudi Arabia		
Israel	Indonesia	Kenya		South Africa		
Italy	Iran	Kyrgyz Republic		Turkey		
Japan	Kazakhstan	Lao P.D.R.		United Kingdom		
Korea	Kuwait	Madagascar		United States		
Latvia	Libya	Mali				
Lithuania	Malaysia	Moldova				
Luxembourg	Mexico	Mongolia				
Malta	Morocco	Mozambique				
Netherlands	Oman	Myanmar				
New Zealand	Pakistan	Nepal				
Norway	Peru	Nicaragua				
Portugal	Philippines	Niger				
Singapore	Poland	Nigeria				
Slovak Republic	Qatar	Papua New Guinea				
Slovenia	Romania	Rwanda				
Spain	Russia	Senegal				
Sweden	Saudi Arabia	Sudan				
Switzerland	South Africa	Tajikistan				
United Kingdom	Sri Lanka	Tanzania				
United States	Thailand	Uganda				
	Turkey	Uzbekistan				
	Ukraine	Vietnam				
	United Arab Emirates	Yemen				
	Uruguay	Zambia				
	Venezuela	Zimbabwe				

[1] Does not include EU aggregate.

Economy groupings *(continued)*

Euro Area	Emerging Market and Middle-Income Asia	Emerging Market and Middle-Income Europe	Emerging Market and Middle-Income Latin America	Emerging Market and Middle-Income Middle East and North Africa and Pakistan	Emerging Market and Middle-Income Africa
Austria	China	Azerbaijan	Argentina	Algeria	Angola
Belgium	India	Belarus	Brazil	Egypt	South Africa
Cyprus	Indonesia	Croatia	Chile	Iran	
Estonia	Malaysia	Hungary	Colombia	Kuwait	
Finland	Philippines	Kazakhstan	Dominican Republic	Libya	
France	Sri Lanka	Poland	Ecuador	Morocco	
Germany	Thailand	Romania	Mexico	Oman	
Greece		Russia	Peru	Pakistan	
Ireland		Turkey	Uruguay	Qatar	
Italy		Ukraine	Venezuela	Saudi Arabia	
Latvia				United Arab Emirates	
Lithuania					
Luxembourg					
Malta					
Netherlands					
Portugal					
Slovak Republic					
Slovenia					
Spain					

Low-Income Developing Asia	Low-Income Developing Latin America	Low-Income Developing Sub-Saharan Africa	Low-Income Developing Others	Low-Income Oil Producers	Oil Producers
Bangladesh	Bolivia	Benin	Kyrgyz Republic	Cameroon	Algeria
Cambodia	Haiti	Burkina Faso	Moldova	Chad	Angola
Lao P.D.R.	Honduras	Cameroon	Sudan	Republic of Congo	Azerbaijan
Mongolia	Nicaragua	Chad	Tajikistan	Côte d'Ivoire	Bahrain
Myanmar		Democratic Republic of the Congo	Uzbekistan	Sudan	Brunei Darussalam
Nepal		Republic of Congo	Yemen	Vietnam	Cameroon
Papua New Guinea		Côte d'Ivoire		Yemen	Chad
Vietnam		Ethiopia			Democratic Republic of the Congo
		Ghana			Republic of Congo
		Guinea			Côte d'Ivoire
		Kenya			Ecuador
		Madagascar			Equatorial Guinea
		Mali			Gabon
		Mozambique			Indonesia
		Niger			Iran
		Nigeria			Iraq
		Rwanda			Kazakhstan
		Senegal			Kuwait
		Tanzania			Libya
		Uganda			Mexico
		Zambia			Nigeria
		Zimbabwe			Norway
					Oman
					Qatar
					Russia
					Saudi Arabia
					Sudan
					Syria
					Timor-Leste
					Turkmenistan
					United Arab Emirates
					Venezuela
					Vietnam
					Yemen

Table A. Advanced Economies: 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
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Australia	GG	CG, LG, SG, TG	A	GG	CG, LG, SG, TG	A	GG	CG, LG, SG, TG	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
Cyprus[2]	GG	CG, LG, SS, EA	C	–	–	–	GG	CG, LG, SS, EA	C
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, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, 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
Latvia	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C
Lithuania	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Luxembourg	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Malta	GG	CG, SG, SS	A	GG	CG, SG, SS	A	GG	CG, SG, SS	A
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, LG, SS	A	GG	CG, LG, SS	A	GG	CG, 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, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, 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; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; PS = public sector; SG = state governments; SS = social security funds; TG = territory governments. Accounting standard: A = accrual; C = cash.

[1] For most economies, fiscal data follow the IMF's *Government Finance Statistics Manual 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] Historical data until 2012 are reported on an accrual basis as general government cash data was not available for years that preceded the IMF program.

Table B. Emerging Market and Middle-Income Economies: 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
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Algeria	CG	CG	C	–	–	–	CG	CG	C
Angola	GG	CG, SS	Other	–	–	–	GG	CG, SS	Other
Argentina	GG	CG, SG, LG, SS	C	CG	CG	C	GG	CG, SG, LG, SS	C
Azerbaijan	CG	CG	C	–	–	–	CG	CG	C
Belarus[2]	GG	CG, SG, LG, SS	C	–	–	–	GG	CG, SG, LG, SS	C
Brazil[3]	NFPS	CG, SG, LG, SS, MPC, NFPC	C	NFPS	CG, SG, LG, SS, MPC, NFPC	C	NFPS	CG, SG, LG, SS, MPC, NFPC	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]	PS	CG, SG, LG, NFPC	C/A	PS	CG, SG, LG, NFPC	C/A	PS	CG, SG, LG, NFPC	C/A
Croatia	GG	CG, LG	C	GG	CG, LG	C	GG	CG, LG	C
Dominican Republic	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Ecuador	NFPS	SG, LG, SS, NFPC	C	NFPS	SG, LG, SS, NFPC	C	NFPS	SG, LG, SS, NFPC	C
Egypt	CG	CG	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Hungary	NFPS	CG, LG, SS, NMPC	A	NFPS	CG, LG, SS, NMPC	A	NFPS	CG, LG, SS, NMPC	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
Iran	CG	CG	C	–	–	–	CG	CG	C
Kazakhstan	GG	CG, LG	A	–	–	–	GG	CG, LG	A
Kuwait	CG	CG	C/A	–	–	–	CG	CG	C/A
Libya	GG	CG, SG, LG	C	–	–	–	GG	CG, SG, LG	C
Malaysia	GG	CG, SG, LG	C	GG	CG	C	GG	CG, SG, LG	C
Mexico	PS	CG, SS, NFPC, FPC	C	CG	CG	C	PS	CG, SS, NFPC, FPC	C
Morocco	CG	CG	A	–	–	–	CG	CG	A
Oman	CG	CG	C	–	–	–	CG	CG	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, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Qatar	CG	CG	C	–	–	–	CG	CG	C
Romania	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Russia	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Saudi Arabia	GG	CG, SS	C	–	–	–	GG	CG, SS	C
South Africa	GG	CG, SG, SS	C	GG	CG, SG, SS	C	GG	CG, SG, SS	C
Sri Lanka	GG	CG, SG, LG, SS	C	–	–	–	GG	CG, SG, LG, SS	C
Thailand[5]	GG	CG, LG, SS, EA	A	GG	CG, LG, SS, EA	A	PS	CG, SS, EA, NFPC, NMPC	A
Turkey	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Ukraine	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
United Arab Emirates[6]	GG	CG, SG	C	–	–	–	GG	CG, SG	C
Uruguay	GG	CG, LG, SS, MPC, NFPC	A	–	–	–	GG	CG, LG, SS, MPC, NFPC	A
Venezuela	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C

Note: Coverage: BA = budgetary central government; CG = central government; EA = extrabudgetary units; FPC = financial public corporations; GG = general government; LG = local governments; MPC = monetary public corporations, including central bank; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; NMPC = nonmonetary financial public corporations; PS = public sector; SG = state governments; SS = social security funds. Accounting standard: A = accrual; C = cash.

[1] For most economies, fiscal data follow the IMF's *Government Finance Statistics Manual 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] Gross debt refers to general government public debt, including publicly guaranteed debt.

[3] 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.

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

[5] Does not include debt of Specialized Financial Institutions (SFIs - NMPC) without government guarantee.

[6] Gross debt covers banking system claims only.

Table C. Low-Income Developing 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
	Aggregate	Subsectors		Aggregate	Subsectors		Aggregate	Subsectors	
Bangladesh	CG	CG	C	CG	CG	C	CG	CG	C
Benin	CG	CG	C	–	–	–	CG	CG	C
Bolivia	NFPS	CG, LG, SS, MPC, NMPC, NFPC	C	NFPS	CG, LG, SS, MPC, NMPC, NFPC	C	NFPS	CG, LG, SS, MPC, NMPC, NFPC	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, NFPC	C	–	–	–	NFPS	CG, NFPC	C
Chad	NFPS	CG, NFPC	C	–	–	–	NFPS	CG, NFPC	C
Democratic Republic of the Congo	GG	CG, SG, LG	A	–	–	–	GG	CG, SG, LG	A
Republic of Congo	CG	CG	A	–	–	–	CG	CG	A
Côte d'Ivoire	CG	CG	A	–	–	–	CG	CG	A
Ethiopia	CG	CG	C	–	–	–	CG	CG	C
Ghana	CG	CG	C	–	–	–	CG	CG	C
Guinea	CG	CG	Other	–	–	–	CG	CG	Other
Haiti	CG	CG	C	CG	CG	C	CG	CG	C
Honduras	CPS	CG, LG, SS, NFPC	A	CPS	CG, LG, SS, NFPC	A	CPS	CG, LG, SS, NFPC	A
Kenya	CG	CG	A	–	–	–	CG	CG	A
Kyrgyz Republic	GG	CG, LG, SS	C	–	–	–	GG	CG, LG, SS	C
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, SS	C	GG	CG, LG, SS	C	GG	CG, LG, SS	C
Mongolia	GG	CG, SG, LG, SS	C	–	–	–	GG	CG, SG, LG, SS	C
Mozambique	CG	CG	C	CG	CG	C	CG	CG	C
Myanmar[3]	NFPS	CG, NFPC	C	–	–	–	NFPS	CG, NFPC	C
Nepal	CG	CG	C	CG	CG	C	CG	CG	C
Nicaragua	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C	GG	CG, SG, LG, SS	C
Niger	CG	CG	A	–	–	–	CG	CG	A
Nigeria	GG	CG, LG, SS, EA	C	–	–	–	GG	CG, LG, SS, EA	C
Papua New Guinea	CG	CG	C	–	–	–	CG	CG	C
Rwanda	GG	CG, SG, LG	C/A	–	–	–	GG	CG, SG, LG	C/A
Senegal	CG	CG	C	CG	CG	C	CG	CG	C
Sudan	CG	CG	A	–	–	–	CG	CG	A
Tajikistan	GG	CG, LG, SS	C	–	–	–	GG	CG, LG, SS	C
Tanzania	CG	CG	C	–	–	–	CG	CG	C
Uganda	CG	CG	C	–	–	–	CG	CG	C
Uzbekistan[4]	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
Zambia	CG	CG	C	–	–	–	CG	CG	C
Zimbabwe	CG	CG	C	–	–	–	CG	CG	C

Note: Coverage: BA = budgetary central government; CG = central government; CPS = combined public sector; EA = extrabudgetary units; FC = financial public corporations; GG = general government; LG = local governments; MPC = monetary public corporations, including central bank; NFPC = nonfinancial public corporations; NFPS = nonfinancial public sector; NMPC = nonmonetary financial public corporations; 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 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] Overall and primary balances in 2012 are based on the monetary statistics and are different from the balances calculated from expenditure and revenue data.

[4] Includes the Fund for Reconstruction and Development.

Table A1. Advanced Economies: General Government Overall Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	1.8	1.5	–1.1	–4.6	–5.1	–4.5	–3.4	–3.0	–3.6	–3.3	–2.7	–2.0	–1.4	–1.1	–0.8
Austria	–2.5	–1.3	–1.5	–5.3	–4.5	–2.6	–2.3	–1.5	–3.3	–1.7	–1.7	–1.5	–1.4	–1.3	–1.3
Belgium	0.2	0.0	–1.1	–5.5	–4.0	–3.9	–4.1	–2.9	–3.2	–2.9	–2.1	–1.3	–0.9	–0.5	–0.1
Canada	1.8	1.5	–0.3	–4.5	–4.9	–3.7	–3.1	–2.8	–1.8	–1.7	–1.3	–0.9	–0.7	–0.6	–0.2
Cyprus	–1.1	3.2	0.9	–5.6	–4.8	–5.8	–5.8	–4.3	–0.1	–1.1	0.2	0.3	1.2	0.9	1.0
Czech Republic	–2.3	–0.7	–2.1	–5.5	–4.5	–3.0	–4.0	–1.4	–1.0	–1.4	–1.2	–1.2	–1.2	–1.1	–1.0
Denmark	5.0	5.0	3.2	–2.8	–2.7	–2.1	–3.7	–1.1	1.8	–2.3	–2.1	–1.9	–1.4	–1.0	–0.5
Estonia	2.4	2.4	–2.9	–1.9	0.2	1.0	–0.3	–0.5	0.4	–0.5	–0.1	0.0	0.0	0.0	0.0
Finland	3.9	5.1	4.2	–2.5	–2.5	–1.0	–2.1	–2.3	–2.7	–2.4	–1.8	–1.2	–0.8	–0.7	–0.6
France	–2.3	–2.5	–3.2	–7.2	–6.8	–5.1	–4.9	–4.1	–4.2	–3.9	–3.5	–2.8	–1.9	–1.1	–0.4
Germany	–1.6	0.2	–0.1	–3.0	–4.0	–0.8	0.1	0.1	0.6	0.3	0.4	0.4	0.6	0.6	0.6
Greece	–6.1	–6.7	–9.9	–15.2	–11.1	–10.1	–6.3	–2.8	–2.7	–0.8	0.7	0.7	0.7	0.8	1.0
Hong Kong SAR	4.1	8.1	0.1	1.5	4.4	4.1	3.3	1.1	5.3	3.2	2.6	1.8	2.1	3.1	3.1
Iceland	5.8	4.9	–13.1	–9.7	–9.7	–5.6	–3.7	–1.7	1.8	0.1	0.1	1.2	0.6	0.7	0.8
Ireland[1]	2.8	0.2	–7.0	–13.9	–32.4	–12.6	–8.0	–5.7	–3.9	–2.4	–1.5	–0.6	0.0	0.0	0.0
Israel	–2.2	–1.2	–3.3	–6.2	–4.6	–3.9	–5.1	–4.1	–3.6	–3.5	–3.5	–2.8	–2.2	–1.7	–1.5
Italy	–3.6	–1.5	–2.7	–5.3	–4.2	–3.5	–3.0	–2.9	–3.0	–2.6	–1.7	–1.1	–0.6	0.0	0.3
Japan	–3.7	–2.1	–4.1	–10.4	–9.3	–9.8	–8.8	–8.5	–7.7	–6.2	–5.0	–4.3	–3.8	–4.0	–4.4
Korea	1.1	2.2	1.5	0.0	1.5	1.7	1.6	0.7	0.3	0.3	0.6	0.9	1.1	1.4	1.7
Latvia	–0.5	0.6	–7.1	–7.7	–7.3	–3.2	0.1	–1.2	–1.7	–1.4	–1.0	–1.7	–0.5	–0.4	–0.4
Lithuania	–0.4	–1.0	–3.3	–9.3	–6.9	–9.0	–3.2	–2.6	–0.7	–1.4	–1.6	–1.6	–1.5	–1.4	–1.3
Luxembourg	1.4	4.2	3.3	–0.5	–0.6	0.3	0.1	0.6	0.5	–0.5	0.2	0.2	0.4	0.4	0.5
Malta	–2.6	–2.3	–4.2	–3.3	–3.3	–2.6	–3.6	–2.7	–2.2	–1.8	–1.6	–1.5	–1.3	–1.1	–0.9
Netherlands	0.2	0.2	0.2	–5.5	–5.0	–4.3	–4.0	–2.3	–2.3	–1.4	–0.5	–0.3	–0.3	–0.3	–0.2
New Zealand	4.3	3.4	1.5	–1.5	–5.0	–4.8	–1.6	–0.8	–0.6	0.0	0.5	1.0	1.3	1.3	1.3
Norway	18.0	17.0	18.5	10.3	10.9	13.2	13.5	11.0	8.8	7.3	7.3	7.3	7.1	6.8	6.3
Portugal	–2.0	–3.0	–3.8	–9.8	–11.2	–7.4	–5.6	–4.8	–4.5	–3.2	–2.8	–2.5	–2.4	–2.5	–2.5
Singapore	7.0	11.8	6.4	–0.6	6.6	8.5	7.8	5.4	4.2	1.5	2.1	2.3	2.4	2.6	2.6
Slovak Republic	–3.6	–1.9	–2.4	–7.9	–7.5	–4.1	–4.2	–2.6	–3.0	–2.6	–2.3	–1.8	–1.6	–1.5	–1.4
Slovenia	–0.8	0.3	–0.3	–5.4	–5.2	–5.5	–3.1	–13.8	–5.8	–4.0	–3.4	–3.4	–3.5	–3.6	–3.7
Spain[1]	2.2	2.0	–4.4	–11.0	–9.4	–9.4	–10.3	–6.8	–5.8	–4.3	–2.9	–2.5	–2.0	–1.5	–1.5
Sweden	2.1	3.4	2.1	–0.9	0.0	0.0	–0.7	–1.4	–2.1	–1.3	–0.6	–0.4	–0.1	0.2	0.5
Switzerland	0.9	1.3	1.7	0.5	0.1	0.3	–0.1	–0.1	0.2	–0.4	–0.2	–0.2	0.0	0.0	0.0
United Kingdom	–2.9	–3.0	–5.1	–10.8	–9.7	–7.6	–7.8	–5.7	–5.7	–4.8	–3.1	–1.5	–0.6	–0.3	–0.3
United States[2]	–2.4	–3.2	–7.0	–13.5	–11.3	–9.9	–8.6	–5.8	–5.3	–4.2	–3.9	–3.4	–3.3	–3.7	–3.9
Average	–1.5	–1.3	–3.6	–8.9	–7.8	–6.4	–5.7	–4.2	–3.9	–3.3	–2.7	–2.2	–1.9	–1.9	–1.9
Euro Area	–1.4	–0.6	–2.1	–6.2	–6.1	–4.1	–3.6	–2.9	–2.7	–2.3	–1.7	–1.3	–0.9	–0.5	–0.3
G7	–2.4	–2.3	–4.7	–10.2	–8.9	–7.6	–6.8	–5.0	–4.6	–3.8	–3.3	–2.7	–2.4	–2.5	–2.6
G20 Advanced	–2.2	–2.0	–4.4	–9.7	–8.5	–7.2	–6.4	–4.8	–4.4	–3.6	–3.1	–2.5	–2.2	–2.3	–2.3

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 A.

[1] Including financial sector support, estimated for Spain at 0.04 percent of GDP for 2010; 0.5 percent of GDP for 2011; 3.7 percent of GDP for 2012; 0.5 percent of GDP in 2013. For 2014 includes one-offs of 0.27 percent of GDP, of which financial sector support of 0.1 percent of GDP.

[2] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.

Table A2. Advanced Economies: General Government Primary Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	1.5	1.3	–1.1	–4.5	–4.8	–4.0	–2.7	–2.2	–2.6	–2.2	–1.6	–0.9	–0.3	0.0	0.3
Austria	0.0	1.0	0.9	–2.7	–2.0	–0.3	0.0	0.7	–1.2	0.4	0.8	1.1	1.2	1.3	1.3
Belgium	3.9	3.6	2.4	–2.1	–0.8	–0.8	–0.9	0.0	–0.3	–0.3	0.4	1.0	1.3	1.6	1.9
Canada	2.4	2.0	–0.2	–3.7	–4.3	–3.3	–2.6	–2.4	–1.4	–1.4	–0.9	–0.6	–0.3	–0.1	0.2
Cyprus	1.3	5.4	3.1	–3.6	–3.2	–4.0	–3.3	–1.9	2.9	1.4	2.6	3.0	4.0	4.0	4.0
Czech Republic	–1.6	0.0	–1.4	–4.6	–3.4	–1.9	–2.8	–0.2	0.2	–0.3	–0.1	0.0	–0.1	0.0	0.2
Denmark	5.8	5.6	3.4	–2.4	–2.1	–1.5	–3.1	–0.6	2.4	–1.7	–1.5	–1.6	–1.1	–0.7	–0.2
Estonia	2.2	2.0	–3.3	–2.2	0.0	0.9	–0.4	–0.5	0.3	–0.6	–0.2	0.0	0.0	0.0	0.1
Finland	3.7	4.8	3.6	–2.9	–2.5	–1.0	–1.9	–2.3	–2.5	–2.2	–1.6	–1.1	–0.8	–0.6	–0.4
France	0.0	–0.1	–0.5	–4.9	–4.5	–2.6	–2.4	–2.0	–2.1	–2.0	–1.7	–1.1	–0.2	0.5	1.2
Germany	0.8	2.6	2.2	–0.8	–2.0	1.1	1.9	1.7	2.0	1.5	1.3	1.2	1.3	1.2	1.1
Greece	–1.6	–2.1	–5.0	–10.2	–5.2	–2.9	–1.3	1.2	1.5	3.0	4.5	4.5	4.2	4.2	4.2
Hong Kong SAR	3.7	7.8	–0.3	1.4	4.3	3.9	3.1	0.9	5.1	3.0	2.4	1.6	2.0	3.0	2.9
Iceland	6.2	5.1	–13.2	–6.6	–6.8	–2.5	–0.1	2.0	5.1	3.3	2.8	3.7	2.8	2.9	2.8
Ireland[1]	3.5	0.8	–6.3	–12.4	–30.0	–9.7	–4.4	–1.9	–0.3	0.6	1.4	2.4	2.8	2.9	2.8
Israel	2.9	3.5	0.8	–2.2	–0.7	–0.2	–1.4	–0.5	–0.1	–0.1	–0.1	0.6	1.2	1.7	1.9
Italy	0.6	3.0	2.0	–1.1	–0.2	0.9	1.9	1.8	1.5	1.4	2.0	2.3	2.7	3.0	3.3
Japan	–3.7	–2.1	–3.8	–9.9	–8.6	–9.0	–7.9	–7.8	–7.0	–5.7	–4.4	–3.8	–3.2	–3.3	–3.3
Korea	2.3	1.4	1.2	–0.7	0.8	0.9	0.8	–0.2	–0.4	–0.2	0.2	0.8	1.0	1.3	1.8
Latvia	–0.1	0.8	–7.0	–7.1	–6.3	–2.2	1.4	0.0	–0.4	–0.1	0.0	–0.7	0.7	0.6	0.5
Lithuania	0.1	–0.5	–2.8	–8.2	–5.2	–7.2	–1.2	–0.9	0.9	0.2	0.0	0.1	0.2	0.3	0.5
Luxembourg	0.6	3.1	2.0	–1.0	–0.9	0.0	–0.1	0.5	0.3	–0.6	0.1	0.1	0.4	0.4	0.5
Malta	1.1	1.2	–0.9	–0.1	–0.2	0.5	–0.6	0.2	0.8	1.1	1.3	1.5	1.6	1.8	2.1
Netherlands	1.7	1.6	1.7	–4.0	–3.8	–3.1	–2.8	–1.3	–1.3	–0.7	0.2	0.4	0.3	0.4	0.4
New Zealand	3.9	3.1	1.2	–2.0	–5.4	–4.7	–1.4	–0.8	–0.6	–0.1	0.3	0.8	1.1	1.0	1.0
Norway	15.9	14.1	15.5	8.0	8.8	11.1	11.7	9.2	6.6	5.2	5.2	5.1	5.0	4.7	4.2
Portugal	–0.1	–0.9	–1.7	–7.8	–9.1	–4.1	–1.9	0.1	0.4	1.7	1.7	1.8	1.7	1.6	1.5
Singapore	5.6	10.4	5.0	–2.0	5.1	7.0	6.4	4.0	2.8	0.0	0.7	0.9	1.0	1.1	1.0
Slovak Republic	–2.7	–1.0	–1.5	–6.8	–6.4	–2.8	–2.6	–0.9	–1.4	–1.2	–1.0	–0.7	–0.7	–0.6	–0.6
Slovenia	0.3	1.2	0.5	–4.6	–4.0	–4.2	–1.4	–11.6	–2.8	–1.0	–0.3	–0.1	0.0	0.0	0.0
Spain[1]	3.5	3.1	–3.4	–9.6	–7.8	–7.5	–7.9	–4.0	–3.0	–1.6	–0.4	–0.1	0.3	0.8	0.8
Sweden	2.9	4.0	2.5	–0.7	0.2	0.3	–0.6	–1.4	–2.2	–1.4	–0.7	–0.5	–0.1	0.2	0.6
Switzerland	1.8	1.9	2.3	1.1	0.7	0.8	0.4	0.2	0.6	–0.1	0.1	0.2	0.3	0.3	0.3
United Kingdom	–1.3	–1.3	–3.6	–9.4	–7.2	–4.9	–5.4	–4.4	–3.8	–3.2	–1.4	0.4	1.3	1.6	1.6
United States	–0.4	–1.1	–5.0	–11.6	–9.2	–7.6	–6.3	–3.6	–3.2	–2.2	–1.8	–1.3	–1.1	–1.2	–1.3
Average	0.1	0.4	–2.0	–7.3	–6.1	–4.6	–3.9	–2.6	–2.2	–1.7	–1.2	–0.6	–0.3	–0.2	–0.2
Euro Area	1.1	1.9	0.4	–3.8	–3.7	–1.6	–1.0	–0.4	–0.3	–0.1	0.3	0.5	0.9	1.1	1.3
G7	–0.6	–0.3	–2.7	–8.3	–7.0	–5.5	–4.7	–3.2	–2.7	–2.1	–1.5	–1.0	–0.6	–0.6	–0.6
G20 Advanced	–0.5	–0.2	–2.6	–8.0	–6.7	–5.3	–4.4	–3.0	–2.6	–2.0	–1.5	–0.9	–0.5	–0.5	–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 A.

[1] Including financial sector support, estimated for Spain at 0.04 percent of GDP for 2010; 0.5 percent of GDP for 2011; 3.7 percent of GDP for 2012; 0.5 percent of GDP in 2013. For 2014 includes one-offs of 0.27 percent of GDP, of which financial sector support of 0.1 percent of GDP.

Table A3. Advanced Economies: General Government Cyclically Adjusted Balance, 2006–20

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	1.7	1.2	–1.4	–4.4	–4.9	–4.2	–3.0	–2.6	–3.0	–2.7	–2.2	–1.7	–1.3	–1.0	–0.8
Austria	–3.0	–2.8	–3.1	–4.3	–3.8	–3.0	–2.5	–1.3	–2.8	–1.2	–1.4	–1.4	–1.3	–1.3	–1.3
Belgium	–0.5	–1.3	–2.2	–4.7	–3.9	–4.1	–3.8	–2.2	–2.5	–2.3	–1.7	–1.0	–0.7	–0.4	–0.1
Canada	1.0	0.8	–0.6	–3.0	–4.0	–3.2	–2.6	–2.3	–1.5	–1.6	–1.2	–0.9	–0.7	–0.6	–0.2
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	–3.9	–2.9	–4.3	–5.3	–4.4	–3.1	–3.3	–0.2	–0.1	–0.9	–1.1	–1.2	–1.2	–1.1	–1.0
Denmark	2.9	3.0	1.4	–1.6	–1.6	–1.5	–2.7	0.1	2.7	–1.8	–2.2	–2.4	–2.1	–1.7	–1.2
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	2.2	2.1	1.6	0.2	–1.2	–1.0	–1.1	–0.6	–0.6	–0.6	–0.3	–0.3	–0.2	–0.4	–0.5
France	–3.1	–3.7	–3.7	–5.4	–5.6	–4.6	–4.1	–3.0	–2.7	–2.5	–2.2	–1.8	–1.2	–0.6	–0.1
Germany	–1.6	–0.8	–1.1	–0.8	–3.3	–1.3	–0.2	0.5	0.8	0.3	0.2	0.1	0.3	0.3	0.3
Greece	–8.4	–10.5	–13.9	–18.6	–12.1	–8.0	–2.0	2.2	1.5	2.1	2.1	1.3	0.8	0.8	1.0
Hong Kong SAR[1]	1.7	4.2	–0.6	–0.9	1.0	1.3	0.6	–0.8	2.7	1.5	1.1	0.6	0.9	1.7	1.6
Iceland	4.3	2.8	–4.4	–10.0	–7.8	–4.9	–3.1	–1.4	2.7	0.3	0.0	1.3	0.6	0.7	0.8
Ireland[1]	–5.5	–9.7	–13.0	–11.0	–8.9	–6.5	–5.0	–4.0	–2.8	–2.0	–1.4	–0.6	0.0	0.0	0.0
Israel	–1.8	–1.7	–3.7	–5.7	–4.9	–4.4	–5.4	–4.2	–3.4	–3.5	–3.6	–2.9	–2.2	–1.8	–1.5
Italy	–4.4	–3.0	–3.7	–3.6	–3.5	–3.2	–1.4	–0.6	–0.6	–0.4	0.2	0.4	0.6	0.8	0.9
Japan	–3.5	–2.2	–3.5	–7.4	–7.8	–8.3	–7.8	–8.2	–7.2	–6.0	–4.9	–4.3	–3.8	–4.0	–4.4
Korea	0.9	1.7	1.3	0.5	1.4	1.5	1.6	0.8	0.4	0.4	0.6	0.9	1.1	1.4	1.7
Latvia	. . .	–1.0	–8.4	–3.2	–3.2	–1.3	0.8	–0.9	–1.5	–1.2	–0.9	–1.7	–0.5	–0.4	–0.5
Lithuania	–2.3	–4.2	–6.4	–6.0	–4.5	–7.1	–2.8	–2.1	–0.3	–1.4	–1.4	–1.4	–1.4	–1.4	–1.4
Luxembourg	1.2	2.6	2.2	1.3	–0.5	–0.1	0.9	1.2	0.6	–0.4	0.2	0.2	0.4	0.4	0.5
Malta	–2.7	–3.1	–5.6	–2.4	–3.1	–2.5	–3.7	–2.9	–2.5	–2.0	–1.8	–1.6	–1.4	–1.2	–0.9
Netherlands	0.2	–0.7	–0.8	–4.4	–3.9	–3.6	–2.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
New Zealand	3.1	2.6	1.2	–1.0	–4.4	–4.3	–1.4	–0.8	–0.7	–0.2	0.4	1.0	1.3	1.4	1.5
Norway[1]	–3.5	–3.3	–3.4	–5.7	–5.5	–4.6	–5.1	–5.3	–6.1	–6.8	–7.2	–7.2	–7.2	–7.2	–7.2
Portugal	–1.9	–3.7	–4.2	–8.9	–10.8	–6.3	–3.1	–1.7	–2.1	–1.7	–1.9	–2.1	–2.3	–2.4	–2.5
Singapore	7.0	11.5	6.6	1.0	6.2	8.0	7.7	5.1	4.0	1.4	2.1	2.3	2.5	2.5	2.4
Slovak Republic	–4.1	–4.1	–4.7	–7.0	–7.5	–4.1	–3.9	–1.9	–2.2	–1.9	–1.9	–1.6	–1.5	–1.4	–1.4
Slovenia	–2.0	–2.4	–2.8	–4.1	–4.5	–4.1	–2.1	–2.1	–3.2	–2.8	–3.3	–3.5	–3.6	–3.7	–3.8
Spain[1]	1.2	0.5	–5.6	–9.5	–7.8	–7.0	–4.2	–3.0	–2.7	–2.3	–1.5	–1.5	–1.4	–1.2	–1.5
Sweden[1]	1.2	1.5	0.8	–0.1	0.7	0.0	–0.2	–0.9	–1.4	–1.0	–0.7	–0.7	–0.5	–0.2	0.2
Switzerland[1]	0.5	0.3	0.8	0.8	0.2	0.4	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
United Kingdom[1]	–4.8	–5.4	–6.8	–9.9	–8.1	–5.8	–5.6	–3.6	–4.2	–4.0	–2.6	–1.3	–0.5	–0.3	–0.5
United States[1, 2]	–3.5	–4.3	–6.2	–7.9	–9.7	–8.3	–6.8	–5.2	–4.4	–3.8	–3.8	–3.4	–3.4	–3.7	–3.9
Average	–2.6	–2.7	–4.1	–6.1	–6.8	–5.7	–4.7	–3.6	–3.1	–2.8	–2.5	–2.2	–2.0	–2.0	–2.1
Euro Area	–2.0	–2.0	–3.2	–4.5	–4.8	–3.7	–2.6	–1.1	–1.0	–0.9	–0.7	–0.6	–0.3	–0.1	0.0
G7	–3.2	–3.4	–4.6	–6.5	–7.6	–6.5	–5.5	–4.3	–3.7	–3.3	–3.0	–2.6	–2.3	–2.5	–2.6
G20 Advanced	–3.0	–3.1	–4.4	–6.2	–7.3	–6.2	–5.1	–4.1	–3.5	–3.1	–2.8	–2.4	–2.2	–2.3	–2.3

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

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

[2] For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the imputed interest on unfunded pension liabilities and the imputed compensation of employees, which are counted as expenditures under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.

Table A4. Advanced Economies: General Government Cyclically Adjusted Primary Balance, 2006–20

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	1.4	1.0	–1.4	–4.3	–4.6	–3.6	–2.3	–1.7	–2.0	–1.7	–1.1	–0.6	–0.2	0.1	0.3
Austria	–0.5	–0.4	–0.6	–1.8	–1.4	–0.6	–0.2	0.8	–0.8	0.9	1.1	1.2	1.3	1.3	1.3
Belgium	3.3	2.4	1.4	–1.4	–0.7	–0.9	–0.6	0.7	0.4	0.3	0.8	1.2	1.5	1.7	1.9
Canada	1.6	1.3	–0.6	–2.1	–3.4	–2.8	–2.1	–2.0	–1.1	–1.3	–0.9	–0.6	–0.3	–0.1	0.2
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	–3.2	–2.2	–3.5	–4.3	–3.3	–1.9	–2.1	0.9	1.0	0.2	0.0	–0.1	–0.1	–0.1	0.2
Denmark	3.8	3.6	1.6	–1.1	–1.0	–0.9	–2.2	0.6	3.3	–1.2	–1.6	–2.1	–1.8	–1.4	–0.9
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	2.0	1.7	1.0	–0.2	–1.2	–1.0	–0.9	–0.5	–0.4	–0.4	–0.1	–0.2	–0.2	–0.3	–0.3
France	–0.7	–1.2	–1.0	–3.2	–3.4	–2.1	–1.7	–0.9	–0.7	–0.6	–0.4	–0.1	0.5	1.0	1.5
Germany	0.8	1.7	1.2	1.4	–1.2	0.6	1.6	2.0	2.1	1.4	1.1	0.9	1.0	0.9	0.8
Greece	–3.6	–5.4	–8.4	–13.2	–6.0	–1.0	2.6	5.8	5.3	5.7	5.8	5.0	4.4	4.3	4.2
Hong Kong SAR[1]	1.4	3.9	–1.0	–1.0	0.8	1.1	0.5	–1.0	2.5	1.4	1.0	0.5	0.8	1.6	1.5
Iceland	4.7	3.1	–4.6	–6.9	–4.9	–1.8	0.4	2.3	6.2	3.9	2.9	4.0	3.0	3.1	3.0
Ireland[1]	–4.7	–9.0	–12.3	–9.6	–6.5	–3.7	–1.5	–0.3	0.7	1.0	1.5	2.4	2.8	2.9	2.8
Israel	3.3	3.0	0.5	–1.8	–1.0	–0.7	–1.7	–0.6	0.0	–0.1	–0.1	0.6	1.2	1.7	1.9
Italy	–0.1	1.6	1.1	0.4	0.4	1.1	3.3	3.9	3.7	3.4	3.7	3.7	3.7	3.8	3.9
Japan	–3.6	–2.2	–3.2	–6.9	–7.2	–7.6	–6.9	–7.5	–6.6	–5.4	–4.4	–3.7	–3.2	–3.3	–3.4
Korea	2.2	1.0	0.9	–0.2	0.7	0.8	0.8	0.0	–0.4	–0.2	0.2	0.8	1.0	1.3	1.8
Latvia	. . .	–0.8	–8.3	–2.6	–2.3	–0.5	2.0	0.2	–0.2	0.1	0.1	–0.7	0.7	0.6	0.4
Lithuania	–1.7	–3.7	–5.9	–5.0	–3.0	–5.4	–0.8	–0.3	1.3	0.2	0.2	0.2	0.3	0.3	0.4
Luxembourg	0.4	1.5	0.9	0.8	–0.8	–0.4	0.6	1.0	0.4	–0.6	0.1	0.1	0.3	0.4	0.5
Malta	1.1	0.6	–2.1	0.9	0.1	0.8	–0.6	0.1	0.6	1.0	1.2	1.4	1.6	1.9	2.1
Netherlands	1.7	0.7	0.7	–3.0	–2.7	–2.4	–1.0	1.5	1.5	1.3	1.3	1.2	1.2	1.2	1.2
New Zealand	2.7	2.3	0.9	–1.5	–4.7	–4.2	–1.2	–0.7	–0.7	–0.2	0.3	0.8	1.1	1.1	1.2
Norway[1]	–6.5	–7.3	–7.4	–8.8	–8.2	–7.3	–7.5	–7.7	–8.9	–9.5	–9.9	–9.9	–9.8	–9.8	–9.8
Portugal	0.0	–1.6	–2.1	–6.9	–8.7	–3.1	0.4	2.9	2.6	3.0	2.5	2.1	1.8	1.6	1.5
Singapore	5.5	10.0	5.1	–0.4	4.6	6.4	6.2	3.6	2.6	0.0	0.7	0.9	1.0	1.1	1.0
Slovak Republic	–3.2	–3.1	–3.8	–6.0	–6.4	–2.7	–2.3	–0.2	–0.7	–0.6	–0.6	–0.4	–0.6	–0.5	–0.6
Slovenia	–0.9	–1.4	–2.0	–3.2	–3.3	–2.8	–0.5	0.1	–0.3	0.1	–0.2	–0.2	0.0	0.0	0.0
Spain[1]	2.5	1.6	–4.5	–8.2	–6.3	–5.1	–1.9	–0.4	0.0	0.2	0.9	0.8	0.9	1.1	0.8
Sweden[1]	2.0	2.2	1.3	0.1	0.9	0.3	–0.1	–0.9	–1.5	–1.1	–0.8	–0.8	–0.5	–0.1	0.3
Switzerland[1]	1.4	1.1	1.4	1.4	0.8	0.9	0.7	0.5	0.7	0.3	0.3	0.3	0.3	0.3	0.3
United Kingdom[1]	–3.1	–3.7	–5.2	–8.5	–5.7	–3.2	–3.3	–2.3	–2.4	–2.4	–0.9	0.6	1.4	1.6	1.4
United States[1]	–1.5	–2.2	–4.1	–6.1	–7.8	–6.1	–4.6	–3.2	–2.3	–1.8	–1.7	–1.3	–1.1	–1.3	–1.3
Average	–0.9	–1.0	–2.4	–4.5	–5.1	–3.9	–2.9	–1.9	–1.5	–1.3	–1.0	–0.6	–0.4	–0.3	–0.3
Euro Area	0.5	0.6	–0.6	–2.1	–2.4	–1.1	0.0	1.2	1.3	1.2	1.3	1.2	1.4	1.5	1.6
G7	–1.4	–1.4	–2.7	–4.7	–5.8	–4.5	–3.4	–2.5	–1.8	–1.6	–1.3	–0.8	–0.5	–0.6	–0.5
G20 Advanced	–1.2	–1.3	–2.5	–4.6	–5.5	–4.3	–3.3	–2.4	–1.8	–1.5	–1.2	–0.8	–0.5	–0.5	–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 country-specific details, see Data and Conventions in text, and Table A.

Table A5. Advanced Economies: General Government Revenue, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	36.4	35.8	34.0	33.4	32.0	32.1	33.4	34.0	34.0	34.9	35.0	35.4	35.7	36.0	36.2
Austria	47.7	47.8	48.3	48.8	48.3	48.2	48.7	49.5	50.0	50.2	49.7	49.7	49.7	49.7	49.7
Belgium	47.9	47.6	48.3	47.7	48.4	49.3	50.7	51.5	51.3	51.0	50.9	50.9	50.9	50.9	50.9
Canada	40.6	40.1	38.7	38.8	38.2	38.0	38.0	37.9	37.6	38.1	38.2	38.3	38.3	38.3	38.6
Cyprus	38.5	41.3	39.6	36.9	37.7	37.0	36.3	37.6	40.1	39.3	39.3	38.8	39.1	39.2	39.2
Czech Republic	37.9	38.5	37.3	37.3	37.5	38.0	38.3	38.9	39.0	38.5	37.8	37.7	37.6	37.7	37.4
Denmark	54.8	54.6	53.7	54.0	54.3	54.8	55.1	56.0	56.4	52.5	52.1	50.7	50.6	50.7	50.9
Estonia	35.7	36.0	36.1	42.3	40.6	39.1	39.5	38.4	38.4	38.6	38.9	39.0	39.0	39.1	39.1
Finland	52.3	51.9	52.4	52.3	52.2	53.4	54.0	55.3	55.5	55.6	56.0	56.2	56.3	56.4	56.4
France	50.2	49.7	49.8	49.6	49.6	50.8	51.8	53.0	53.3	53.2	53.1	53.0	53.0	52.9	52.8
Germany	42.3	42.3	42.6	43.7	42.3	42.9	44.3	44.5	44.6	44.5	44.4	44.4	44.4	44.4	44.4
Greece	38.7	40.1	40.6	38.7	41.0	43.6	44.6	45.0	43.6	43.4	43.3	42.7	41.8	41.4	40.3
Hong Kong SAR	20.0	23.5	18.8	19.0	22.3	24.1	22.6	22.1	23.7	21.2	21.1	19.9	19.7	19.4	19.4
Iceland	46.8	45.6	42.4	38.9	39.6	40.1	41.8	42.5	47.9	43.9	42.9	42.8	41.8	41.8	41.5
Ireland	36.9	36.2	35.0	33.7	33.6	33.5	34.2	34.8	34.7	33.7	33.1	32.4	31.7	31.3	30.9
Israel	42.9	42.1	39.5	36.5	37.3	37.8	36.5	37.1	37.4	37.3	37.4	37.9	38.5	38.9	39.1
Italy	44.0	45.2	45.1	45.9	45.6	45.6	47.8	47.9	48.7	48.3	48.4	48.6	48.7	48.8	48.8
Japan	30.8	31.2	31.6	29.6	29.6	30.8	31.1	32.0	32.6	33.3	33.4	34.0	34.8	35.0	35.4
Korea	21.3	22.6	22.3	21.3	21.0	21.6	22.1	21.6	21.6	21.4	21.4	21.5	21.6	21.6	21.6
Latvia	33.5	33.8	33.4	35.7	36.1	35.6	37.1	36.1	35.5	35.1	33.9	32.7	33.6	33.4	32.7
Lithuania	33.3	33.4	33.8	34.3	34.3	32.6	32.1	32.1	32.8	32.7	32.3	32.3	32.5	32.6	32.6
Luxembourg	41.0	42.3	42.6	44.5	43.3	42.6	43.5	44.5	44.7	44.0	44.2	44.1	44.3	44.3	44.4
Malta	39.7	38.9	38.4	38.5	37.7	38.2	38.7	39.5	40.5	42.1	41.4	41.4	41.5	41.6	41.7
Netherlands	43.7	42.9	44.0	42.7	43.2	42.7	43.5	44.5	44.1	42.9	43.2	43.0	43.0	43.0	43.0
New Zealand	38.4	36.8	36.4	35.2	34.5	34.4	34.2	34.1	33.7	34.1	33.8	33.8	33.6	33.3	33.3
Norway	57.4	56.5	57.4	55.4	55.0	56.2	55.8	54.4	53.7	52.7	52.4	52.8	52.8	52.7	52.5
Portugal	40.9	41.5	41.6	40.4	40.6	42.6	42.9	45.2	44.5	44.7	44.7	44.7	44.6	44.5	44.5
Singapore	19.8	23.8	24.0	17.4	21.1	23.2	22.3	21.5	22.4	22.4	22.5	22.8	23.1	23.4	23.5
Slovak Republic	34.9	34.1	34.0	35.9	34.5	36.4	36.0	38.4	38.4	38.5	38.1	38.0	37.9	37.9	37.8
Slovenia	41.1	39.8	40.4	39.8	40.8	40.6	41.7	40.7	41.6	40.9	41.0	41.0	41.1	41.0	41.0
Spain	40.5	40.9	36.7	34.8	36.2	36.0	37.0	37.5	37.8	38.1	38.2	38.2	38.2	38.2	38.2
Sweden	52.2	51.7	51.0	51.0	49.6	49.0	49.5	49.3	48.5	48.8	48.9	49.1	49.2	49.2	49.2
Switzerland	33.4	32.7	31.4	31.8	31.2	31.7	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3
United Kingdom	36.8	36.5	37.0	35.1	35.6	36.1	36.3	36.8	35.8	35.6	35.9	36.1	36.0	36.1	36.1
United States	31.5	31.7	30.2	28.4	28.8	29.1	29.2	30.9	31.4	32.0	32.0	31.9	31.7	31.5	31.5
Average	36.5	36.9	36.4	35.0	34.9	35.4	35.6	36.6	36.8	36.6	36.6	36.5	36.5	36.5	36.5
Euro Area	44.4	44.5	44.2	44.2	44.1	44.6	45.9	46.5	46.7	46.5	46.4	46.4	46.4	46.4	46.3
G7	35.7	36.1	35.6	34.2	34.1	34.7	34.9	36.1	36.5	36.4	36.4	36.4	36.3	36.3	36.3
G20 Advanced	35.3	35.6	35.2	33.9	33.6	34.2	34.4	35.5	35.8	35.7	35.7	35.7	35.7	35.6	35.7

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 A.

Table A6. Advanced Economies: General Government Expenditure, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	34.6	34.3	35.1	38.0	37.1	36.6	36.8	37.0	37.6	38.2	37.7	37.4	37.2	37.0	37.0
Austria	50.2	49.1	49.8	54.1	52.8	50.9	51.0	50.9	53.3	52.0	51.4	51.2	51.1	51.0	51.0
Belgium	47.7	47.6	49.4	53.2	52.3	53.2	54.8	54.4	54.5	53.9	53.0	52.3	51.8	51.4	51.1
Canada	38.8	38.6	39.0	43.4	43.1	41.7	41.1	40.7	39.4	39.8	39.4	39.2	39.0	38.9	38.8
Cyprus	39.6	38.1	38.7	42.5	42.5	42.8	42.1	41.9	40.2	40.4	39.0	38.5	38.0	38.3	38.2
Czech Republic	40.1	39.2	39.4	42.8	41.9	41.0	42.3	40.3	40.0	40.0	39.0	38.9	38.8	38.8	38.4
Denmark	49.8	49.6	50.5	56.8	57.1	56.8	58.8	57.1	54.6	54.7	54.2	52.6	52.1	51.7	51.4
Estonia	33.3	33.6	39.0	44.3	40.4	38.0	39.7	38.9	38.1	39.1	39.0	39.0	39.0	39.1	39.1
Finland	48.3	46.8	48.3	54.8	54.7	54.4	56.1	57.6	58.3	58.0	57.8	57.4	57.1	57.1	57.0
France	52.5	52.2	53.0	56.8	56.4	55.9	56.7	57.1	57.5	57.1	56.6	55.7	54.9	54.0	53.2
Germany	43.9	42.1	42.6	46.7	46.4	43.7	44.2	44.3	43.9	44.2	44.0	44.0	43.8	43.8	43.8
Greece	44.8	46.8	50.5	54.0	52.1	53.7	50.9	47.8	46.3	44.2	42.7	42.0	41.2	40.6	39.4
Hong Kong SAR	15.9	15.4	18.7	17.4	17.8	20.0	19.3	21.0	18.4	18.0	18.6	18.1	17.5	16.3	16.3
Iceland	41.0	40.7	55.4	48.6	49.3	45.7	45.5	44.2	46.0	43.8	42.8	41.6	41.3	41.1	40.7
Ireland	34.1	36.0	42.0	47.6	66.1	46.1	42.2	40.5	38.5	36.1	34.5	33.0	31.7	31.3	30.9
Israel	45.1	43.3	42.9	42.7	41.9	41.8	41.6	41.2	41.0	40.8	40.8	40.8	40.7	40.6	40.6
Italy	47.6	46.8	47.8	51.1	49.9	49.1	50.8	50.8	51.7	50.9	50.1	49.7	49.3	48.8	48.5
Japan	34.5	33.3	35.7	40.0	38.9	40.6	39.9	40.5	40.3	39.6	38.4	38.3	38.6	39.0	39.8
Korea	20.3	20.5	20.8	21.3	19.5	19.9	20.6	20.9	21.3	21.0	20.8	20.6	20.4	20.1	19.9
Latvia	33.9	33.2	40.5	43.4	43.4	38.8	36.9	37.2	37.1	36.4	34.9	34.4	34.1	33.7	33.2
Lithuania	33.7	34.4	37.0	43.6	41.2	41.5	35.3	34.7	33.6	34.1	33.9	34.0	34.0	34.0	33.9
Luxembourg	39.6	38.1	39.4	45.0	43.9	42.3	43.4	43.8	44.2	44.4	43.9	43.9	43.9	43.9	43.9
Malta	42.3	41.1	42.6	41.9	41.0	40.9	42.4	42.2	42.7	43.9	43.0	42.9	42.8	42.7	42.6
Netherlands	43.5	42.8	43.8	48.2	48.2	47.0	47.5	46.8	46.3	44.3	43.7	43.3	43.3	43.3	43.3
New Zealand	34.1	33.5	35.0	36.7	39.5	39.2	35.8	34.9	34.3	34.1	33.4	32.8	32.3	32.0	32.1
Norway	39.3	39.5	38.9	45.0	44.1	43.0	42.2	43.3	45.0	45.4	45.1	45.5	45.6	45.9	46.2
Portugal	42.9	44.5	45.3	50.2	51.8	50.0	48.5	50.1	49.0	47.8	47.5	47.2	47.0	47.0	47.0
Singapore	12.8	12.0	17.6	18.0	14.5	14.7	14.5	16.1	18.2	20.9	20.4	20.5	20.7	20.8	20.9
Slovak Republic	38.5	36.1	36.4	43.8	42.0	40.6	40.2	41.0	41.4	41.0	40.4	39.8	39.5	39.4	39.2
Slovenia	41.9	39.6	40.7	45.3	46.1	46.1	44.8	54.5	47.4	44.9	44.5	44.4	44.6	44.7	44.7
Spain	38.3	38.9	41.1	45.8	45.6	45.4	47.3	44.3	43.6	42.4	41.1	40.7	40.3	39.7	39.6
Sweden	50.1	48.3	48.9	51.9	49.6	49.0	50.2	50.7	50.6	50.2	49.6	49.5	49.3	49.0	48.7
Switzerland	32.5	31.5	29.7	31.3	31.1	31.4	31.4	31.5	31.1	31.7	31.6	31.5	31.3	31.3	31.3
United Kingdom	39.7	39.5	42.1	45.9	45.2	43.8	44.1	42.5	41.5	40.4	39.0	37.6	36.6	36.4	36.4
United States	33.9	34.9	37.2	41.9	40.1	39.0	37.8	36.6	36.8	36.2	35.9	35.3	35.0	35.2	35.4
Average	38.0	38.1	40.0	44.0	42.6	41.9	41.4	40.9	40.7	39.8	39.3	38.7	38.4	38.4	38.4
Euro Area	45.8	45.1	46.3	50.4	50.2	48.7	49.5	49.4	49.4	48.7	48.1	47.7	47.3	46.9	46.6
G7	38.1	38.3	40.3	44.4	43.0	42.3	41.7	41.2	41.1	40.2	39.6	39.1	38.7	38.8	38.9
G20 Advanced	37.5	37.6	39.6	43.6	42.1	41.4	40.8	40.3	40.2	39.4	38.8	38.3	37.9	37.9	38.0

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 A.

Table A7. Advanced Economies: General Government Gross Debt, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia[1]	10.0	9.7	11.7	16.8	20.5	24.2	27.9	30.7	34.3	38.1	40.2	41.4	41.6	41.2	40.7
Austria	67.0	64.8	68.5	79.7	82.4	82.1	81.7	81.2	86.8	88.8	87.4	86.2	85.4	84.5	83.5
Belgium	90.8	86.9	92.2	99.3	99.6	102.1	104.0	104.5	105.6	106.6	106.2	104.9	102.9	100.3	97.4
Canada[1]	70.4	66.7	70.8	83.0	84.6	85.3	87.9	87.7	86.5	87.0	85.0	83.1	81.5	80.1	78.7
Cyprus	59.6	53.7	44.7	53.5	56.5	66.0	79.5	102.2	107.1	105.7	111.0	105.1	100.3	95.8	91.4
Czech Republic	27.0	26.7	27.5	33.1	36.8	39.4	43.9	43.8	41.6	42.0	42.0	41.4	40.9	40.4	39.8
Denmark	31.5	27.3	33.4	40.4	42.9	46.4	45.6	45.1	42.6	43.9	44.3	44.3	43.8	42.8	41.5
Estonia	4.4	3.6	4.5	7.0	6.5	6.1	9.7	10.1	9.7	10.1	10.0	9.8	9.5	9.3	9.0
Finland	38.1	33.9	32.5	41.5	46.6	48.5	52.9	55.7	59.6	61.7	62.8	63.2	63.2	62.7	61.9
France	64.2	64.2	67.9	78.8	81.5	85.0	89.2	92.4	95.1	97.0	98.1	97.9	96.9	94.9	92.1
Germany	66.3	63.5	64.9	72.4	80.3	77.6	79.0	76.9	73.1	69.5	66.6	64.1	61.6	59.2	56.9
Greece	102.9	102.8	108.8	126.2	145.7	171.0	156.5	174.9	177.2	172.7	162.4	151.8	142.1	132.9	124.2
Hong Kong SAR[1]	4.8	4.5	4.0	4.9	5.8	6.4	7.1	7.0	6.9	6.4	6.2	6.0	5.8	5.6	5.5
Iceland	29.2	27.1	67.3	83.1	88.1	95.1	92.8	85.7	82.1	73.8	68.7	64.4	60.8	57.4	54.0
Ireland	23.8	24.0	42.6	62.2	87.4	111.1	121.7	123.3	109.5	107.7	104.9	101.5	97.2	93.5	89.7
Israel	81.0	73.9	72.7	75.0	71.1	69.7	68.3	67.6	68.8	69.0	69.0	68.7	67.8	66.4	64.8
Italy	102.5	99.7	102.3	112.5	115.3	116.4	123.2	128.6	132.1	133.8	132.9	131.1	128.7	125.7	122.4
Japan	186.0	183.0	191.8	210.2	216.0	229.8	236.8	242.6	246.4	246.1	247.0	248.6	249.5	250.7	251.6
Korea	29.3	28.7	28.0	31.2	31.0	31.7	32.3	33.9	35.7	36.9	38.1	38.7	38.8	38.5	37.8
Latvia	9.2	7.2	16.1	32.3	39.8	37.5	36.5	35.2	37.8	37.7	37.0	36.6	35.0	33.5	31.9
Lithuania	18.0	16.7	15.4	29.0	36.3	37.3	39.9	39.0	37.7	38.1	38.1	37.8	37.2	36.6	35.7
Luxembourg	7.0	7.2	14.4	15.5	19.6	18.5	21.4	23.6	24.6	26.3	27.2	28.3	29.1	29.9	30.5
Malta	64.6	62.4	62.7	67.8	67.6	69.7	67.4	69.2	68.1	67.5	65.7	64.5	63.2	61.7	59.8
Netherlands	44.6	42.5	54.7	56.4	59.0	61.3	66.5	68.6	68.3	67.5	65.6	64.0	62.4	60.8	59.2
New Zealand	19.1	17.0	19.9	25.5	31.5	36.5	36.9	35.5	34.0	33.1	33.7	32.6	29.5	26.8	24.4
Norway	52.9	49.6	47.8	42.4	42.5	28.6	29.5	30.1	30.1	30.1	30.1	30.1	30.1	30.1	30.1
Portugal	61.6	68.4	71.7	83.6	96.2	111.1	125.8	129.7	130.2	126.3	124.3	122.7	122.2	121.7	120.9
Singapore	85.1	84.7	95.3	99.7	97.0	101.0	105.5	102.1	98.8	97.8	95.2	92.3	89.5	90.8	92.0
Slovak Republic	30.7	29.8	28.2	36.0	41.1	43.5	52.1	54.6	54.0	53.9	54.0	53.4	52.6	51.7	50.6
Slovenia	26.0	22.7	21.6	34.4	37.9	46.2	53.3	70.0	82.9	79.8	82.1	83.6	85.2	86.8	88.4
Spain	38.9	35.5	39.4	52.7	60.1	69.2	84.4	92.1	97.7	99.4	100.1	100.1	99.4	98.0	96.4
Sweden	43.0	38.1	36.7	40.2	36.7	36.1	36.4	38.6	41.5	41.1	39.6	38.2	36.4	34.4	32.3
Switzerland	59.7	53.3	48.7	47.9	47.1	47.4	48.2	47.0	46.1	45.9	45.6	44.7	43.7	42.6	41.6
United Kingdom	42.5	43.6	51.8	65.8	76.4	81.8	85.8	87.3	89.5	91.1	91.7	90.7	88.9	86.1	83.2
United States[1]	63.6	64.0	72.8	86.0	94.8	99.1	102.4	103.4	104.8	105.1	104.9	104.3	103.6	103.9	104.3
Average	74.6	72.0	78.8	92.1	98.6	102.6	106.8	105.2	105.3	105.4	105.1	104.2	103.0	102.1	101.1
Euro Area	67.2	65.0	68.6	78.4	83.9	86.5	91.1	93.4	94.0	93.5	92.4	90.9	89.0	86.7	84.2
G7	83.1	81.1	89.2	104.0	112.0	117.0	121.2	118.8	118.4	117.7	117.3	116.5	115.2	114.5	113.8
G20 Advanced	79.5	77.3	85.1	99.5	106.2	110.5	114.4	112.3	112.2	111.9	111.7	110.9	109.7	108.9	108.1

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 A.

[1] For cross-country comparability, gross debt levels reported by national statistical agencies for countries that have adopted the 2008 System of National Accounts (Australia, Canada, Hong Kong SAR, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Table A8. Advanced Economies: General Government Net Debt, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia[1]	–6.3	–7.3	–5.3	–0.6	3.9	8.1	11.2	13.7	17.0	19.9	21.6	22.5	22.8	22.7	22.4
Austria	. . .	. . .	. . .	. . .	. . .	. . .	49.5	48.9	51.1	51.0	50.4	49.6	49.0	48.1	47.1
Belgium	60.7	54.1	56.1	60.7	59.3	60.2	61.9	63.6	65.4	67.1	67.6	67.3	66.3	64.8	62.9
Canada[1]	27.8	24.3	24.3	29.9	32.9	34.6	36.4	37.1	37.3	38.3	37.9	37.1	36.4	35.5	34.3
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Denmark	1.1	–4.6	–6.7	–5.9	–3.3	1.1	5.4	2.7	0.8	3.1	5.0	6.7	7.9	8.5	8.6
Estonia	–8.7	–8.5	–5.6	–6.8	–5.5	–3.8	–5.8	–3.9	–3.9	–2.3	–1.7	–1.3	–0.9	–0.5	–0.3
Finland	–66.5	–69.7	–50.0	–59.6	–62.1	–49.4	–50.8	–47.9	–44.7	–41.5	–38.6	–36.2	–34.2	–32.2	–30.4
France	57.8	57.7	60.3	70.1	73.7	76.4	81.5	84.7	87.4	89.3	90.4	90.2	89.2	87.2	84.4
Germany	51.6	48.7	48.7	55.0	56.8	55.0	54.3	52.7	49.7	46.9	44.7	42.7	40.8	38.9	37.1
Greece	. . .	. . .	. . .	. . .	. . .	. . .	152.8	172.1	174.3	169.9	159.7	149.2	139.7	130.6	122.0
Hong Kong SAR	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland	20.4	17.4	53.1	66.4	65.6	61.7	64.0	62.8	58.3	52.5	48.4	45.1	42.4	39.9	37.4
Ireland	11.2	10.1	20.4	37.2	67.5	79.1	87.9	92.1	85.7	85.5	83.8	81.3	77.7	74.8	71.7
Israel	72.4	66.5	65.3	67.0	64.9	64.1	63.0	62.6	64.0	64.4	64.6	64.5	63.8	62.6	61.2
Italy	86.3	84.1	86.2	94.2	96.3	98.4	103.0	107.5	110.4	111.8	111.1	109.6	107.6	105.1	102.3
Japan	81.0	80.5	95.3	106.2	113.1	127.3	129.1	122.9	127.3	129.6	131.9	134.2	135.8	137.4	138.7
Korea	27.6	26.9	26.8	29.9	29.8	30.6	30.5	33.3	35.1	36.3	37.6	38.2	38.3	38.0	37.4
Latvia	7.0	4.5	11.0	21.3	28.4	30.0	29.4	32.2	34.9	34.8	34.2	33.9	32.5	30.9	29.5
Lithuania	11.0	11.0	12.6	23.0	29.2	32.9	33.7	16.4	16.0	17.2	18.3	19.1	19.6	20.0	20.1
Luxembourg	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malta	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Netherlands	20.6	17.7	16.2	20.1	23.3	26.4	30.4	32.6	34.4	35.3	35.0	34.3	33.6	32.9	32.1
New Zealand	8.7	6.4	7.3	11.5	16.7	21.8	24.9	25.7	25.8	26.2	25.6	24.4	22.7	20.8	18.6
Norway	–136.2	–142.6	–128.0	–157.4	–167.0	–161.9	–170.7	–204.7	–244.2	–248.1	–248.8	–248.9	–248.2	–246.8	–245.0
Portugal	56.7	61.4	67.6	79.7	91.9	100.9	115.9	119.4	120.1	119.2	118.5	117.8	117.4	117.0	116.4
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovenia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Spain	30.0	26.0	30.0	24.3	32.5	39.3	51.9	59.5	64.8	67.4	68.8	69.6	69.7	69.2	68.4
Sweden	–12.0	–16.2	–11.6	–18.2	–20.6	–18.6	–22.3	–25.4	–21.4	–19.3	–17.9	–16.7	–15.8	–15.3	–15.1
Switzerland	37.5	30.2	28.5	27.9	27.3	27.4	26.8	25.7	24.8	24.6	24.2	23.4	22.3	21.3	20.3
United Kingdom	37.9	38.3	45.7	58.8	69.1	73.4	77.1	78.7	81.0	82.6	83.1	82.2	80.4	77.5	74.7
United States[1]	44.7	44.5	50.4	62.1	69.5	76.1	79.2	79.5	79.7	80.4	80.7	80.5	80.5	81.2	82.1
Average	45.6	43.6	49.0	58.3	63.4	68.1	71.3	69.8	70.4	72.0	72.3	72.1	71.6	71.2	70.8
Euro Area	48.0	45.6	47.5	52.8	56.4	58.5	66.7	69.0	69.8	69.8	69.2	68.1	66.7	65.0	63.0
G7	53.3	52.3	58.7	69.6	75.8	81.7	84.4	82.6	83.1	83.6	83.8	83.6	83.1	82.8	82.5
G20 Advanced	50.9	49.8	55.8	66.5	71.8	77.1	79.6	78.1	78.8	79.7	80.0	79.7	79.3	79.0	78.6

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 A.

[1] For cross-country comparability, net debt levels reported by national statistical agencies for countries that have adopted the 2008 System of National Accounts (Australia, Canada, United States) are adjusted to exclude unfunded pension liabilities of government employees' defined-benefit pension plans.

Table A9. Emerging Market and Middle-Income Economies: General Government Overall Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	13.9	6.1	9.1	–5.5	–0.4	–0.4	–4.1	–0.8	–6.2	–12.5	–9.9	–7.5	–5.5	–3.8	–2.6
Angola	11.8	4.7	–4.5	–7.4	3.4	8.7	4.6	–0.3	–2.8	–4.7	–2.3	–2.2	–2.4	–2.8	–3.4
Argentina	1.8	0.3	0.8	–1.6	0.0	–1.9	–2.4	–2.0	–2.7	–4.1	–4.0	–4.4	–4.7	–4.9	–5.3
Azerbaijan	1.1	2.3	20.0	6.6	14.0	11.6	3.8	1.4	0.4	–5.7	1.4	2.5	4.3	5.2	5.5
Belarus	1.2	1.5	1.9	–0.4	–0.5	4.2	1.7	–0.9	0.1	–3.0	–2.6	–3.1	–3.7	–4.3	–4.6
Brazil	–3.6	–2.7	–1.5	–3.2	–2.7	–2.5	–2.6	–3.1	–6.2	–5.3	–4.7	–4.2	–3.5	–3.0	–2.6
Chile	7.4	7.9	4.1	–4.1	–0.4	1.4	0.7	–0.5	–1.4	–2.1	–1.9	–1.2	–0.6	–0.7	–0.6
China	–1.1	0.1	0.0	–1.8	–1.2	0.6	0.0	–1.1	–1.1	–1.9	–2.2	–1.9	–1.6	–1.5	–1.3
Colombia	–1.0	–0.8	–0.3	–2.8	–3.3	–2.0	0.1	–0.9	–1.4	–3.2	–2.6	–2.5	–2.2	–1.9	–1.7
Croatia	–3.3	–2.5	–2.7	–5.9	–6.0	–7.7	–5.6	–5.2	–5.0	–4.8	–3.8	–3.3	–2.9	–2.9	–2.9
Dominican Republic	–0.9	0.1	–3.3	–3.0	–2.7	–3.0	–6.6	–3.6	–3.0	–2.4	–2.2	–2.2	–2.3	–2.5	–2.9
Ecuador	2.9	1.8	0.5	–3.6	–1.3	0.0	–0.9	–4.6	–5.2	–5.4	–4.8	–4.0	–2.7	–1.4	–1.3
Egypt[1]	–9.2	–7.5	–8.0	–6.9	–8.3	–9.8	–10.5	–14.1	–13.6	–11.8	–9.4	–8.6	–8.4	–8.2	–7.9
Hungary	–9.2	–5.0	–3.6	–4.5	–4.5	–5.2	–2.3	–2.4	–2.6	–2.7	–2.5	–2.5	–2.5	–2.4	–2.3
India	–6.2	–4.4	–10.0	–9.8	–8.4	–8.1	–7.5	–7.2	–7.1	–7.2	–7.1	–6.9	–6.7	–6.5	–6.4
Indonesia	0.4	–0.9	0.1	–1.6	–1.2	–0.6	–1.6	–2.0	–2.2	–2.3	–2.1	–1.9	–1.7	–1.7	–1.6
Iran	2.0	6.7	0.6	0.8	2.8	0.2	–0.3	–0.9	–1.4	–2.5	–2.3	–2.5	–2.7	–2.7	–2.7
Kazakhstan	7.7	5.1	1.2	–1.3	1.5	6.0	4.5	5.0	1.9	–3.2	–1.9	–0.3	–0.4	0.3	0.4
Kuwait	31.9	37.4	20.2	27.2	25.9	33.9	35.6	34.9	25.5	6.2	13.0	15.4	15.3	14.4	13.3
Libya	31.8	28.6	27.5	–5.3	11.6	–15.9	27.8	–4.0	–43.5	–68.2	–43.3	–15.6	–14.5	–9.5	–12.0
Malaysia	–2.7	–2.7	–3.6	–6.7	–4.7	–3.7	–3.9	–4.4	–3.7	–3.5	–2.9	–2.9	–2.6	–2.4	–2.1
Mexico	–1.0	–1.2	–1.0	–5.1	–4.3	–3.3	–3.7	–3.8	–4.6	–4.1	–3.5	–3.0	–2.5	–2.5	–2.5
Morocco	–2.0	–0.1	0.7	–1.8	–4.4	–6.7	–7.4	–5.2	–4.9	–4.3	–3.5	–3.0	–2.9	–2.7	–2.7
Oman	14.4	12.4	17.3	–0.3	5.7	9.4	4.7	3.2	–1.5	–14.8	–11.6	–10.7	–11.2	–11.3	–12.5
Pakistan	–3.4	–5.1	–7.1	–5.0	–5.9	–6.9	–8.4	–8.1	–4.7	–4.7	–3.8	–3.5	–3.4	–3.1	–2.8
Peru	2.0	3.3	2.7	–1.7	0.0	2.2	1.9	0.7	–0.1	–1.7	–1.4	–1.2	–1.0	–0.8	–0.8
Philippines	0.0	–0.3	0.0	–2.7	–2.4	–0.4	–0.6	–0.1	0.5	–0.9	–1.0	–1.1	–1.2	–1.3	–1.4
Poland	–4.0	–2.1	–3.6	–7.2	–7.6	–4.9	–3.7	–4.0	–3.5	–2.9	–2.3	–2.4	–2.0	–1.9	–1.9
Qatar	8.5	10.4	10.8	15.5	6.1	10.2	14.2	20.5	14.5	5.6	1.9	1.2	1.1	0.5	–0.1
Romania	–1.3	–3.1	–4.7	–7.1	–6.3	–4.2	–2.5	–2.5	–1.9	–1.8	–1.7	–1.5	–1.4	–1.3	–1.3
Russia	8.4	6.0	4.9	–6.3	–3.4	1.5	0.4	–1.3	–1.2	–3.7	–2.6	–1.3	–0.4	–0.4	–0.5
Saudi Arabia	24.4	15.0	31.6	–4.1	5.2	12.0	14.7	8.7	–0.5	–14.2	–8.1	–5.4	–5.2	–4.6	–4.5
South Africa	0.7	1.2	–0.5	–4.7	–4.8	–3.9	–4.1	–4.1	–4.1	–4.2	–3.4	–3.1	–3.0	–2.9	–2.7
Sri Lanka	–7.0	–6.9	–7.0	–9.9	–8.0	–6.9	–6.5	–5.9	–5.9	–6.7	–7.4	–7.3	–7.2	–7.4	–7.4
Thailand	2.2	0.2	0.1	–3.2	–0.8	–0.6	–1.8	–0.2	–1.8	–1.9	–2.0	–1.9	–1.9	–1.9	–1.8
Turkey	–0.7	–1.9	–2.7	–6.0	–3.4	–0.6	–1.7	–1.3	–1.5	–1.4	–0.9	–0.8	–1.1	–1.3	–0.9
Ukraine	–1.3	–1.9	–3.0	–6.0	–5.8	–2.8	–4.3	–4.8	–4.5	–4.2	–3.7	–3.1	–2.6	–2.4	–2.2
United Arab Emirates	25.3	21.8	20.1	–4.3	2.0	6.3	10.9	9.9	6.0	–3.0	0.0	1.2	2.3	3.1	3.9
Uruguay	–0.5	0.0	–1.6	–1.7	–1.5	–0.9	–2.8	–2.4	–3.4	–2.8	–2.9	–3.0	–3.0	–3.0	–3.1
Venezuela	–1.6	–2.8	–3.5	–8.7	–10.4	–11.6	–16.5	–14.6	–14.8	–19.9	–20.4	–20.8	–21.5	–22.1	–22.5
Average	1.3	1.1	0.9	–3.6	–2.4	–0.7	–0.7	–1.5	–2.4	–3.7	–3.3	–2.8	–2.5	–2.4	–2.2
Asia	–1.9	–1.1	–1.9	–3.4	–2.7	–1.2	–1.4	–2.1	–2.1	–2.8	–2.9	–2.7	–2.5	–2.3	–2.2
Europe	2.4	1.5	0.8	–5.8	–3.8	–0.1	–0.7	–1.5	–1.6	–2.9	–2.0	–1.4	–1.0	–1.0	–0.9
Latin America	–1.1	–1.1	–0.8	–3.8	–3.0	–2.7	–3.1	–3.2	–4.9	–4.9	–4.4	–4.0	–3.7	–3.6	–3.4
MENAP	13.9	11.5	13.3	–0.7	2.7	4.7	7.1	4.9	0.0	–7.5	–4.7	–3.2	–2.8	–2.4	–2.3
G20 Emerging	0.5	0.2	0.5	–3.9	–2.6	–0.8	–1.0	–1.8	–2.6	–3.5	–3.2	–2.8	–2.5	–2.4	–2.2

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 B. MENAP = Middle East, North Africa, and Pakistan.

[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A10. Emerging Market and Middle-Income Economies: General Government Primary Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	13.8	6.0	8.8	–6.0	–0.8	–1.7	–5.0	–0.9	–6.3	–13.3	–10.3	–7.8	–5.7	–4.1	–2.8
Angola	13.4	5.8	–2.5	–5.6	4.6	9.6	5.5	0.5	–1.7	–2.7	–0.5	–0.3	–0.5	–0.9	–1.3
Argentina	3.2	1.9	2.3	0.2	1.3	–0.4	–0.5	–0.7	–1.0	–1.6	–1.4	–1.4	–1.3	–1.2	–1.1
Azerbaijan	1.2	2.4	20.1	6.7	14.1	12.0	4.0	1.7	0.6	–5.5	1.7	2.8	4.6	5.6	5.9
Belarus	1.6	1.9	2.5	0.4	0.2	5.3	3.1	0.1	1.4	–1.2	–0.5	–0.7	–0.7	–0.9	–1.0
Brazil	3.2	3.2	3.8	1.9	2.3	2.9	2.0	1.8	–0.6	1.2	2.0	2.3	2.5	2.5	2.5
Chile	7.6	7.7	3.8	–4.3	–0.3	1.5	0.8	–0.4	–1.4	–1.9	–1.5	–0.7	0.0	0.0	0.0
China	–0.7	0.5	0.4	–1.3	–0.8	1.1	0.5	–0.6	–0.7	–1.4	–1.7	–1.3	–1.1	–1.0	–0.7
Colombia	1.7	1.8	1.9	–1.1	–1.6	–0.1	1.6	1.2	0.9	–0.5	0.0	0.0	0.3	0.5	0.7
Croatia	–1.8	–1.1	–1.2	–3.9	–3.8	–4.8	–2.4	–1.9	–1.5	–0.9	0.2	0.9	1.4	1.4	1.4
Dominican Republic	0.4	1.6	–1.7	–1.2	–0.9	–1.0	–4.2	–1.2	–0.5	0.2	0.1	0.1	0.0	0.0	0.0
Ecuador	4.8	3.4	1.6	–3.0	–0.8	0.6	–0.2	–3.6	–4.0	–4.1	–3.6	–2.5	–1.0	0.5	0.6
Egypt[1]	–4.2	–3.0	–3.9	–3.7	–3.8	–4.7	–5.1	–6.6	–6.1	–4.4	–1.9	–1.2	–1.0	–0.6	–0.3
Hungary	–5.6	–1.2	0.0	–0.5	–0.7	–1.4	1.6	1.9	1.4	0.9	0.9	1.0	0.8	0.9	1.1
India	–1.3	0.4	–5.3	–5.2	–4.2	–3.8	–3.1	–2.6	–2.6	–2.2	–2.4	–2.3	–2.3	–2.2	–2.1
Indonesia	2.5	0.9	1.7	–0.1	0.0	0.6	–0.4	–0.8	–0.9	–1.0	–0.7	–0.6	–0.4	–0.4	–0.3
Iran	2.0	6.8	0.7	0.8	2.7	0.3	–0.2	–0.9	–1.3	–2.4	–2.3	–2.4	–2.6	–2.7	–2.7
Kazakhstan	7.2	4.2	1.5	–1.4	1.8	5.8	3.9	4.5	1.4	–3.7	–2.3	–0.6	–0.6	0.1	0.4
Kuwait	19.2	25.5	11.1	18.1	16.9	26.5	27.5	26.0	15.3	–8.4	–2.9	–2.0	–2.5	–3.4	–4.4
Libya	31.8	28.6	27.5	–5.3	11.6	–15.9	27.8	–4.0	–43.5	–68.2	–43.3	–15.6	–14.5	–9.5	–12.0
Malaysia	–1.7	–2.0	–2.1	–5.1	–3.0	–2.1	–2.1	–2.5	–1.7	–1.5	–0.7	–0.8	–0.4	–0.2	0.0
Mexico	1.8	1.5	1.5	–2.4	–1.7	–1.0	–1.1	–1.3	–2.0	–1.4	–0.6	0.0	0.6	0.7	0.7
Morocco	1.2	3.0	3.3	0.6	–2.1	–4.4	–4.9	–2.7	–2.2	–1.6	–0.7	–0.2	–0.1	0.1	0.2
Oman	13.0	10.8	16.0	–1.4	4.8	9.0	3.4	2.6	–2.2	–16.0	–13.1	–12.6	–13.0	–12.5	–13.2
Pakistan	–0.5	–1.1	–2.5	–0.1	–1.6	–3.1	–4.0	–3.7	–0.2	0.0	0.7	0.6	0.7	0.8	0.6
Peru	3.9	5.2	4.1	–0.5	1.1	3.3	2.8	1.7	0.8	–0.8	–0.4	–0.2	0.1	0.1	0.0
Philippines	4.8	3.4	3.4	0.6	0.7	2.2	2.0	2.3	2.8	1.4	1.2	1.0	0.8	0.6	0.3
Poland	–1.4	0.2	–1.5	–4.7	–5.1	–2.4	–1.1	–1.5	–1.3	–0.8	–0.2	–0.4	0.0	0.2	0.2
Qatar	9.3	11.0	11.4	16.6	7.2	11.7	15.6	21.5	15.5	6.5	2.7	1.9	1.6	1.0	0.3
Romania	–0.7	–2.5	–4.1	–6.1	–5.0	–2.8	–0.7	–0.8	–0.4	–0.5	–0.1	0.1	0.2	0.3	0.3
Russia	8.9	6.0	5.1	–6.6	–3.3	1.8	0.7	–0.9	–0.8	–3.2	–2.0	–0.5	0.4	0.4	0.4
Saudi Arabia	25.3	14.8	31.0	–3.9	5.6	12.1	14.6	8.4	–1.1	–14.9	–8.8	–6.2	–5.8	–4.7	–4.2
South Africa	3.5	3.7	2.0	–2.4	–2.2	–1.2	–1.3	–1.1	–1.0	–1.0	–0.1	0.3	0.5	0.7	0.9
Sri Lanka	–1.9	–1.8	–2.2	–3.4	–1.7	–1.4	–1.1	–0.7	–1.7	–2.1	–3.1	–2.9	–2.7	–2.6	–2.2
Thailand	3.5	1.2	1.0	–2.4	–0.1	0.3	–0.9	0.6	–0.9	–1.1	–1.1	–1.0	–1.0	–1.0	–1.0
Turkey	4.4	2.9	1.7	–1.4	0.3	2.1	1.1	1.4	0.8	1.4	1.5	1.4	1.4	1.4	1.4
Ukraine	–0.7	–1.4	–2.5	–4.9	–4.1	–0.8	–2.4	–2.3	–1.2	1.1	1.4	1.6	1.6	1.6	1.6
United Arab Emirates	25.3	21.8	20.1	–4.1	2.3	6.5	11.2	10.3	6.4	–2.5	0.4	1.6	2.6	3.4	4.2
Uruguay	3.7	3.6	1.4	1.2	1.6	2.0	–0.2	0.4	–0.5	0.2	0.0	–0.2	–0.3	–0.4	–0.4
Venezuela	0.5	–1.2	–2.0	–7.2	–8.6	–9.4	–13.8	–11.6	–10.9	–16.8	–18.0	–18.8	–19.7	–20.5	–20.9
Average	3.4	3.0	2.6	–1.9	–0.6	1.1	0.9	0.1	–0.7	–1.9	–1.5	–1.1	–0.8	–0.7	–0.6
Asia	–0.3	0.5	–0.5	–2.0	–1.3	0.1	–0.2	–0.9	–0.9	–1.5	–1.6	–1.4	–1.2	–1.1	–0.9
Europe	4.3	3.1	2.3	–4.3	–2.3	1.2	0.6	–0.2	–0.3	–1.3	–0.5	0.1	0.6	0.7	0.7
Latin America	2.7	2.5	2.4	–0.5	0.2	0.8	0.0	0.0	–1.3	–0.9	–0.4	0.0	0.2	0.2	0.2
MENAP	14.0	11.5	13.4	–0.3	3.3	5.1	7.5	5.5	0.6	–6.9	–4.2	–2.8	–2.4	–1.9	–1.7
G20 Emerging	3.0	2.5	2.5	–1.9	–0.7	1.1	0.7	–0.2	–0.9	–1.7	–1.4	–1.0	–0.7	–0.6	–0.5

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 B. MENAP = Middle East, North Africa, and Pakistan.

[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A11. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Balance, 2006–20

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	1.3	–0.5	0.7	–0.2	0.2	–3.0	–2.6	–2.5	–2.9	–4.1	–3.9	–4.1	–4.3	–4.6	–4.9
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	–3.2	–2.9	–2.1	–2.3	–3.2	–2.8	–2.6	–3.4	–6.2	–4.8	–4.2	–4.0	–3.4	–3.0	–2.6
Chile[1]	0.8	0.5	–1.5	–4.3	–2.5	–1.0	–0.1	–1.1	–1.5	–2.2	–1.7	–1.2	–0.7	–0.7	–0.7
China	–0.6	–0.1	–0.3	–1.8	–1.3	0.6	0.2	–0.7	–0.7	–1.6	–2.0	–1.8	–1.6	–1.5	–1.3
Colombia	–1.1	–1.6	–0.7	–2.4	–2.8	–2.1	0.1	–1.0	–1.5	–3.2	–2.6	–2.5	–2.1	–1.9	–1.7
Croatia	–5.5	–4.7	–5.0	–5.3	–4.9	–6.7	–4.0	–3.5	–3.1	–3.2	–2.6	–2.5	–2.6	–2.9	–2.9
Dominican Republic	–1.3	–0.4	–4.1	–2.4	–3.2	–2.5	–6.1	–2.7	–2.9	–2.7	–2.4	–2.3	–2.3	–2.5	–2.9
Ecuador	4.8	3.4	1.7	–3.0	–0.7	0.6	–0.2	–3.6	–4.0	–4.1	–3.6	–2.5	–1.0	0.5	0.6
Egypt[2]	–9.2	–7.6	–8.3	–7.0	–8.2	–9.4	–10.0	–13.4	–13.0	–11.5	–9.3	–8.6	–8.5	–8.3	–7.9
Hungary[1]	–12.4	–7.5	–6.0	–3.1	–3.2	–15.4	–0.3	–0.6	–1.8	–2.3	–2.3	–2.5	–2.5	–2.4	–2.3
India	–6.3	–4.9	–9.6	–9.6	–8.8	–8.4	–7.4	–7.1	–7.0	–7.1	–7.0	–6.8	–6.7	–6.5	–6.4
Indonesia	0.4	–0.9	–0.1	–1.6	–1.2	–0.6	–1.6	–2.1	–2.1	–2.3	–2.1	–1.9	–1.7	–1.7	–1.6
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–3.0	–3.3	–3.8	–5.9	–4.6	–3.2	–4.1	–4.3	–3.9	–4.0	–3.2	–3.1	–2.8	–2.6	–2.2
Mexico	–1.2	–1.4	–1.2	–4.4	–4.0	–3.3	–3.8	–3.8	–4.5	–4.0	–3.4	–3.0	–2.5	–2.5	–2.5
Morocco	–2.5	–1.3	–0.4	–1.9	–4.5	–6.9	–7.6	–5.4	–6.2	–5.7	–4.4	–3.9	–3.0	–2.8	–2.8
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[1]	0.2	1.6	0.5	–0.6	–0.6	1.1	1.1	0.2	0.2	–1.0	–0.8	–0.9	–0.8	–0.8	–0.8
Philippines	–0.2	–0.8	–0.6	–1.8	–2.5	–0.2	–0.7	–0.3	0.2	–1.5	–1.5	–1.5	–1.6	–1.6	–1.7
Poland	–4.3	–2.6	–4.2	–7.1	–7.6	–5.5	–3.8	–3.3	–3.2	–2.8	–2.3	–2.4	–2.0	–1.9	–1.9
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–2.9	–5.8	–9.4	–8.0	–6.1	–3.8	–1.6	–1.9	–1.5	–1.4	–1.3	–1.2	–1.2	–1.3	–1.3
Russia	8.3	5.4	4.6	–5.5	–3.0	1.6	0.2	–1.5	0.0	–2.5	–2.4	–1.2	–0.4	–0.4	–0.5
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	1.5	1.0	–0.7	–3.1	–3.5	–3.5	–3.9	–3.8	–3.7	–3.7	–3.0	–2.7	–2.7	–2.7	–2.6
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	2.0	–0.1	–0.5	–2.1	–1.0	–0.8	–1.1	–0.3	–1.2	–1.4	–1.6	–1.7	–1.9	–1.9	–1.8
Turkey	–1.8	–3.2	–3.1	–3.6	–2.7	–1.4	–1.8	–1.5	–1.5	–1.3	–0.8	–0.8	–1.1	–1.3	–0.9
Ukraine	–1.9	–3.6	–3.5	–2.2	–2.8	–3.2	–4.6	–4.6	–3.3	–2.2	–2.4	–2.6	–2.5	–2.4	–2.2
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay	1.1	1.0	–1.2	–0.6	–1.5	–1.8	–3.6	–3.4	–4.3	–3.4	–3.2	–3.1	–3.0	–3.0	–3.1
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	–0.9	–1.0	–1.5	–3.5	–3.1	–1.7	–1.7	–2.3	–2.4	–2.9	–2.9	–2.7	–2.4	–2.3	–2.2
Asia	–1.6	–1.3	–2.1	–3.3	–2.8	–1.2	–1.2	–1.8	–1.7	–2.5	–2.8	–2.6	–2.4	–2.3	–2.2
Europe	1.6	0.4	–0.1	–5.2	–3.8	–1.3	–1.1	–1.9	–1.1	–2.2	–1.9	–1.4	–1.0	–1.1	–1.0
Latin America	–1.5	–1.7	–1.3	–2.7	–2.8	–2.6	–2.4	–2.9	–4.5	–4.0	–3.5	–3.3	–2.8	–2.6	–2.5
MENAP	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
G20 Emerging	–0.5	–0.7	–1.1	–3.4	–2.9	–1.4	–1.5	–2.1	–2.3	–2.8	–2.9	–2.6	–2.4	–2.3	–2.1

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

Note: MENAP = Middle East, North Africa, and Pakistan.

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

[2] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A12. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Primary Balance, 2006–20

(Percent of potential GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	2.8	1.2	2.1	1.5	1.4	–1.3	–0.7	–1.2	–1.2	–1.6	–1.3	–1.1	–1.0	–0.8	–0.8
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	3.5	3.1	3.3	2.7	1.9	2.6	2.0	1.5	–0.6	1.6	2.4	2.4	2.6	2.5	2.5
Chile[1]	1.0	0.3	–1.9	–4.5	–2.4	–0.9	0.0	–1.0	–1.5	–2.1	–1.3	–0.7	–0.1	–0.1	–0.1
China	–0.2	0.3	0.1	–1.4	–0.8	1.1	0.7	–0.3	–0.2	–1.1	–1.5	–1.3	–1.0	–0.9	–0.8
Colombia	1.5	1.1	1.5	–0.7	–1.1	–0.2	1.6	1.1	0.8	–0.4	0.0	0.1	0.3	0.5	0.7
Croatia	–3.7	–3.2	–3.4	–3.3	–2.7	–3.9	–0.9	–0.2	0.3	0.7	1.5	1.7	1.7	1.4	1.4
Dominican Republic	0.0	1.1	–2.5	–0.6	–1.3	–0.5	–3.8	–0.4	–0.4	–0.1	–0.1	0.0	0.0	0.0	0.0
Ecuador	6.8	5.1	2.8	–2.4	–0.2	1.3	0.6	–2.6	–2.9	–2.8	–2.3	–1.0	0.7	2.3	2.5
Egypt[2]	–4.2	–3.1	–4.2	–3.8	–3.7	–4.4	–4.8	–6.1	–5.6	–4.2	–1.9	–1.1	–1.0	–0.7	–0.4
Hungary[1]	–8.5	–3.5	–2.2	0.8	0.5	–11.7	3.4	3.5	2.0	1.2	1.1	1.0	0.8	0.9	1.1
India	–1.4	0.0	–5.0	–5.0	–4.6	–4.1	–3.0	–2.5	–2.5	–2.1	–2.4	–2.3	–2.3	–2.2	–2.1
Indonesia	2.6	0.9	1.5	0.0	0.1	0.6	–0.4	–0.9	–0.9	–1.0	–0.7	–0.6	–0.4	–0.4	–0.3
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–2.0	–2.6	–2.3	–4.4	–3.0	–1.6	–2.3	–2.3	–1.8	–1.9	–1.0	–1.0	–0.6	–0.4	–0.1
Mexico	1.6	1.3	1.4	–1.8	–1.5	–0.9	–1.2	–1.3	–1.8	–1.3	–0.6	0.0	0.6	0.7	0.7
Morocco	0.7	1.9	2.3	0.4	–2.2	–4.7	–5.1	–2.9	–3.5	–3.0	–1.6	–1.1	–0.2	0.0	0.0
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[1]	2.1	3.4	1.9	0.5	0.4	2.2	2.0	1.2	1.1	–0.1	0.1	0.1	0.2	0.2	0.1
Philippines	4.7	3.0	2.8	1.4	0.5	2.4	1.9	2.2	2.5	0.9	0.7	0.6	0.4	0.2	0.0
Poland	–1.7	–0.3	–2.0	–4.7	–5.1	–2.9	–1.1	–0.8	–1.0	–0.7	–0.2	–0.4	0.0	0.2	0.2
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–2.3	–5.2	–8.7	–7.0	–4.9	–2.3	0.1	–0.3	0.0	–0.1	0.3	0.4	0.3	0.3	0.3
Russia	8.8	5.4	4.8	–5.8	–2.9	1.9	0.5	–1.1	0.5	–2.0	–1.8	–0.4	0.4	0.4	0.4
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	4.3	3.5	1.7	–0.8	–1.0	–0.9	–1.1	–0.9	–0.6	–0.5	0.3	0.7	0.7	0.9	1.0
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	3.3	0.8	0.3	–1.4	–0.2	0.1	–0.3	0.5	–0.3	–0.6	–0.7	–0.9	–1.0	–1.0	–1.0
Turkey	3.5	1.8	1.3	0.6	0.9	1.4	1.0	1.1	0.8	1.5	1.6	1.4	1.4	1.4	1.4
Ukraine	–1.2	–3.1	–3.0	–1.1	–1.2	–1.2	–2.6	–2.2	0.0	2.9	2.5	2.1	1.7	1.6	1.6
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay	5.1	4.5	1.7	2.1	1.5	1.1	–0.9	–0.5	–1.3	–0.3	–0.3	–0.3	–0.3	–0.4	–0.4
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	1.6	1.2	0.6	–1.6	–1.1	0.2	0.1	–0.5	–0.6	–0.9	–0.9	–0.7	–0.5	–0.4	–0.3
Asia	0.0	0.3	–0.7	–2.0	–1.4	0.1	0.0	–0.6	–0.6	–1.2	–1.5	–1.3	–1.1	–1.1	–0.9
Europe	3.8	2.1	1.5	–3.6	–2.3	0.1	0.3	–0.5	0.3	–0.4	–0.3	0.2	0.7	0.7	0.7
Latin America	2.5	2.1	2.1	0.6	0.5	1.0	0.7	0.2	–0.9	–0.1	0.5	0.8	1.1	1.2	1.2
MENAP	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
G20 Emerging	2.0	1.6	1.0	–1.4	–0.9	0.6	0.2	–0.4	–0.5	–0.9	–1.0	–0.8	–0.5	–0.5	–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. For country-specific details, see Data and Conventions in text, and Table B. MENAP = Middle East, North Africa, and Pakistan.

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

[2] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A13. Emerging Market and Middle-Income Economies: General Government Revenue, 2006–20
(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	42.8	39.4	47.0	36.9	36.6	39.9	39.7	36.0	33.2	30.0	30.6	31.4	32.0	32.3	32.5
Angola	50.2	45.8	50.9	34.6	43.5	48.8	45.9	40.5	34.3	25.6	28.3	28.5	28.2	27.7	27.3
Argentina	24.1	24.9	26.9	27.8	29.6	29.8	31.5	33.4	35.6	35.7	35.1	34.9	34.8	34.8	34.7
Azerbaijan	28.0	28.2	51.1	40.4	45.7	45.5	40.5	39.4	38.8	29.5	33.6	34.1	35.6	35.4	35.3
Belarus	49.1	49.5	50.7	45.8	41.6	38.8	40.5	42.0	40.3	41.4	40.8	41.0	41.2	41.4	41.5
Brazil	35.6	34.9	35.9	34.0	36.1	35.1	35.4	35.6	34.0	34.5	34.4	34.4	34.9	34.9	35.0
Chile	26.2	27.3	25.8	20.6	23.5	24.7	24.4	23.3	22.8	23.4	24.5	25.2	25.9	25.9	25.9
China	17.0	18.5	22.6	23.8	25.1	27.7	28.4	28.2	28.5	28.9	28.3	28.2	27.9	27.5	27.2
Colombia	27.3	27.2	26.4	26.7	26.1	26.7	28.3	28.3	28.2	26.3	26.1	26.0	26.0	25.8	25.7
Croatia	41.6	42.2	41.6	41.2	40.8	40.6	41.3	41.8	41.9	42.6	42.9	43.0	43.3	43.4	43.4
Dominican Republic	15.1	16.4	15.1	13.3	13.1	12.8	13.6	14.6	15.1	14.8	14.8	14.7	14.7	14.6	14.7
Ecuador	24.1	26.4	35.7	29.4	33.3	39.3	39.5	39.4	38.8	33.9	34.1	34.3	33.7	33.4	32.9
Egypt[1]	28.6	27.7	28.0	27.7	25.1	22.0	22.1	23.0	25.0	23.4	23.3	23.2	22.9	22.6	22.7
Hungary	42.2	44.7	44.9	45.9	45.2	44.4	46.4	47.3	47.0	46.2	44.0	44.4	44.9	45.6	46.6
India	20.3	22.0	19.7	18.5	18.8	19.1	19.7	19.8	19.4	19.5	19.7	19.8	19.9	20.0	20.1
Indonesia	18.9	17.8	19.4	15.4	15.6	17.1	17.2	17.1	16.6	15.2	15.7	15.9	16.1	16.2	16.3
Iran	25.8	26.5	22.7	21.4	21.9	19.2	14.2	14.1	14.2	13.5	13.3	12.8	12.3	11.9	11.4
Kazakhstan	27.5	28.8	28.3	22.1	23.9	27.7	26.9	25.3	24.8	20.8	22.1	22.7	22.6	22.5	22.2
Kuwait	63.8	67.5	60.6	69.4	70.7	73.0	73.5	72.4	70.8	62.0	64.5	66.1	65.6	64.5	63.3
Libya	63.0	62.3	68.4	52.9	64.9	39.1	72.3	65.7	40.9	27.5	39.4	57.3	57.2	58.8	57.8
Malaysia	24.1	24.4	24.6	25.6	23.1	24.6	25.8	24.9	24.2	22.9	23.3	23.3	23.6	23.9	23.7
Mexico	21.9	22.1	25.0	22.1	22.6	23.6	23.8	24.2	23.5	22.0	21.7	22.2	22.3	22.2	22.2
Morocco	27.4	29.9	32.5	29.3	27.5	27.8	28.7	28.6	28.3	27.0	27.5	28.1	27.9	27.9	27.9
Oman	49.8	48.8	47.4	39.3	40.6	48.9	49.5	49.2	47.3	41.2	42.5	42.8	41.3	40.2	38.1
Pakistan	13.6	14.4	14.4	14.2	14.3	12.6	13.2	13.3	15.1	14.8	15.4	15.6	15.7	15.9	15.9
Peru	21.1	21.9	22.2	19.8	20.9	22.1	22.2	22.3	22.4	21.0	21.2	21.0	20.9	21.0	20.9
Philippines	19.0	18.7	18.7	17.4	16.8	17.6	18.3	18.5	19.0	18.7	18.8	18.8	18.9	19.0	19.0
Poland	41.2	41.1	40.8	37.9	38.2	39.0	39.1	38.2	38.7	39.1	39.2	38.9	39.2	39.3	39.3
Qatar	36.6	37.2	35.6	47.7	35.0	38.7	45.0	51.9	47.1	40.1	35.3	32.9	31.8	30.7	29.6
Romania	32.1	32.1	31.6	30.6	31.6	32.1	32.4	31.4	31.9	32.0	31.5	31.3	31.1	31.0	30.9
Russia	39.5	40.2	39.2	35.0	34.6	37.3	37.7	36.9	37.1	34.8	33.4	34.6	34.4	34.1	33.8
Saudi Arabia	53.7	46.6	60.5	36.0	41.6	47.5	50.3	46.7	42.3	35.9	37.0	37.2	36.4	35.0	33.8
South Africa	27.8	28.4	28.2	27.0	26.7	27.0	27.2	27.6	28.0	28.3	29.0	29.2	29.2	29.3	29.3
Sri Lanka	17.3	16.6	15.6	15.0	14.9	14.5	13.2	12.4	11.7	13.3	12.4	12.6	12.9	13.1	13.7
Thailand	22.3	21.5	21.4	20.8	22.4	22.6	23.1	24.1	22.5	22.7	23.0	23.1	23.1	23.1	23.2
Turkey	32.8	31.6	31.8	32.6	33.3	34.6	35.0	37.2	36.0	36.1	35.8	35.6	35.5	35.5	35.4
Ukraine	41.6	40.2	42.4	40.8	43.4	42.9	44.7	43.3	40.8	42.8	40.3	40.7	40.8	40.7	40.3
United Arab Emirates	40.9	39.5	42.0	30.7	34.7	37.8	40.2	39.3	36.3	30.7	31.4	31.1	30.7	30.0	29.3
Uruguay	28.6	28.9	27.1	29.2	30.1	28.7	28.5	30.5	30.1	30.1	30.0	29.8	29.7	29.6	29.6
Venezuela	37.7	33.1	31.4	24.6	21.2	27.9	23.5	23.4	28.8	22.6	21.1	20.3	19.4	18.6	18.2
Average	28.0	28.2	30.0	27.1	28.0	29.5	30.1	30.0	29.3	28.2	27.9	27.9	27.8	27.5	27.3
Asia	18.3	19.5	21.8	22.0	22.8	24.8	25.7	25.8	25.9	26.2	25.8	25.7	25.5	25.3	25.1
Europe	37.8	37.9	37.9	35.3	35.3	37.0	37.3	37.0	36.8	35.5	34.8	35.3	35.2	35.1	34.9
Latin America	28.5	28.6	30.1	28.2	29.7	30.2	30.2	30.5	29.9	29.1	28.8	28.8	28.9	28.8	28.7
MENAP	40.1	38.1	41.9	32.5	34.0	35.1	38.3	37.4	34.5	29.3	29.9	30.3	29.9	29.3	28.6
G20 Emerging	26.1	26.4	28.7	26.2	27.4	29.2	29.8	29.6	29.1	28.4	28.0	28.0	27.9	27.6	27.3

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 B. MENAP = Middle East, North Africa, and Pakistan.

[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A14. Emerging Market and Middle-Income Economies: General Government Expenditure, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	28.9	33.3	37.9	42.3	37.0	40.3	43.8	36.8	39.4	42.5	40.4	38.9	37.4	36.2	35.1
Angola	38.4	41.2	55.4	41.9	40.0	40.2	41.3	40.8	37.1	30.3	30.6	30.6	30.6	30.6	30.7
Argentina	22.4	24.6	26.1	29.4	29.6	31.7	33.9	35.4	38.4	39.8	39.2	39.3	39.4	39.7	40.1
Azerbaijan	26.9	25.9	31.1	33.8	31.7	34.0	36.7	38.0	38.4	35.2	32.1	31.5	31.2	30.2	29.8
Belarus	47.9	47.9	48.8	46.2	42.1	34.5	38.9	42.9	40.2	44.4	43.5	44.1	44.9	45.7	46.2
Brazil	39.2	37.7	37.4	37.2	38.8	37.6	38.0	38.6	40.2	39.8	39.2	38.6	38.3	37.9	37.6
Chile	18.7	19.4	21.7	24.7	23.9	23.3	23.7	23.7	24.3	25.5	26.4	26.5	26.6	26.6	26.6
China	18.1	18.4	22.7	25.6	26.3	27.1	28.3	29.3	29.6	30.9	30.5	30.0	29.5	29.0	28.5
Colombia	28.3	28.0	26.6	29.5	29.4	28.6	28.3	29.2	29.6	29.5	28.8	28.5	28.1	27.8	27.4
Croatia	44.9	44.7	44.3	47.2	46.8	48.2	46.9	47.0	46.9	47.4	46.7	46.3	46.2	46.3	46.3
Dominican Republic	16.1	16.3	18.3	16.3	15.8	15.9	20.2	18.1	18.1	17.2	16.9	17.0	17.0	17.1	17.6
Ecuador	21.2	24.6	35.2	33.0	34.7	39.3	40.4	44.0	44.0	39.3	39.0	38.4	36.4	34.8	34.2
Egypt[1]	37.8	35.3	36.0	34.6	33.4	31.8	32.7	37.1	38.6	35.2	32.7	31.8	31.3	30.9	30.6
Hungary	51.4	49.7	48.5	50.4	49.7	49.7	48.7	49.7	49.6	48.9	46.4	46.9	47.5	48.0	48.9
India	26.5	26.4	29.7	28.3	27.2	27.2	27.2	27.0	26.5	26.7	26.8	26.7	26.6	26.5	26.5
Indonesia	18.5	18.7	19.4	17.0	16.9	17.7	18.8	19.1	18.8	17.4	17.8	17.8	17.8	17.9	18.0
Iran	23.8	19.7	22.1	20.6	19.1	18.9	14.5	15.0	15.6	16.1	15.6	15.3	15.0	14.6	14.1
Kazakhstan	19.8	23.7	27.1	23.5	22.5	21.8	22.4	20.2	22.8	24.1	24.0	23.0	23.0	22.2	21.8
Kuwait	31.9	30.1	40.4	42.2	44.8	39.1	37.9	37.5	45.3	55.8	51.6	50.7	50.3	50.1	50.0
Libya	31.2	33.7	40.8	58.2	53.4	55.0	44.5	69.8	84.4	95.6	82.8	72.9	71.7	68.4	69.8
Malaysia	26.8	27.1	28.2	32.4	27.8	28.3	29.7	29.3	27.9	26.3	26.1	26.2	26.2	26.3	25.8
Mexico	22.9	23.3	25.9	27.1	26.9	27.0	27.5	28.1	28.1	26.2	25.2	25.2	24.8	24.8	24.7
Morocco	29.4	30.1	31.8	31.1	31.9	34.5	36.1	33.9	33.2	31.3	31.1	31.1	30.8	30.6	30.6
Oman	35.4	36.4	30.1	39.6	35.0	39.5	44.8	45.9	48.8	56.0	54.1	53.5	52.5	51.5	50.7
Pakistan	17.1	19.5	21.4	19.2	20.2	19.5	21.6	21.4	19.8	19.5	19.3	19.1	19.1	18.9	18.6
Peru	19.1	18.6	19.6	21.4	20.9	19.8	20.3	21.5	22.5	22.7	22.6	22.2	21.9	21.8	21.7
Philippines	19.1	19.0	18.6	20.1	19.2	18.0	18.9	18.6	18.4	19.6	19.8	19.9	20.1	20.2	20.4
Poland	45.2	43.3	44.3	45.1	45.9	43.9	42.9	42.2	42.1	42.0	41.5	41.4	41.2	41.1	41.2
Qatar	28.1	26.7	24.8	32.2	29.0	28.5	30.8	31.4	32.5	34.5	33.4	31.8	30.8	30.2	29.7
Romania	33.4	35.2	36.3	37.8	37.9	36.3	34.8	33.8	33.8	33.9	33.2	32.7	32.5	32.3	32.2
Russia	31.1	34.2	34.3	41.4	38.0	35.7	37.3	38.2	38.3	38.4	36.0	35.8	34.8	34.5	34.3
Saudi Arabia	29.3	31.6	29.0	40.0	36.4	35.5	35.5	38.0	42.7	50.2	45.1	42.6	41.6	39.5	38.2
South Africa	27.1	27.2	28.7	31.7	31.5	30.9	31.3	31.7	32.1	32.5	32.4	32.3	32.2	32.1	32.0
Sri Lanka	24.3	23.5	22.6	24.9	22.8	21.4	19.7	18.3	17.7	20.0	19.8	19.9	20.1	20.5	21.1
Thailand	20.1	21.3	21.2	24.0	23.2	23.2	24.9	24.3	24.3	24.7	25.0	24.9	24.9	25.1	25.0
Turkey	33.5	33.6	34.5	38.6	36.7	35.2	36.6	38.5	37.5	37.5	36.7	36.4	36.5	36.7	36.3
Ukraine	42.9	42.1	45.4	46.8	49.2	45.7	49.0	48.1	45.4	47.1	43.9	43.8	43.4	43.2	42.5
United Arab Emirates	15.6	17.7	21.9	35.0	32.7	31.5	29.3	29.4	30.3	33.6	31.4	29.9	28.4	27.0	25.4
Uruguay	29.1	28.9	28.7	30.9	31.6	29.6	31.3	32.9	33.5	33.0	32.9	32.8	32.7	32.6	32.7
Venezuela	39.3	35.9	34.9	33.3	31.6	39.5	40.0	38.0	43.6	42.6	41.4	41.1	40.8	40.7	40.7
Average	26.7	27.1	29.1	30.8	30.4	30.2	30.9	31.4	31.7	31.8	31.1	30.7	30.3	29.9	29.6
Asia	20.3	20.6	23.7	25.4	25.5	26.1	27.1	27.9	28.0	28.9	28.7	28.3	28.0	27.6	27.2
Europe	35.4	36.4	37.1	41.1	39.1	37.1	38.0	38.5	38.4	38.4	36.9	36.6	36.2	36.0	35.8
Latin America	29.7	29.7	31.0	31.9	32.7	32.9	33.2	33.7	34.9	33.9	33.2	32.9	32.6	32.3	32.2
MENAP	26.2	26.6	28.6	33.2	31.3	30.5	31.2	32.5	34.5	36.8	34.6	33.4	32.7	31.7	30.9
G20 Emerging	25.6	26.2	28.1	30.1	30.0	29.9	30.7	31.5	31.7	31.9	31.2	30.8	30.4	30.0	29.6

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 B. MENAP = Middle East, North Africa, and Pakistan.

[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A15. Emerging Market and Middle-Income Economies: General Government Gross Debt, 2006–20
(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	26.9	13.9	8.8	10.8	11.7	9.9	10.0	8.3	8.8	13.6	15.4	16.7	18.0	18.3	18.1
Angola	18.7	16.4	16.6	49.9	39.8	32.2	29.6	35.2	38.0	47.5	44.3	41.9	40.1	39.2	38.9
Argentina	61.8	53.2	47.0	47.6	39.2	35.8	37.3	40.2	48.6	49.5	50.5	51.3	52.4	53.9	55.9
Azerbaijan	10.2	8.6	7.3	11.8	11.1	10.1	11.6	13.8	16.4	21.6	23.1	24.0	25.2	26.1	27.3
Belarus	11.1	18.3	21.5	34.7	39.5	45.9	38.5	38.3	37.9	39.6	45.5	46.8	47.1	48.6	49.8
Brazil[1]	65.8	63.8	61.9	65.0	63.0	61.2	63.5	62.2	65.2	66.2	66.2	65.3	65.1	65.1	64.2
Chile	5.0	3.9	4.9	5.8	8.6	11.2	12.0	12.8	13.9	16.3	17.9	19.0	19.6	20.0	20.3
China	31.5	34.8	31.7	35.8	36.6	36.5	37.3	39.4	41.1	43.5	46.2	48.1	49.2	49.8	49.8
Colombia	35.7	32.3	31.9	35.2	37.0	35.7	32.0	35.8	38.0	40.6	40.1	39.9	39.3	38.6	37.6
Croatia	36.1	34.4	36.0	44.5	52.8	59.9	64.4	75.7	80.9	85.1	87.2	87.7	87.3	86.7	86.0
Dominican Republic	19.4	17.5	19.6	22.7	23.8	25.8	30.5	34.6	35.1	30.7	36.2	36.3	36.6	37.3	38.0
Ecuador	28.8	27.2	22.2	16.4	19.2	18.4	21.3	24.2	29.8	34.3	36.6	37.7	37.6	36.3	35.0
Egypt[2]	90.3	80.2	70.2	73.0	73.2	76.6	78.9	89.0	90.5	90.5	88.5	85.9	83.8	82.6	81.7
Hungary	64.9	65.8	71.9	78.1	80.9	81.0	78.5	77.3	76.9	75.5	74.7	73.9	73.2	72.4	71.8
India	77.1	74.0	74.5	72.5	67.5	68.1	67.5	65.5	65.0	64.4	63.3	62.4	61.4	60.3	59.2
Indonesia	35.8	32.3	30.3	26.5	24.5	23.1	23.0	24.9	25.0	25.9	25.7	25.6	25.2	24.7	24.2
Iran	12.5	12.0	9.3	10.4	12.2	8.9	11.2	11.1	12.2	11.9	11.9	11.7	11.4	10.8	10.1
Kazakhstan	6.7	5.9	6.8	10.2	10.7	10.4	12.4	12.9	15.1	17.2	19.1	21.3	24.6	27.3	29.9
Kuwait	10.6	11.8	9.6	11.0	11.3	8.5	6.8	6.5	7.1	9.5	8.8	8.3	8.0	7.7	7.4
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	41.5	41.2	41.2	52.8	53.5	54.2	56.2	57.7	56.9	56.7	54.8	53.8	52.1	50.3	48.4
Mexico	37.8	37.5	42.8	43.9	42.2	43.2	43.2	46.3	50.1	51.4	51.7	51.6	50.9	50.2	49.4
Morocco	59.4	54.6	47.3	47.1	50.3	53.7	59.7	63.4	63.9	65.5	64.9	63.5	62.1	60.4	58.7
Oman	8.9	7.1	4.8	6.9	5.9	5.2	4.9	5.1	5.1	8.6	9.6	10.6	14.7	19.3	24.3
Pakistan	54.4	52.6	57.9	59.1	61.5	59.5	64.0	64.3	64.2	64.1	64.1	63.0	61.4	60.3	58.8
Peru	34.8	31.9	28.0	28.4	25.2	23.2	21.2	20.3	20.7	21.5	22.3	22.2	21.7	21.4	22.1
Philippines	51.6	44.6	44.2	44.3	43.5	41.4	40.6	39.1	37.2	35.5	33.8	32.0	30.3	28.7	27.4
Poland	47.5	44.6	47.0	50.3	53.6	54.8	54.4	55.7	48.8	49.4	49.2	48.9	48.1	46.9	45.8
Qatar	12.5	8.0	11.5	33.6	38.4	34.5	36.0	32.1	31.5	28.9	26.1	22.5	18.0	15.0	12.7
Romania	12.5	12.7	13.4	23.3	30.5	33.9	37.5	38.8	40.4	40.5	40.0	39.2	38.3	37.5	36.6
Russia	10.5	8.6	8.0	10.6	11.3	11.6	12.7	14.0	17.9	18.8	17.1	17.2	17.5	17.9	18.2
Saudi Arabia	25.8	17.1	12.1	14.0	8.4	5.4	3.6	2.2	1.6	1.8	1.7	1.6	1.5	1.4	9.2
South Africa	29.8	27.1	25.9	30.3	34.4	37.6	40.5	43.3	45.9	47.5	48.2	48.8	50.0	50.7	50.6
Sri Lanka	87.9	85.0	81.4	86.1	81.9	78.5	79.2	78.3	75.9	77.0	78.1	78.2	78.0	77.9	77.7
Thailand	42.0	38.3	37.3	45.2	42.6	41.7	45.4	45.9	47.2	47.5	47.2	47.0	47.0	47.3	47.6
Turkey	46.5	39.9	40.0	46.0	42.3	39.1	36.2	36.2	33.5	33.4	32.5	32.6	31.9	31.9	32.8
Ukraine	14.3	11.8	19.7	34.1	40.6	36.8	37.5	40.7	71.2	94.1	92.6	88.9	83.3	77.3	71.0
United Arab Emirates	6.8	7.9	12.5	24.1	22.2	17.6	17.1	11.7	12.1	14.7	15.1	15.6	16.1	16.4	16.5
Uruguay	75.7	68.0	67.8	65.6	61.6	59.0	59.5	62.1	62.8	64.4	65.3	65.8	66.6	67.4	68.3
Venezuela	34.5	30.8	23.3	28.6	36.3	43.3	46.0	55.4	45.6	39.6	30.6	26.3	24.0	22.5	21.8
Average	38.5	37.1	35.2	39.7	39.4	38.4	38.6	39.7	41.7	43.9	44.6	45.2	45.4	45.4	45.3
Asia	42.8	43.8	40.1	42.8	42.3	41.7	41.8	42.9	44.1	46.0	47.7	48.9	49.5	49.6	49.4
Europe	27.0	23.7	23.8	29.6	29.4	28.0	27.2	28.5	30.9	33.9	32.5	32.4	32.0	31.7	31.6
Latin America	47.9	46.5	46.5	49.2	48.4	48.0	48.2	49.2	52.2	52.3	52.2	51.8	51.4	51.1	50.6
MENAP	26.6	22.2	19.8	25.7	24.6	22.1	23.0	23.1	24.5	27.8	27.9	27.6	27.5	27.4	29.2
G20 Emerging	40.9	40.1	37.7	41.4	40.4	39.4	39.3	40.3	42.5	44.7	45.7	46.6	46.9	47.0	47.1

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 B. MENAP = Middle East, North Africa, and Pakistan.

[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] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A16. Emerging Market and Middle-Income Economies: General Government Net Debt, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Algeria	–7.6	–20.4	–29.9	–32.5	–28.7	–27.1	–23.4	–23.3	–16.5	–6.0	2.9	8.8	12.4	14.5	15.3
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	46.5	44.2	37.1	40.4	38.0	34.5	32.9	31.5	34.1	34.4	34.5	33.9	34.0	34.2	33.4
Chile	–6.6	–13.0	–19.3	–10.6	–7.0	–8.6	–6.8	–5.7	–5.2	–2.7	–0.7	0.6	1.3	1.9	2.6
China	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	25.2	22.3	22.0	26.1	29.0	27.2	22.8	24.9	27.9	30.2	30.5	31.0	31.0	30.8	30.4
Croatia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Dominican Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ecuador	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Egypt[1]	71.4	64.5	55.6	58.7	60.0	64.5	67.9	78.1	81.9	83.0	82.0	80.3	78.8	78.2	77.7
Hungary	62.4	63.4	63.8	72.4	75.5	74.7	72.3	71.7	71.6	70.5	69.9	69.4	68.9	68.3	68.8
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iran	–0.9	–2.7	–2.8	2.5	2.0	–2.7	0.2	–4.0	–1.1	1.8	4.0	5.3	6.0	6.3	6.3
Kazakhstan	–10.9	–13.8	–13.9	–11.0	–10.2	–13.0	–16.3	–18.0	–20.1	–18.1	–15.4	–14.4	–13.6	–13.6	–13.8
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	–77.8	–77.6	–70.2	–93.6	–86.9	–170.5	–83.6	–92.9	–102.6	–49.9	3.6	18.1	30.8	36.5	46.0
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	29.8	29.1	33.2	36.2	36.2	37.5	37.7	40.3	43.7	45.0	45.3	45.3	44.6	43.8	43.1
Morocco	56.8	53.1	46.6	46.4	49.8	53.3	59.1	62.9	63.4	65.0	64.3	63.0	61.6	59.9	58.2
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	50.6	47.9	53.2	55.5	57.9	56.2	60.6	61.2	61.0	60.8	60.8	59.7	58.2	57.0	55.6
Peru	24.0	16.7	13.0	12.2	10.3	6.9	4.5	3.5	3.4	4.9	6.0	6.8	7.3	7.7	8.1
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	14.9	10.1	9.9	14.7	19.8	24.4	25.6	29.0	22.1	23.8	24.5	25.2	25.5	25.2	25.1
Qatar	7.8	3.7	7.5	30.0	33.8	26.9	27.5	17.5	18.6	18.1	16.3	13.3	9.2	6.7	4.8
Romania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	–50.0	–73.7	–83.9	–97.5	–90.7	–81.2	–91.2	–100.1	–97.1	–87.5	–72.0	–60.7	–50.7	–42.1	–34.2
South Africa	25.9	22.8	21.7	25.4	28.5	31.3	34.7	37.6	40.5	42.5	43.7	44.6	45.7	46.8	47.1
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Turkey	39.0	32.7	32.5	37.5	34.7	31.3	27.8	27.4	25.5	25.9	25.5	25.5	25.9	26.5	27.3
Ukraine	11.3	9.7	17.5	30.8	38.5	34.5	35.3	38.4	69.7	91.5	91.2	87.7	82.2	76.3	70.1
United Arab Emirates	–222.4	–215.1	–203.0	–247.1	–228.0	–201.6	–209.5	–210.4	–225.8	–253.3	–240.7	–234.0	–228.9	–224.5	–218.9
Uruguay	47.4	37.8	31.6	31.9	31.7	28.7	26.0	24.4	22.8	23.8	25.7	26.9	28.0	29.1	30.6
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	13.4	9.9	7.2	10.4	12.4	11.5	8.6	7.8	9.2	10.9	12.8	14.1	15.2	16.1	16.7
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	28.2	23.3	23.3	29.1	29.8	28.3	26.0	26.5	25.8	26.7	27.0	27.1	27.1	27.0	26.9
Latin America	34.6	32.9	30.8	34.2	33.3	31.3	29.7	29.8	32.5	33.4	33.8	33.7	33.6	33.5	33.0
MENAP	–39.0	–45.2	–48.0	–46.9	–42.4	–39.4	–44.0	–48.2	–46.0	–39.0	–32.2	–27.3	–23.5	–20.3	–17.6
G20 Emerging	27.4	23.5	19.8	22.7	22.5	20.7	16.8	15.8	17.7	20.0	21.6	22.8	24.1	25.4	26.2

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 B. MENAP = Middle East, North Africa, and Pakistan.

[1] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A17. Low-Income Developing Countries: General Government Overall Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	–2.6	–2.2	–4.0	–3.2	–2.7	–3.6	–3.0	–3.4	–3.0	–3.2	–3.0	–2.9	–2.4	–2.3	–2.0
Benin	–0.2	0.3	–0.1	–3.3	–0.4	–1.4	–0.3	–2.1	–1.9	–2.5	–4.1	–4.1	–4.0	–2.2	–1.2
Bolivia	4.5	1.7	3.6	0.0	1.7	0.8	1.8	0.7	–3.2	–4.5	–5.5	–5.0	–4.7	–4.3	–4.0
Burkina Faso	16.1	–5.6	–4.1	–4.7	–3.0	–1.4	–3.1	–3.9	–1.9	–2.6	–3.0	–3.6	–4.0	–4.3	–4.3
Cambodia	–0.2	–0.7	0.3	–4.2	–2.8	–4.1	–3.8	–2.1	–0.8	–3.1	–3.0	–2.6	–2.3	–1.9	–1.6
Cameroon	32.8	4.7	2.2	0.0	–1.1	–2.6	–1.6	–4.0	–5.1	–6.0	–5.4	–5.2	–4.4	–3.8	–3.8
Chad	2.2	2.5	3.6	–9.2	–4.2	2.4	0.5	–2.1	–4.2	–3.4	–0.7	0.2	3.6	3.2	2.0
Democratic Republic of the Congo	1.9	–0.2	–1.1	1.3	2.5	–0.5	1.8	3.1	2.6	1.6	1.6	1.8	1.6	1.4	1.4
Republic of Congo	16.6	9.4	23.4	4.8	16.1	16.5	6.4	8.5	2.0	–6.8	1.6	6.9	7.0	4.2	2.1
Côte d'Ivoire	–1.5	–0.5	–0.4	–1.4	–1.8	–5.4	–3.1	–2.2	–2.3	–3.2	–3.1	–3.1	–3.0	–2.9	–1.6
Ethiopia	–3.8	–3.6	–2.9	–0.9	–1.3	–1.6	–1.2	–1.9	–2.6	–2.9	–2.8	–2.7	–2.6	–2.5	–2.4
Ghana	–4.7	–5.4	–8.4	–7.0	–9.4	–7.3	–12.2	–10.9	–9.8	–6.3	–4.4	–2.3	–2.6	–2.3	–2.1
Guinea	–3.1	1.9	0.6	–7.1	–14.0	–1.3	–3.3	–5.2	–4.3	–10.1	–4.1	–2.9	–1.6	–1.4	–1.0
Haiti	–1.7	0.2	–2.8	–4.6	1.1	–3.6	–4.8	–7.2	–6.4	–3.1	–3.0	–2.9	–2.7	–2.8	–2.7
Honduras	–2.7	–1.6	–1.7	–4.5	–2.8	–2.8	–4.2	–7.6	–4.3	–2.7	–1.9	–1.5	–1.1	–0.9	–0.7
Kenya	–2.1	–2.4	–3.4	–4.3	–4.4	–4.1	–5.0	–5.7	–6.8	–7.6	–6.2	–4.7	–4.3	–3.8	–3.2
Kyrgyz Republic	–2.7	–0.6	1.0	–1.1	–5.8	–4.6	–5.7	–3.7	0.2	–4.3	–4.4	–3.5	–1.5	–0.2	–0.7
Lao P.D.R.	–2.9	–2.7	–1.4	–4.1	–3.2	–1.7	–0.5	–5.6	–3.8	–4.7	–5.6	–5.7	–6.1	–6.7	–6.4
Madagascar	–0.5	–2.7	–2.0	–2.5	–0.9	–2.4	–2.6	–4.0	–2.4	–4.0	–3.7	–3.8	–3.6	–3.5	–3.3
Mali	31.3	–3.2	–2.2	–4.2	–2.9	–4.1	–1.1	–2.9	–4.0	–4.6	–4.3	–4.0	–3.6	–3.1	–3.1
Moldova	–0.3	0.3	–0.9	–6.3	–2.5	–2.4	–2.2	–1.8	–1.7	–5.3	–6.3	–6.6	–5.9	–5.5	–5.9
Mongolia	6.6	2.3	–3.9	–4.5	0.4	–4.0	–9.1	–8.9	–11.0	–9.8	–7.8	–6.7	–5.1	–4.1	–4.2
Mozambique	–3.5	–2.6	–2.2	–5.0	–3.9	–4.8	–3.9	–2.7	–8.4	–6.5	–6.0	–5.6	–5.0	–4.6	–4.0
Myanmar	–3.6	–3.3	–2.4	–4.9	–5.4	–4.6	–1.7	–2.0	–4.3	–6.3	–6.9	–7.0	–7.0	–7.2	–7.3
Nepal	0.3	–0.8	–0.4	–2.6	–0.8	–1.0	–0.6	2.1	2.2	1.1	0.8	0.5	0.4	0.1	0.1
Nicaragua	1.0	1.4	–0.3	–1.6	0.1	0.1	0.1	–0.6	–1.1	–0.9	–0.7	–0.7	–0.9	–1.0	–1.0
Niger	40.3	–1.0	1.5	–5.3	–2.4	–1.5	–1.2	–2.6	–5.6	–8.0	–5.3	–3.6	–3.3	–2.5	–2.3
Nigeria	8.9	–1.1	5.8	–6.0	–4.2	0.4	0.3	–2.4	–2.3	–2.0	–1.7	–1.8	–1.8	–1.6	–1.7
Papua New Guinea	6.5	9.0	2.5	–9.6	3.1	1.7	–3.2	–8.0	–6.1	–5.0	–3.7	–3.1	–2.8	–3.1	–3.2
Rwanda	0.2	–1.7	0.9	0.3	0.4	–1.8	–1.6	–2.6	–3.6	–2.0	–2.3	–2.6	–2.9	–2.6	–2.5
Senegal	–5.4	–3.8	–4.7	–4.9	–5.2	–6.3	–5.6	–5.5	–5.1	–4.6	–4.2	–4.0	–3.7	–3.0	–2.8
Sudan	–1.4	–3.5	0.6	–5.1	0.3	0.2	–3.3	–2.3	–1.0	–1.5	–1.4	–1.2	–1.1	–1.0	–1.0
Tajikistan	1.7	–5.5	–5.1	–5.2	–3.0	–2.1	0.6	–0.8	0.1	–1.8	–2.2	–2.3	–2.5	–2.8	–3.2
Tanzania	–3.4	–1.5	–2.0	–4.5	–4.8	–3.6	–4.1	–4.0	–3.9	–4.2	–3.8	–3.8	–3.7	–3.6	–3.4
Uganda	–0.7	–1.0	–2.5	–2.1	–5.8	–2.6	–3.0	–4.1	–3.9	–2.7	–4.5	–5.1	–5.8	–5.5	–4.8
Uzbekistan	5.4	5.2	10.2	2.8	4.9	8.8	8.5	2.9	1.7	0.0	–0.1	–0.1	–0.1	–0.1	–0.1
Vietnam	0.3	–2.0	–0.5	–6.0	–2.8	–1.1	–6.8	–5.9	–5.4	–6.5	–5.6	–4.7	–3.9	–3.7	–3.5
Yemen	1.2	–7.2	–4.5	–10.2	–4.1	–4.5	–6.3	–6.9	–4.1	–5.3	–5.1	–4.6	–4.0	–3.6	–3.2
Zambia	16.9	–1.0	–0.7	–2.1	–2.4	–1.8	–3.2	–6.7	–5.6	–5.1	–5.1	–4.2	–3.3	–3.1	–2.8
Zimbabwe	–2.5	–3.0	–2.0	–2.1	0.7	–1.3	–0.6	–1.9	–1.5	–1.2	–2.5	–3.4	–3.5	–3.7	–3.7
Average	3.8	–1.3	1.1	–4.3	–2.7	–1.1	–2.0	–3.2	–3.1	–3.5	–3.2	–2.9	–2.7	–2.5	–2.4
Oil Producers	7.4	–1.0	3.8	–5.3	–3.1	–0.1	–1.5	–2.9	–2.9	–3.3	–2.8	–2.5	–2.2	–2.1	–2.0
Asia	–0.9	–1.7	–1.9	–4.7	–2.8	–2.5	–4.3	–4.2	–4.1	–4.9	–4.5	–4.1	–3.6	–3.6	–3.4
Latin America	0.6	0.4	0.3	–2.3	–0.1	–0.9	–1.0	–2.7	–3.6	–3.3	–3.5	–3.2	–3.0	–2.8	–2.6
Sub-Saharan Africa	6.6	–1.2	2.4	–4.3	–3.5	–1.0	–1.4	–3.0	–3.1	–3.2	–2.7	–2.4	–2.3	–2.2	–2.1
Others	0.8	–2.2	1.4	–3.9	0.2	1.3	–0.3	–1.7	–0.8	–2.0	–2.0	–1.8	–1.5	–1.4	–1.3

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 C.

Table A18. Low-Income Developing Countries: General Government Primary Balance, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	–1.0	–0.6	–1.9	–1.0	–0.8	–1.9	–1.1	–1.4	–0.9	–1.2	–1.0	–1.0	–0.6	–0.7	–0.5
Benin	0.0	1.9	0.3	–2.8	0.1	–1.0	0.3	–1.6	–1.3	–1.5	–3.3	–3.3	–3.1	–1.3	–0.3
Bolivia	7.0	4.3	5.5	1.7	3.1	2.1	2.8	1.6	–2.3	–3.6	–4.6	–3.9	–3.5	–3.0	–2.7
Burkina Faso	16.7	–5.2	–3.7	–4.3	–2.6	–0.8	–2.4	–3.3	–1.2	–1.9	–2.3	–2.9	–3.2	–3.5	–3.5
Cambodia	0.0	–0.5	0.5	–4.0	–2.5	–3.8	–3.3	–1.4	–0.5	–2.7	–2.6	–2.2	–2.0	–1.6	–1.3
Cameroon	33.8	5.2	2.6	0.2	–0.8	–2.2	–1.2	–3.6	–4.7	–5.4	–4.5	–4.0	–3.2	–2.4	–2.3
Chad	2.6	2.8	3.8	–8.8	–3.6	3.0	0.9	–1.5	–3.6	–2.7	0.0	0.9	4.1	3.7	2.4
Democratic Republic of the Congo	3.1	0.9	–0.1	2.7	3.9	1.3	3.3	4.4	3.6	2.6	2.5	2.6	2.3	2.0	2.0
Republic of Congo	21.1	11.9	25.8	6.1	17.0	16.5	6.5	8.8	2.2	–6.6	1.8	7.2	7.2	4.4	2.3
Côte d'Ivoire	0.2	1.2	1.3	0.1	–0.3	–2.9	–1.4	–0.9	–1.1	–2.0	–2.0	–2.0	–1.9	–1.9	–0.6
Ethiopia	–3.0	–2.9	–2.4	–0.6	–0.9	–1.2	–0.9	–1.6	–2.3	–2.5	–2.4	–2.2	–2.0	–1.9	–1.8
Ghana	–2.6	–3.5	–6.2	–4.2	–6.2	–4.6	–8.7	–6.2	–3.5	0.9	1.7	3.2	2.7	2.4	2.1
Guinea	0.4	4.3	3.2	–5.0	–12.0	0.7	–1.6	–4.1	–3.2	–9.1	–2.7	–1.7	–0.5	–0.4	–0.1
Haiti	–1.2	1.3	–2.1	–3.8	1.7	–3.2	–4.4	–6.7	–5.9	–2.6	–2.3	–2.1	–1.8	–1.7	–1.7
Honduras	–3.1	–2.2	–2.7	–5.4	–3.4	–3.0	–4.3	–7.1	–3.8	–1.6	–0.5	0.1	0.4	0.5	0.2
Kenya	–0.5	–0.8	–1.8	–2.7	–2.5	–2.2	–2.9	–3.3	–4.5	–5.4	–4.0	–2.5	–2.1	–1.7	–1.2
Kyrgyz Republic	–1.8	0.0	1.7	–0.3	–5.0	–3.6	–4.7	–2.9	1.1	–3.4	–3.7	–2.7	–0.7	0.5	0.0
Lao P.D.R.	–2.2	–2.2	–0.8	–3.8	–2.8	–1.2	0.2	–4.5	–3.0	–3.4	–4.4	–3.9	–3.7	–3.8	–3.4
Madagascar	2.0	–1.5	–1.2	–1.8	–0.1	–1.5	–1.9	–3.3	–1.5	–2.8	–2.5	–2.7	–2.5	–2.4	–2.2
Mali	31.8	–2.8	–1.9	–3.9	–2.5	–3.4	–0.5	–2.3	–3.4	–4.0	–3.7	–3.4	–2.9	–2.5	–2.5
Moldova	0.7	1.4	0.2	–5.0	–1.7	–1.6	–1.4	–1.2	–1.2	–3.5	–4.5	–4.7	–4.0	–3.6	–3.9
Mongolia	7.0	2.6	–3.6	–4.1	0.9	–3.7	–8.3	–7.5	–8.7	–6.9	–4.3	–3.4	–0.2	0.3	0.1
Mozambique	–2.9	–2.0	–1.8	–4.5	–3.2	–3.9	–2.9	–1.8	–7.3	–5.3	–4.5	–3.9	–3.2	–2.7	–2.1
Myanmar	–3.0	–2.7	–1.9	–4.2	–4.5	–3.5	–0.4	–0.4	–2.7	–4.5	–5.0	–4.9	–4.6	–4.5	–4.4
Nepal	0.9	–0.1	0.3	–1.9	0.0	–0.1	0.2	2.8	2.8	2.2	1.4	1.0	0.9	0.6	0.5
Nicaragua	2.0	1.8	–0.2	–1.2	0.2	0.5	0.7	–0.1	–0.6	–0.3	–0.1	–0.1	–0.2	–0.3	–0.4
Niger	40.6	–0.7	1.7	–5.1	–2.2	–1.1	–0.8	–2.3	–5.2	–7.2	–4.5	–2.9	–2.7	–2.0	–1.8
Nigeria	9.6	–0.5	6.5	–5.2	–3.6	1.3	1.2	–1.3	–1.3	–0.9	–0.6	–0.8	–0.8	–0.6	–0.7
Papua New Guinea	8.3	10.9	4.3	–7.6	4.4	3.0	–1.8	–6.6	–4.2	–3.1	–1.6	–0.6	0.2	0.1	0.0
Rwanda	1.0	–1.2	1.4	0.6	0.9	–1.4	–1.1	–1.8	–2.8	–1.3	–1.6	–1.9	–2.2	–1.9	–1.8
Senegal	–4.5	–3.2	–4.0	–4.2	–4.3	–4.8	–4.1	–4.0	–3.4	–2.8	–2.5	–2.2	–1.9	–1.2	–1.1
Sudan	–0.2	–2.5	1.5	–4.1	1.4	1.4	–2.2	–1.8	–0.3	–0.7	–0.6	–0.4	–0.3	–0.1	–0.1
Tajikistan	2.2	–5.1	–4.8	–4.7	–2.5	–1.6	1.1	0.1	0.6	–1.1	–1.7	–1.7	–1.9	–2.2	–2.7
Tanzania	–2.5	–0.6	–1.2	–3.8	–4.1	–2.8	–3.1	–2.7	–2.6	–3.0	–2.5	–2.4	–2.3	–2.1	–2.0
Uganda	0.4	0.1	–1.4	–1.1	–4.9	–1.7	–1.7	–2.7	–2.2	–0.9	–2.4	–2.8	–3.3	–2.9	–1.8
Uzbekistan	5.6	5.3	10.3	2.9	5.0	8.9	8.5	2.9	1.7	0.0	–0.1	–0.1	–0.1	–0.1	–0.1
Vietnam	1.0	–1.0	0.5	–4.9	–1.6	0.0	–5.6	–4.5	–3.6	–4.6	–3.8	–2.8	–2.1	–1.8	–1.7
Yemen	3.5	–4.9	–2.1	–7.7	–1.7	–0.2	–0.9	–1.5	1.5	–0.2	–0.2	0.4	0.4	0.7	0.7
Zambia	18.5	0.3	0.7	–0.7	–1.0	–0.8	–1.9	–5.1	–3.4	–2.6	–2.4	–1.4	–0.3	–0.1	0.3
Zimbabwe	0.0	–1.2	0.3	0.4	1.9	–0.2	0.4	–1.0	–0.4	0.1	–1.1	–1.9	–2.0	–2.2	–2.2
Average	4.9	–0.4	2.1	–3.2	–1.7	0.0	–0.8	–1.8	–1.7	–2.0	–1.7	–1.4	–1.1	–1.0	–1.0
Oil Producers	8.3	–0.1	4.7	–4.3	–2.2	1.0	–0.3	–1.7	–1.6	–1.9	–1.3	–1.0	–0.8	–0.7	–0.7
Asia	0.1	–0.6	–0.6	–3.3	–1.5	–1.3	–2.9	–2.7	–2.3	–3.0	–2.7	–2.2	–1.7	–1.6	–1.5
Latin America	1.6	1.3	0.9	–1.8	0.4	–0.4	–0.5	–2.0	–2.9	–2.4	–2.5	–2.1	–1.9	–1.6	–1.6
Sub-Saharan Africa	7.6	–0.2	3.3	–3.4	–2.6	0.1	–0.3	–1.8	–1.9	–1.7	–1.3	–1.1	–0.9	–0.8	–0.7
Others	2.0	–1.1	2.4	–2.9	1.2	2.7	1.4	–0.2	0.8	–0.6	–0.6	–0.4	–0.2	–0.1	–0.2

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

Note: Primary balance is defined as the overall balance excluding net interest payments. For country-specific details, see Data and Conventions in text, and Table C.

Table A19. Low-Income Developing Countries: General Government Revenue, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	9.6	9.3	9.8	9.5	10.0	10.4	11.2	11.2	10.9	10.9	11.6	12.9	13.5	13.8	13.8
Benin	19.2	23.8	21.3	21.7	20.0	20.1	20.7	20.4	19.7	21.3	21.7	21.8	21.9	21.7	21.9
Bolivia	34.3	34.4	38.9	35.8	33.2	36.2	37.8	39.2	38.5	34.9	33.5	33.5	33.3	33.4	33.3
Burkina Faso	40.8	20.0	16.8	19.5	19.8	20.7	22.4	23.9	21.4	22.1	21.9	22.1	22.4	22.4	22.6
Cambodia	12.8	13.7	15.9	15.8	17.1	15.6	16.9	18.4	19.5	18.1	18.5	19.2	19.6	20.0	20.4
Cameroon	47.4	20.3	21.2	17.4	16.6	17.9	17.9	18.0	17.6	16.4	16.8	16.9	16.9	17.1	16.9
Chad	16.2	19.7	22.5	15.0	20.2	24.8	24.4	20.8	17.9	14.2	17.8	18.1	23.8	25.0	25.1
Democratic Republic of the Congo	11.8	10.4	11.5	15.2	20.3	15.7	17.3	15.8	14.3	15.7	16.4	16.3	16.5	16.8	17.1
Republic of Congo	44.4	39.3	47.0	29.5	37.5	42.5	42.6	46.9	43.0	39.8	40.4	40.3	41.0	41.0	40.2
Côte d'Ivoire	18.6	19.2	19.9	18.5	18.1	19.2	18.9	19.8	20.8	19.6	19.7	20.0	20.2	20.5	21.8
Ethiopia	18.3	17.0	15.9	16.2	17.2	16.6	15.5	15.9	15.1	16.2	16.3	16.2	16.3	16.4	16.5
Ghana	17.1	17.5	15.9	16.4	16.7	19.1	18.5	16.5	18.4	19.2	19.6	20.0	20.7	20.7	20.1
Guinea	15.9	15.1	16.1	16.5	15.7	20.2	22.9	19.8	25.7	23.4	23.2	23.3	23.4	23.3	21.7
Haiti	13.5	15.8	15.1	17.8	23.9	21.9	23.4	20.8	19.6	20.9	20.5	20.8	20.8	20.9	20.9
Honduras	23.3	24.5	26.4	24.4	24.1	23.1	22.5	22.9	24.4	25.4	25.9	26.2	26.4	26.5	26.5
Kenya	19.3	19.7	19.4	18.8	19.8	19.5	19.2	19.6	20.5	21.3	22.0	22.5	22.8	23.0	23.1
Kyrgyz Republic	27.4	31.2	30.3	33.3	31.3	32.8	34.9	34.4	36.0	34.7	33.6	33.7	33.7	33.9	33.7
Lao P.D.R.	14.5	15.6	15.9	17.1	22.6	22.4	24.1	23.9	24.2	22.6	21.7	21.6	21.6	21.6	22.0
Madagascar	21.0	16.0	15.9	11.5	13.2	11.7	10.8	10.9	12.0	12.6	13.3	13.9	14.3	14.5	14.5
Mali	56.2	21.3	19.0	21.7	20.1	20.8	17.4	21.1	22.9	21.9	22.1	22.6	23.1	23.6	23.7
Moldova	39.9	42.9	40.6	38.9	38.3	36.6	37.9	36.7	38.1	38.1	37.2	36.3	35.7	35.2	34.8
Mongolia	29.2	32.8	28.5	26.0	32.0	33.9	29.8	31.3	28.0	25.4	25.1	24.9	25.4	25.4	25.7
Mozambique	19.9	22.0	22.7	24.4	26.1	27.1	27.5	32.2	31.9	29.2	28.8	28.6	28.3	28.1	27.7
Myanmar	12.8	12.3	11.6	10.7	11.4	12.0	23.3	23.2	24.8	24.3	24.9	24.9	25.2	25.3	25.4
Nepal	13.0	14.2	14.9	16.8	18.0	17.7	18.7	19.3	21.0	21.3	21.6	21.8	22.1	22.2	22.4
Nicaragua	21.9	22.2	20.9	20.4	21.8	22.9	23.5	23.4	23.1	23.6	24.4	24.4	24.5	24.4	24.4
Niger	60.1	22.2	24.1	18.6	18.2	17.9	22.2	25.2	23.6	25.5	26.2	28.0	28.1	28.6	28.8
Nigeria	21.6	17.6	20.6	11.2	12.4	17.7	14.3	11.0	9.8	8.6	9.2	9.3	9.2	9.1	9.1
Papua New Guinea	37.2	37.3	32.6	27.3	31.3	30.4	29.2	28.2	31.4	25.2	24.6	24.2	23.9	23.5	22.6
Rwanda	21.9	21.2	25.2	24.1	26.3	24.6	24.2	25.1	23.8	23.3	22.8	22.2	22.0	22.1	22.6
Senegal	21.2	23.6	21.6	21.6	21.9	22.5	23.3	22.7	24.0	23.9	23.7	23.9	23.9	24.1	24.1
Sudan	22.4	21.9	24.0	15.5	19.3	18.0	9.9	10.9	11.7	10.8	11.2	11.2	11.5	11.6	11.5
Tajikistan	23.6	22.5	22.1	23.4	23.2	24.9	25.1	26.9	28.4	26.2	26.5	26.1	26.3	26.5	26.8
Tanzania	14.4	16.6	16.6	15.7	15.6	15.7	15.7	15.7	15.8	16.2	16.7	16.9	16.9	16.9	17.1
Uganda	14.9	14.6	13.7	12.9	13.5	14.1	13.6	12.7	13.4	14.4	14.3	14.5	14.9	15.4	16.2
Uzbekistan	34.4	35.6	40.7	36.7	37.0	40.2	41.5	36.3	35.5	34.9	34.6	34.5	34.4	34.3	34.3
Vietnam	26.3	26.1	26.6	25.6	27.3	25.9	22.6	22.9	21.4	20.7	21.0	21.4	21.5	21.6	21.5
Yemen	38.6	33.2	36.7	25.0	26.1	25.3	29.9	23.9	23.6	18.1	19.4	20.3	20.6	20.8	20.9
Zambia	36.6	18.9	18.8	15.7	15.6	17.5	19.1	18.4	19.1	18.0	18.0	18.5	19.4	19.4	19.9
Zimbabwe	7.3	2.9	2.2	12.0	23.3	26.7	28.0	27.7	27.6	27.9	27.1	27.5	27.7	27.8	27.8
Average	22.3	19.5	21.0	17.1	18.0	20.0	19.0	17.7	17.2	16.7	17.3	17.7	17.9	18.0	18.1
Oil Producers	24.4	20.3	22.8	16.2	17.2	20.3	17.8	15.5	14.2	13.2	14.1	14.4	14.5	14.6	14.6
Asia	17.6	17.6	17.9	16.9	18.2	18.3	19.2	19.1	18.6	18.0	18.4	19.0	19.3	19.5	19.5
Latin America	25.4	26.1	28.4	27.0	27.2	28.3	29.3	30.0	30.1	28.9	28.5	28.7	28.8	28.9	28.9
Sub-Saharan Africa	22.7	18.1	19.7	14.7	15.5	18.7	16.8	15.1	14.3	13.9	14.6	14.9	15.1	15.2	15.3
Others	29.7	28.6	31.5	25.0	26.5	27.2	26.4	24.1	24.2	22.4	23.1	23.4	23.6	23.8	23.8

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 C.

Table A20. Low-Income Developing Countries: General Government Expenditure, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	12.1	11.5	13.8	12.7	12.7	14.0	14.2	14.6	13.9	14.0	14.6	15.8	15.9	16.1	15.8
Benin	19.4	23.4	21.4	25.0	20.4	21.6	21.0	22.4	21.7	23.8	25.8	25.9	26.0	23.9	23.1
Bolivia	29.8	32.7	35.3	35.8	31.5	35.4	36.1	38.5	41.7	39.4	39.0	38.5	38.0	37.7	37.3
Burkina Faso	24.6	25.7	20.9	24.2	22.8	22.1	25.5	27.8	23.3	24.7	24.9	25.7	26.4	26.7	26.9
Cambodia	13.0	14.5	15.6	20.1	19.9	19.7	20.7	20.5	20.4	21.2	21.5	21.8	21.9	21.9	21.9
Cameroon	14.6	15.6	19.0	17.5	17.7	20.5	19.5	21.9	22.7	22.4	22.2	22.1	21.4	21.0	20.7
Chad	14.0	17.1	18.9	24.2	24.4	22.4	23.9	22.9	22.1	17.6	18.5	17.9	20.2	21.8	23.1
Democratic Republic of the Congo	9.9	10.6	12.6	13.9	17.9	16.2	15.5	12.7	11.7	14.1	14.9	14.5	14.9	15.5	15.8
Republic of Congo	27.8	29.9	23.6	24.7	21.4	26.1	36.2	38.4	41.0	46.6	38.8	33.3	34.0	36.8	38.1
Côte d'Ivoire	20.1	19.7	20.3	19.9	20.0	24.6	22.1	22.1	23.1	22.7	22.9	23.1	23.2	23.5	23.4
Ethiopia	22.1	20.5	18.8	17.1	18.5	18.2	16.6	17.8	17.7	19.1	19.1	18.9	18.9	18.9	18.9
Ghana	21.8	22.9	24.4	23.5	26.1	26.5	30.7	27.3	28.2	25.5	24.0	22.3	23.3	22.9	22.2
Guinea	19.0	13.2	15.6	23.7	29.7	21.5	26.1	25.1	30.1	33.6	27.2	26.2	24.9	24.7	22.7
Haiti	15.2	15.6	17.9	22.4	22.8	25.5	28.2	28.0	26.0	24.0	23.4	23.7	23.5	23.7	23.6
Honduras	26.0	26.1	28.1	28.9	27.0	25.9	26.7	30.6	28.7	28.1	27.8	27.7	27.5	27.4	27.2
Kenya	21.5	22.1	22.8	23.1	24.2	23.6	24.2	25.3	27.3	28.9	28.2	27.2	27.1	26.8	26.3
Kyrgyz Republic	30.1	31.8	29.3	34.4	37.1	37.4	40.6	38.1	35.8	39.0	38.0	37.2	35.2	34.1	34.3
Lao P.D.R.	17.4	18.3	17.3	21.3	25.9	24.1	24.6	29.6	28.1	27.3	27.3	27.3	27.7	28.3	28.3
Madagascar	21.4	18.7	17.9	14.1	14.0	14.1	13.4	14.9	14.5	16.6	17.0	17.7	17.9	18.0	17.9
Mali	24.9	24.5	21.2	25.9	23.0	25.0	18.5	23.9	26.8	26.5	26.4	26.6	26.6	26.7	26.9
Moldova	40.2	42.6	41.6	45.3	40.8	39.0	40.1	38.5	39.8	43.4	43.5	42.9	41.6	40.7	40.7
Mongolia	22.7	30.5	32.4	30.5	31.6	37.9	38.9	40.2	39.0	35.2	32.9	31.6	30.5	29.5	29.9
Mozambique	23.5	24.6	24.9	29.4	30.0	31.9	31.4	34.9	40.3	35.6	34.8	34.2	33.3	32.7	31.7
Myanmar	16.4	15.5	14.0	15.6	16.9	16.6	25.0	25.2	29.1	30.6	31.8	32.0	32.2	32.4	32.6
Nepal	12.7	15.0	15.4	19.4	18.8	18.7	19.3	17.2	18.8	20.2	20.8	21.3	21.7	22.1	22.3
Nicaragua	20.9	20.8	21.2	22.0	21.8	22.7	23.4	24.0	24.2	24.5	25.1	25.1	25.3	25.4	25.4
Niger	19.7	23.2	22.6	23.9	20.6	19.4	23.4	27.8	29.2	33.5	31.4	31.6	31.4	31.1	31.1
Nigeria	12.7	18.7	14.7	17.2	16.7	17.3	14.1	13.4	12.1	10.6	10.9	11.1	11.0	10.8	10.7
Papua New Guinea	30.7	28.3	30.1	36.9	28.2	28.7	32.4	36.1	37.5	30.3	28.3	27.3	26.8	26.6	25.8
Rwanda	21.7	22.9	24.3	23.9	25.9	26.5	25.9	27.6	27.4	25.3	25.1	24.9	25.0	24.7	25.1
Senegal	26.6	27.5	26.3	26.5	27.1	28.8	28.9	28.2	29.0	28.5	27.9	27.9	27.6	27.1	26.8
Sudan	23.8	25.4	23.5	20.6	19.0	17.8	13.3	13.1	12.7	12.3	12.6	12.4	12.5	12.6	12.5
Tajikistan	21.9	28.0	27.2	28.6	26.1	27.0	24.6	27.7	28.3	28.0	28.7	28.4	28.8	29.2	30.0
Tanzania	17.9	18.1	18.6	20.2	20.4	19.3	19.8	19.7	19.6	20.4	20.5	20.6	20.6	20.5	20.5
Uganda	15.6	15.6	16.2	15.0	19.3	16.7	16.6	16.8	17.3	17.1	18.9	19.6	20.7	20.9	20.9
Uzbekistan	29.0	30.4	30.5	33.9	32.1	31.4	33.0	33.4	33.8	34.8	34.7	34.5	34.5	34.4	34.3
Vietnam	26.1	28.1	27.1	31.6	30.0	26.9	29.4	28.8	26.8	27.2	26.6	26.0	25.4	25.2	25.0
Yemen	37.4	40.3	41.2	35.2	30.2	29.8	36.2	30.8	27.8	23.4	24.5	24.9	24.6	24.4	24.1
Zambia	19.7	19.9	19.5	17.8	18.1	19.3	22.3	25.1	24.6	23.1	23.1	22.7	22.6	22.5	22.7
Zimbabwe	9.7	5.9	4.3	14.0	22.6	27.9	28.6	29.7	29.0	29.1	29.5	30.9	31.2	31.5	31.5
Average	18.5	20.9	19.9	21.4	20.8	21.1	21.1	20.9	20.3	20.2	20.5	20.6	20.6	20.6	20.6
Oil Producers	17.0	21.3	18.9	21.5	20.3	20.4	19.3	18.4	17.1	16.5	16.8	16.8	16.7	16.6	16.7
Asia	18.5	19.3	19.9	21.6	21.0	20.8	23.5	23.4	22.7	22.8	22.9	23.1	23.0	23.0	22.9
Latin America	24.8	25.7	28.0	29.3	27.3	29.2	30.3	32.8	33.7	32.2	32.0	31.9	31.8	31.7	31.6
Sub-Saharan Africa	16.1	19.3	17.4	19.0	19.0	19.6	18.2	18.0	17.4	17.0	17.3	17.3	17.4	17.4	17.4
Others	28.9	30.7	30.1	28.9	26.3	25.9	26.7	25.8	25.0	24.4	25.1	25.1	25.1	25.1	25.2

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 C.

Table A21. Low-Income Developing Countries: General Government Gross Debt, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	42.3	41.9	40.6	39.5	36.6	35.3	33.8	34.7	33.9	33.0	32.0	30.9	29.4	28.1	26.8
Benin	12.5	21.2	26.9	27.3	30.2	31.9	29.2	29.8	30.9	32.3	34.4	36.1	37.5	37.0	35.4
Bolivia	55.2	40.5	37.2	40.0	38.5	34.7	33.4	32.6	32.4	36.3	40.2	41.5	42.8	43.4	43.8
Burkina Faso	22.6	25.3	25.2	28.5	29.3	29.8	28.4	28.8	28.3	30.6	29.9	31.5	32.7	34.2	35.7
Cambodia	32.7	30.7	27.5	29.0	29.1	28.7	28.9	28.7	29.5	29.8	29.5	29.1	28.6	28.3	28.1
Cameroon	15.9	12.0	9.7	10.1	11.5	13.2	15.4	18.6	23.9	30.1	33.6	36.6	38.8	39.9	40.7
Chad	26.2	22.2	20.0	31.7	20.7	20.7	17.9	18.7	25.0	23.7	21.6	19.0	18.4	17.5	15.7
Democratic Republic of the Congo	100.0	83.4	87.0	89.8	27.2	23.0	19.9	18.9	19.7	20.5	21.0	22.6	24.1	25.0	25.2
Republic of Congo	98.8	98.0	68.1	61.6	22.9	33.1	34.1	38.2	42.3	51.6	44.3	37.2	35.8	35.4	35.0
Côte d'Ivoire	79.4	74.0	70.8	64.2	63.0	93.3	44.8	39.9	36.4	34.7	33.4	32.0	30.8	29.8	27.7
Ethiopia	38.7	36.6	30.2	24.9	27.4	25.7	20.9	21.6	21.9	21.7	21.8	22.6	23.3	23.9	24.3
Ghana	26.2	31.0	33.4	36.2	46.5	42.6	49.1	55.1	67.6	69.6	67.5	62.6	58.6	56.1	53.8
Guinea	138.4	90.3	90.2	89.3	99.6	77.8	35.4	39.5	37.4	35.4	30.5	25.7	21.6	18.5	14.6
Haiti	39.6	35.0	38.3	28.0	17.5	12.0	16.6	21.5	26.7	27.6	28.6	29.3	30.3	31.0	31.4
Honduras	40.3	24.7	23.0	27.5	30.7	32.0	34.7	45.3	46.1	48.3	49.7	50.1	49.6	48.9	47.8
Kenya	44.0	38.4	41.5	41.1	44.4	43.0	40.8	42.2	48.6	50.1	50.8	50.3	49.4	48.4	47.3
Kyrgyz Republic	72.5	56.8	48.5	58.1	59.7	49.4	49.0	46.1	53.0	58.8	61.2	61.0	57.7	54.9	53.5
Lao P.D.R.	71.9	64.2	60.3	63.2	62.1	56.9	62.2	60.1	62.5	63.0	65.4	67.0	67.4	69.3	70.8
Madagascar	37.3	32.8	31.8	33.4	31.9	32.4	33.7	34.0	34.9	35.1	38.7	38.5	37.7	36.9	36.1
Mali	20.4	21.1	22.6	24.9	28.7	29.1	30.3	31.6	31.5	37.6	37.9	37.6	37.3	37.2	37.4
Moldova	30.9	24.6	19.3	29.1	26.9	24.1	24.5	23.8	31.5	48.0	50.8	52.2	54.4	56.6	58.4
Mongolia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	46.6	36.6	37.8	41.1	41.8	37.5	41.1	46.9	55.4	61.3	61.9	61.2	59.4	57.8	51.1
Myanmar	90.4	62.4	53.1	55.1	49.6	49.4	48.0	40.8	39.7	41.3	42.4	44.1	45.8	47.7	49.6
Nepal	49.5	42.8	41.2	39.3	35.4	33.2	34.3	31.2	26.3	23.6	22.3	21.6	21.3	21.5	21.9
Nicaragua	54.9	32.4	28.7	32.9	34.4	33.1	32.1	32.4	32.2	31.6	30.6	30.0	29.4	28.8	28.5
Niger	27.1	25.1	21.1	27.7	23.9	27.1	27.4	26.7	36.4	46.8	47.0	45.1	43.1	40.8	41.0
Nigeria	7.9	8.4	7.4	9.6	9.6	10.2	10.4	10.5	10.5	11.5	11.2	11.1	11.0	10.9	11.0
Papua New Guinea	39.6	33.7	31.7	31.5	25.6	23.0	26.7	34.0	35.6	32.2	33.4	33.7	34.2	35.1	33.7
Rwanda	26.6	26.7	20.9	22.6	22.8	23.7	23.7	29.0	28.0	29.1	31.2	33.1	34.7	35.6	36.5
Senegal	21.8	23.5	23.9	34.0	35.5	40.7	43.4	47.1	50.7	52.0	52.6	52.7	52.2	50.6	49.0
Sudan	75.0	70.7	68.8	72.1	73.1	70.5	94.7	90.5	74.2	78.5	74.8	71.8	69.4	66.7	63.5
Tajikistan	35.3	34.6	30.0	36.2	36.3	35.4	32.4	29.2	28.2	29.7	31.1	32.5	32.7	32.6	32.4
Tanzania	32.8	21.6	21.6	24.3	27.5	28.0	29.2	31.4	33.2	34.7	34.8	34.8	34.9	34.9	35.0
Uganda	31.7	20.0	19.6	18.8	23.6	23.3	24.6	27.4	30.4	35.3	40.0	43.3	45.6	49.0	51.1
Uzbekistan	21.3	15.8	12.7	11.0	10.0	9.1	8.6	8.3	8.5	8.3	8.3	8.4	8.5	8.7	8.9
Vietnam	38.4	40.9	39.4	46.9	48.4	46.7	48.5	52.1	58.7	62.2	64.4	65.0	64.8	64.1	63.2
Yemen	40.8	40.4	36.4	49.8	42.4	45.7	47.3	48.2	48.9	53.7	54.0	54.1	53.5	52.7	51.3
Zambia	25.0	21.9	19.2	20.5	18.9	20.6	25.5	28.8	31.1	32.4	33.8	34.5	34.6	34.6	34.3
Zimbabwe	44.7	50.1	68.9	68.3	63.2	51.8	56.7	54.2	54.0	55.2	54.7	56.6	57.9	58.2	53.8
Average	34.5	31.6	29.7	33.0	30.5	30.0	30.2	30.7	31.3	33.9	34.4	34.3	34.1	33.9	33.6
Oil Producers	24.8	24.0	22.1	26.8	21.7	22.7	22.1	22.8	24.3	27.7	28.7	29.0	29.0	29.0	29.0
Asia	45.8	43.6	41.4	44.2	42.6	41.4	41.7	42.4	44.4	45.4	45.9	46.0	45.6	45.2	44.7
Latin America	48.2	33.1	31.4	33.2	32.7	30.7	31.5	34.6	35.3	37.6	39.7	40.3	40.8	40.9	40.9
Sub-Saharan Africa	25.6	23.4	22.0	24.6	21.5	21.8	20.9	21.7	22.6	24.8	25.4	25.5	25.5	25.5	25.4
Others	52.3	48.4	44.5	47.8	47.1	44.5	51.5	49.0	44.2	47.0	44.7	43.3	42.0	40.7	39.2

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 C.

Table A22. Low-Income Developing Countries: General Government Net Debt, 2006–20

(Percent of GDP)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Benin	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bolivia	41.9	27.3	20.6	23.1	18.4	14.4	11.0	10.2	12.0	18.3	27.0	35.7	42.8	43.4	43.8
Burkina Faso	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cambodia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Cameroon	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Chad	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Democratic Republic of the Congo	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Republic of Congo	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Côte d'Ivoire	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ethiopia	29.0	28.7	25.4	20.9	23.3	20.4	17.7	18.8	19.6	19.8	20.2	21.2	22.1	22.9	23.5
Ghana	21.9	23.2	29.9	32.7	43.2	38.7	47.0	51.8	64.6	67.5	65.7	61.1	56.4	53.3	50.5
Guinea	138.4	90.3	90.2	89.3	99.6	77.8	35.4	39.5	37.4	35.4	30.5	25.7	21.6	18.5	14.6
Haiti	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Honduras	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kenya	39.9	34.4	37.1	36.9	40.2	39.1	37.1	38.4	44.9	47.4	48.8	48.3	47.4	46.4	45.3
Kyrgyz Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Lao P.D.R.	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Madagascar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mali	14.8	15.0	16.3	14.1	19.2	20.8	25.1	26.8	27.2	30.3	31.6	31.5	31.7	31.9	32.4
Moldova	30.9	24.6	19.3	29.1	26.9	24.1	24.5	23.8	31.5	48.0	50.8	52.2	54.4	56.6	58.4
Mongolia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nepal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nicaragua	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Niger	–37.0	2.1	1.1	1.5	1.5	3.2	2.0	2.7	13.3	4.6	3.3	3.5	3.5	3.5	3.5
Nigeria	3.5	8.4	0.5	6.7	8.8	9.0	8.1	9.9	9.9	11.5	11.1	10.8	10.2	10.0	10.0
Papua New Guinea	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Rwanda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Senegal	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sudan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tajikistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tanzania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uganda	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uzbekistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Vietnam	38.4	40.9	39.4	46.9	48.4	46.7	48.5	52.1	58.7	62.2	64.4	65.0	64.8	64.1	63.2
Yemen	33.0	35.2	31.4	43.6	38.3	42.3	45.3	46.7	48.0	52.8	53.2	53.4	52.8	52.1	50.8
Zambia	21.6	17.6	16.3	16.5	15.9	16.2	20.0	25.0	29.0	31.9	33.4	34.3	34.4	34.4	34.1
Zimbabwe	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	17.5	19.9	15.0	21.7	22.1	21.7	21.7	23.9	25.8	29.7	31.0	31.3	31.2	31.0	30.9
Oil Producers	13.0	17.1	10.8	19.3	19.2	19.5	19.6	21.8	23.3	27.4	28.5	28.7	28.3	28.2	28.3
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Latin America	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sub-Saharan Africa	10.8	14.1	8.5	13.7	15.5	14.9	14.4	16.5	17.2	19.6	20.0	19.7	19.2	18.9	18.8
Others	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .

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 C.

Table A23. Advanced Economies: Structural Fiscal Indicators

(Percent of GDP, except where otherwise indicated)

	Pension Spending Change, 2015–30[1]	Net Present Value of Pension Spending Change, 2015–50[1,2]	Health Care Spending Change, 2015–30	Net Present Value of Health Care Spending Change, 2015–50[2]	Gross Financing Need, 2015[3]	Average Term to Maturity, 2015 (years)[4]	Debt-to-Average Maturity, 2015	Projected Interest Rate-Growth Differential, 2015–20 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2015–20	Nonresident Holding of General Government Debt, 2014 (percent of total)[5]
Australia	0.7	21.8	2.3	77.6	5.6	6.5	5.8	0.1	1.1	–1.9	65.9
Austria	2.0	42.4	1.4	50.0	7.5	7.7	11.5	0.7	–2.1	–1.5	75.5
Belgium	3.4	89.6	3.2	116.2	19.7	8.0	13.4	–0.1	–0.5	–1.3	59.2
Canada	1.0	21.3	2.7	84.3	11.7	6.5	13.4	–0.1	1.2	–0.9	22.4
Cyprus	3.1	99.0	. . .	. . .	. . .	2.5	43.0	0.0	–2.3	0.4	61.1
Czech Republic	0.0	12.8	0.6	19.3	7.8	5.2	8.1	–1.0	–3.8	–1.2	32.0
Denmark	0.2	0.2	2.1	60.1	9.1	8.0	5.5	–0.9	2.5	–1.5	42.8
Estonia	–0.1	–7.5	0.7	20.2	. . .	11.1	0.9	–3.7	1.2	–0.1	88.8
Finland	2.5	51.7	1.5	44.2	8.1	6.1	10.0	–0.7	4.0	–1.2	78.5
France	0.4	10.7	0.8	26.4	17.3	6.8	14.2	–0.8	–2.7	–2.3	61.2
Germany	1.2	33.0	1.5	49.0	5.8	6.6	10.6	–1.0	–2.2	0.5	61.0
Greece	0.5	21.6	0.8	37.2	. . .	. . .	. . .	–1.8	–5.4	0.5	81.5
Hong Kong SAR	1.1	30.0	. . .	. . .	. . .	. . .	. . .	–6.3	0.2	2.6	6.4
Iceland	0.3	5.5	1.1	36.2	2.4	12.3	6.0	–0.1	1.2	0.6	33.5
Ireland	0.6	29.7	0.8	24.8	10.2	12.4	8.7	–1.0	1.5	–0.7	62.2
Israel	0.4	11.7	0.5	15.0	. . .	5.5	12.4	1.2	–4.9	–2.6	14.1
Italy	–0.4	1.9	0.7	24.3	21.4	6.4	20.9	0.8	–3.0	–0.9	36.0
Japan	–0.4	2.2	2.5	68.8	52.7	6.8	36.0	–0.8	–5.7	–4.6	8.1
Korea	1.8	63.4	2.9	111.6	2.9	6.7	5.5	–1.2	2.0	1.0	13.0
Latvia	–1.7	–44.4	0.7	25.7	. . .	4.8	7.8	–1.9	–1.3	–0.9	82.3
Lithuania	0.3	19.1	0.7	24.9	8.4	4.8	7.9	–0.6	–1.8	–1.5	85.5
Luxembourg	4.0	124.2	0.6	27.8	. . .	8.5	3.1	–2.3	2.4	0.2	40.2
Malta	–0.1	13.2	. . .	. . .	6.3	8.5	7.9	0.3	–4.9	–1.3	10.3
Netherlands	2.5	71.2	3.7	134.3	10.8	6.7	10.1	–0.8	–0.7	–0.5	51.8
New Zealand	2.6	77.0	3.6	118.6	4.6	5.8	5.7	–0.4	3.0	0.9	58.7
Norway	2.4	66.2	2.1	68.6	. . .	4.3	7.0	–0.5	13.2	7.0	34.4
Portugal	0.2	6.1	1.0	49.3	20.1	6.4	19.7	0.8	–4.1	–2.6	71.8
Singapore[6]	0.5	13.9	. . .	. . .	. . .	3.5	27.7	–5.1	7.0	2.2	. . .
Slovak Republic	1.3	48.9	1.0	31.4	6.6	6.9	7.8	–1.8	–5.0	–1.9	68.6
Slovenia	1.5	68.6	0.9	30.2	9.2	5.7	14.1	1.3	–1.0	–3.6	65.3
Spain	0.0	22.8	1.3	55.0	21.5	6.0	16.7	0.1	0.4	–2.4	42.5
Sweden	0.5	10.0	0.4	10.2	7.1	5.0	8.3	–2.1	1.3	–0.3	45.5
Switzerland	1.6	41.5	3.5	127.5	2.7	8.8	5.2	0.1	0.2	–0.1	11.2
United Kingdom	0.3	9.4	2.4	82.2	12.2	14.5	6.3	–0.8	–2.1	–1.8	28.4
United States	1.6	35.3	4.7	163.1	20.0	5.7	18.5	–1.3	–3.0	–3.7	33.8
Average	1.0	28.3	3.1	105.6	19.1	6.8	16.6	–0.9	–2.1	–2.3	36.9
G7	1.0	24.9	3.4	113.4	21.4	6.8	18.4	–1.0	–3.0	–2.9	34.7
G20 Advanced	1.0	26.4	3.3	112.2	20.2	6.8	17.5	–0.9	–2.7	–2.7	35.1

Sources: Bloomberg L.P.; Joint External Debt Hub, Quarterly External Debt Statistics; 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, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF, 2014). Projections rely on authorities' estimates when these are available. For Cyprus, the data are from the 2012 aging report of the European Commission which does not include reforms after December 2012.

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

[3] Gross financing need is defined as the projected overall deficit and maturing government debt in 2015; for more details on the assumptions, see note 1 in Table 1.3. Data are from Bloomberg L.P. and IMF staff projections.

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

[5] Nonresident holding of general government debt data are for 2014:Q3 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 2014 gross general government debt.

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

Table A24. Emerging Market and Middle-Income Economies: Structural Fiscal Indicators

(Percent of GDP, except where otherwise indicated)

	Pension Spending Change, 2015–30[1]	Net Present Value of Pension Spending Change, 2015–50[1,2]	Health Care Spending Change, 2015–30	Net Present Value of Health Care Spending Change, 2015–50[2]	Gross Financing Need, 2015[3]	Average Term to Maturity, 2015 (years)[4]	Debt-to-Average Maturity, 2015	Projected Interest Rate-Growth Differential, 2015–20 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2015–20	Nonresident Holding of General Government Debt, 2014 (percent of total)[5]
Algeria	. . .	. . .	1.5	55.8	. . .	. . .	. . .	–3.1	7.3	–7.0	5.5
Angola	. . .	. . .	0.4	15.4	. . .	. . .	. . .	–3.6	3.0	–3.0	. . .
Argentina	1.0	46.3	1.7	62.7	10.7	10.8	4.6	–10.5	–0.1	–4.6	59.0
Azerbaijan	3.8	113.1	0.5	18.2	. . .	. . .	. . .	–5.5	0.6	2.2	. . .
Belarus	1.1	39.1	1.1	38.5	. . .	1.4	27.4	–9.3	1.0	–3.6	47.2
Brazil	1.8	93.8	1.9	68.5	13.1	6.9	9.6	4.0	–3.6	–3.9	16.6
Chile	–1.0	–21.3	1.6	56.7	3.0	9.2	1.8	–0.6	2.4	–1.2	15.7
China	2.9	88.0	1.3	47.5	4.4	7.4	5.9	–6.4	–1.8	–1.7	. . .
Colombia	–0.7	–26.8	2.1	76.0	6.4	8.2	4.9	1.4	–1.9	–2.4	25.1
Croatia	0.4	12.4	1.7	58.8	21.1	4.8	17.8	1.9	–3.0	–3.4	36.9
Dominican Republic	0.2	5.8	1.0	36.6	6.4	8.5	3.6	–0.4	–1.9	–2.4	70.2
Ecuador	1.0	38.7	1.0	38.5	8.5	4.8	7.1	–1.5	1.4	–3.3	42.3
Egypt[6]	2.4	44.8	0.5	20.0	61.9	2.0	45.0	–3.1	–6.7	–9.1	10.8
Hungary	–0.6	2.7	1.3	47.2	23.0	4.3	17.4	0.0	–6.6	–2.5	60.8
India	0.0	–0.6	0.4	15.8	10.9	9.1	7.1	–3.8	–7.9	–6.8	6.6
Indonesia	0.2	7.2	0.5	16.5	3.9	10.3	2.5	–5.0	–0.7	–1.9	56.4
Iran	2.0	85.4	1.2	45.0	. . .	. . .	. . .	–14.9	3.1	–2.6	. . .
Kazakhstan	0.8	24.4	0.7	24.2	. . .	9.9	1.7	–3.9	3.4	–0.9	15.7
Kuwait	1.5	75.7	0.6	25.5	. . .	0.6	16.7	0.6	29.0	12.9	. . .
Libya	. . .	. . .	1.2	47.0	. . .	. . .	. . .	–10.5	16.4	–27.2	. . .
Malaysia	0.3	12.9	0.9	31.9	9.4	5.9	9.6	–3.0	–4.1	–2.7	28.3
Mexico	1.2	10.9	1.3	49.6	10.1	8.7	5.9	–0.4	–2.0	–3.0	32.7
Morocco	. . .	. . .	0.8	28.6	16.4	6.5	10.0	–2.2	–3.5	–3.2	22.9
Oman	0.2	27.3	0.9	40.1	. . .	4.0	2.1	4.4	10.4	–12.0	. . .
Pakistan	0.2	8.3	0.3	10.5	29.9	2.7	24.1	–2.5	–2.9	–3.5	. . .
Peru	0.8	31.2	1.1	41.8	2.8	13.6	1.6	–1.1	–0.4	–1.2	39.8
Philippines	0.2	6.5	0.5	18.5	6.6	10.0	3.5	–2.7	–2.4	–1.1	30.6
Poland	–0.5	–22.8	1.7	60.0	10.6	4.9	10.1	–0.7	–4.4	–2.2	56.6
Qatar	. . .	. . .	1.1	47.6	. . .	4.7	6.2	–1.3	8.6	1.7	. . .
Romania	0.7	30.4	1.2	45.5	8.2	4.5	8.9	–1.4	–2.6	–1.5	48.8
Russia	1.3	49.8	1.1	36.5	5.1	8.7	2.2	–1.0	4.5	–1.5	14.8
Saudi Arabia	1.8	73.3	0.9	37.6	. . .	7.2	0.3	5.8	10.7	–7.0	. . .
South Africa	0.3	11.7	1.1	40.9	11.4	11.9	4.0	–0.5	–0.6	–3.2	33.3
Sri Lanka	0.6	19.3	0.5	18.7	20.4	4.4	17.5	–3.8	–7.9	–7.2	44.0
Thailand	2.6	82.0	1.6	56.0	9.9	8.9	5.3	–3.0	–0.4	–1.9	12.4
Turkey	3.5	79.7	1.9	69.8	5.7	6.3	5.3	0.0	–4.1	–1.1	32.9
Ukraine	0.0	1.2	1.1	37.9	17.3	3.8	24.6	–5.8	–2.3	–3.0	34.8
United Arab Emirates	0.4	47.5	1.0	46.5	. . .	. . .	. . .	–0.9	13.7	1.2	. . .
Uruguay	0.5	28.9	1.6	59.3	17.1	13.6	4.7	–5.0	–2.0	–3.0	43.8
Venezuela	. . .	. . .	. . .	. . .	. . .	8.1	4.9	–33.7	0.1	–21.2	. . .
Average	1.8	57.3	1.2	43.2	8.0	7.7	6.7	–3.9	–0.8	–2.8	26.1
G20 Emerging	2.1	64.8	1.2	44.0	6.6	7.9	5.7	–3.9	–1.5	–2.8	23.9

Sources: Bloomberg L.P.; Joint External Debt Hub, Quarterly External Debt Statistics; 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, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF, 2014). Projections rely on authorities' estimates when these are available.

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

[3] Gross financing need is defined as the projected overall balance and maturing government debt in 2015. Data are from IMF staff projections. See Table 1.4.

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

[5] Nonresident holding of general government debt data are 2014:Q3 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 2014 gross general government debt.

[6] Projections do not incorporate the potential impact of the investment agreements reached at the March 2015 Economic Development Conference.

Table A25. Low-Income Developing Countries: Structural Fiscal Indicators

(Percent of GDP, except where otherwise indicated)

	Pension Spending Change, 2015–30[1]	Net Present Value of Pension Spending Change, 2015–50[1,2]	Health Care Spending Change, 2015–30	Net Present Value of Health Care Spending Change, 2015–50[2]	Average Term to Maturity, 2015 (years)[3]	Debt-to-Average Maturity, 2015	Projected Interest Rate-Growth Differential, 2015–20 (percent)	Precrisis Overall Balance, 2000–07	Projected Overall Balance, 2015–20	Nonresident Holding of General Government Debt, 2014 (percent of total)[4]
Bangladesh	0.4	19.9	0.5	18.0	4.9	6.7	–6.4	–2.8	–2.6	42.3
Benin	0.0	2.1	0.5	18.6	2.2	14.8	–4.3	–2.5	–3.0	. . .
Bolivia	0.4	21.8	1.1	40.8	16.5	2.2	–4.0	–3.6	–4.7	46.4
Burkina Faso	0.0	3.2	0.7	25.4	3.1	9.9	–5.2	–1.8	–3.6	74.6
Cambodia	0.4	13.5	0.5	18.2	. . .	. . .	–7.9	–3.4	–2.4	. . .
Cameroon	0.0	0.0	0.3	13.0	0.7	40.8	–3.2	5.7	–4.8	. . .
Chad	0.0	–0.2	0.3	10.7	. . .	. . .	–4.5	–2.4	0.8	. . .
Democratic Republic of the Congo	0.0	0.0	0.5	20.1	. . .	. . .	–6.1	–1.2	1.5	. . .
Republic of Congo	0.0	1.6	0.5	17.3	. . .	. . .	–2.4	6.5	2.5	. . .
Côte d'Ivoire	0.0	0.5	0.4	13.7	. . .	. . .	–5.1	–1.0	–2.8	. . .
Ethiopia	0.0	0.7	0.4	16.9	. . .	. . .	–12.0	–4.8	–2.7	. . .
Ghana	0.1	4.8	0.7	26.2	2.6	27.2	–4.8	–4.4	–3.3	. . .
Guinea	0.0	0.0	0.4	13.1	. . .	. . .	–9.8	–3.3	–3.5	. . .
Haiti	. . .	. . .	0.4	14.8	. . .	. . .	–5.6	–1.9	–2.9	. . .
Honduras	0.0	2.0	1.4	53.1	4.1	11.8	–1.5	–3.3	–1.4	. . .
Kenya	0.1	9.1	0.4	16.4	6.2	8.1	–6.8	–1.5	–5.0	. . .
Kyrgyz Republic	0.6	16.7	1.2	44.9	. . .	. . .	–8.7	–5.1	–2.4	. . .
Lao P.D.R.	0.0	1.1	0.4	17.1	. . .	. . .	–8.6	–4.1	–5.9	. . .
Madagascar	0.0	1.6	0.6	20.9	. . .	. . .	–7.1	–3.4	–3.7	64.6
Mali	–0.2	–4.1	0.4	13.4	1.7	22.7	–5.5	1.4	–3.8	. . .
Moldova	–0.2	3.2	1.7	58.2	0.4	112.2	–3.9	–0.2	–5.9	52.5
Mongolia	4.9	173.8	1.5	54.0	. . .	. . .	. . .	–0.8	–6.3	. . .
Mozambique	0.0	–0.8	0.5	18.4	0.5	128.7	–10.4	–3.3	–5.3	. . .
Myanmar	. . .	. . .	. . .	. . .	. . .	. . .	–7.7	–4.2	–6.9	. . .
Nepal	0.1	4.5	0.7	26.6	. . .	. . .	–7.2	–1.0	0.5	. . .
Nicaragua	0.5	23.6	1.7	65.2	3.2	9.8	–6.9	–1.3	–0.9	73.2
Niger	0.0	–1.6	0.4	15.0	. . .	. . .	–6.5	2.6	–4.1	. . .
Nigeria	–0.1	–1.3	0.3	12.3	3.4	3.4	–1.9	2.3	–1.8	. . .
Papua New Guinea	0.0	0.5	1.1	40.5	. . .	. . .	–1.7	1.2	–3.5	25.0
Rwanda	0.1	5.5	1.6	59.6	. . .	. . .	–8.8	–0.6	–2.5	. . .
Senegal	–0.1	1.9	0.5	20.9	4.8	10.8	–4.3	–2.3	–3.7	. . .
Sudan	0.0	1.0	0.4	14.5	. . .	. . .	–11.0	–1.1	–1.2	. . .
Tajikistan	0.7	23.2	0.5	17.0	. . .	. . .	–9.1	–2.8	–2.5	. . .
Tanzania	–0.1	1.6	0.5	19.5	3.0	11.4	–6.6	–1.8	–3.7	. . .
Uganda	0.0	0.4	0.4	13.7	2.6	13.8	–3.5	–0.8	–4.7	54.9
Uzbekistan	3.1	113.1	1.1	41.3	. . .	. . .	–14.0	0.9	–0.1	. . .
Vietnam	2.3	91.2	1.3	47.5	3.9	16.0	–6.7	–1.7	–4.6	. . .
Yemen	–0.4	6.7	0.4	14.4	. . .	. . .	0.5	–0.7	–4.3	. . .
Zambia	3.3	100.9	0.8	29.4	4.4	7.3	–2.7	–0.4	–3.9	. . .
Zimbabwe	. . .	. . .	. . .	. . .	11.3	4.9	–1.3	–1.5	–3.0	. . .
Average	0.5	22.2	0.6	22.3	2.5	3.9	–5.4	–0.2	–3.0	6.6

Sources: Bloomberg L.P.; Joint External Debt Hub, Quarterly External Debt Statistics; 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, Eich, and Gupta, *Equitable and Sustainable Pensions: Challenges and Experience* (IMF, 2014). Projections rely on authorities' estimates when these are available.

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

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

[4] Nonresident holding of general government debt data are 2014:Q3 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 2014 gross general government debt.

Table A26. Selected Advanced Economies: Financial Sector Support
(Percent of 2014 GDP)

	Impact on Gross Public Debt and Other Support	Recovery to Date	Impact on Gross Public Debt and Other Support after Recovery
Austria[1]	. . .	. . .	6.2
Belgium	7.2	3.3	4.0
Cyprus	20.0	0.0	20.0
Germany[2]	12.3	4.4	7.9
Greece[3]	34.9	8.1	26.7
Ireland[4]	36.3	6.5	29.9
Netherlands	17.3	13.7	3.7
Slovenia[5]	12.0	1.7	12.0
Spain[6]	7.4	3.2	4.3
United Kingdom	11.6	4.7	6.9
United States	4.3	4.8	–0.5
Average	7.4	5.0	2.5
US$ billions	2,114	1,391	723

Sources: National authorities; and IMF staff estimates.

Note: Table shows fiscal outlays of the central government, except in the cases of Belgium and Germany, for which financial sector support by subnational governments is also included. Data are cumulative since the beginning of the global financial crisis in 2007—latest available data up to end-2014. Data do not include forthcoming support.

[1] As published by Statistik Austria on March 30, 2015 (end-2014 liabilities of HETA and KA Finanz).

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

[3] Support includes the disbursements from the Hellenic Financial Stability Fund (HFSF), but excludes the undisbursed amount of the financial sector envelope.

[4] The impact of the direct support measures is mainly on net debt, as significant recapitalization expenses were met from public assets. Direct support does not include asset purchases by the National Asset Management Agency, as these are not financed directly through the general government but with government-guaranteed bonds.

[5] Support provided by the general government.

[6] Direct support includes total capital injections by the Fondo de Reestructuración Ordenada Bancaria and liquidity support.

FISCAL MONITOR
SELECTED TOPICS

Fiscal Monitor Archives

Navigating the Fiscal Challenges Ahead	April 2010
Fiscal Exit: From Strategy to Implementation	November 2010
Shifting Gears	April 2011
Addressing Fiscal Challenges to Reduce Economic Risks	September 2011
Balancing Fiscal Policy Risks	April 2012
Taking Stock: A Progress Report on Fiscal Adjustment	October 2012
Fiscal Adjustment in an Uncertain World	April 2013
Taxing Times	October 2013
Public Expenditure Reform: Making Difficult Choices	April 2014
Back to Work: How Fiscal Policy Can Help	October 2014

I. Adjustment

Fiscal Consolidations with Progressive Measures	April 2014, Box 2.4
Constructing an Index of the Difficulty of Fiscal Adjustment	October 2013, Box 1
Medium-Term Fiscal Adjustment in an Uncertain World	April 2013, Chapter 2
Fiscal Adjustment in the United States: Making Sense of the Numbers	April 2013, Box 5
The Appropriate Pace of Short-Term Fiscal Adjustment	April 2013, Box 2
Taking Stock: A Progress Report on Fiscal Adjustment	October 2012, Chapter 2
Distributional Consequences of Alternative Fiscal Consolidation Measures: Reading from the Data	October 2012, Appendix 1
Easy Does It: The Appropriate Pace of Fiscal Consolidation	April 2012, Chapter 3
Fiscal Multipliers in Expansions and Contractions	April 2012, Appendix 1
Early Lessons from Experiences with Large Fiscal Adjustment Plans	April 2012, Appendix 2
Experience with Large Fiscal Adjustment Plans in Ireland and Portugal	April 2012, Box A2.1
Fiscal Adjustment Plans and Medium-Term Fiscal Outlook	November 2010, Chapter 3
To Tighten or Not to Tighten: This Is the Question	November 2010, Box 1.2
Fiscal Adjustment and Income Distribution in Advanced and Emerging Economies	November 2010, Appendix 3
The Fiscal Policy Outlook: Adjustment Needs and Plans	April 2010, Chapter 3
Adjustment Measures and Institutions	April 2010, Chapter 4
Fiscal Adjustment Requirements: Gross and Net Debt Targets	April 2010, Appendix 2

II. Commodities and Energy

Reforming Energy Subsidies	April 2013, Appendix 1
Fiscal Developments in Oil-Producing Economies	September 2011, Box 3
Pass-Through and Fiscal Impact of Rising Fuel Prices	April 2011, Box 1.2
Global Fuel and Food Price Shocks and Fiscal Performance in Low-Income Countries	September 2011, Box 8
Reforming Petroleum Subsidies	April 2010, Appendix 5

III. Country Cases

Lowflation and Debt in the Euro Area	October 2014, Box 1.1
Fiscal Challenges in the Pacific Island Countries	April 2014, Box 1.3
Fiscal Reforms to Unlock Economic Potential in the Arab Countries in Transition	October 2013, Box 2
Fiscal Adjustment in the United States: Making Sense of the Numbers	April 2013, Box 5
Lessons from Sweden	October 2012, Box 2
The "Two-Pack": Further Reforms to Fiscal Governance in the Euro Area	October 2012, Box 6
Ireland: The Impact of Crisis and Fiscal Policies on Inequality	October 2012, Box 8
The "Fiscal Compact": Reforming EU Fiscal Governance	April 2012, Box 5
Experience with Large Fiscal Adjustment Plans in Ireland and Portugal	April 2012, Box A2.1
Subnational Government Response to the Financial Crisis in the United States and Canada	April 2012, Box A3.1
United States: Government-Sponsored Enterprises and Contingent Liabilities	September 2011, Box 1
The Dog That Didn't Bark (So Far): Low Interest Rates in the United States and Japan	September 2011, Chapter 3
Fiscal Aspects of EU Economic Governance Reforms	April 2011, Box 4.1
The U.S. National Commission Report	April 2011, Box A5.1
The European Union: Reforming Fiscal Governance	November 2010, Box 3.2
Increasing Social Expenditures and Household Consumption in China	April 2010, Box 4
Health Care Reforms in United States	April 2010, Box 5

IV. Crises, Shocks

Learning from the Crisis? Taxation and Financial Stability	October 2013, Box 3
The Impact of the Global Financial Crisis on Subnational Government Finances	April 2012, Appendix 3
The Evolution of Seigniorage during the Crisis	April 2012, Box 4
Subnational Government Response to the Financial Crisis in the United States and Canada	April 2012, Box A3.1
Ireland: The Impact of Crisis and Fiscal Policies on Inequality	October 2012, Box 8
The Legacy of the Crisis: How Long Will It Take to Lower Public Debt?	September 2011, Chapter 5
The G-20 Economies: Crisis-Related Discretionary Fiscal Stimulus	November 2010, Box 1.1
Update on Crisis-Related Discretionary Fiscal Stimulus in G-20 Economies	April 2010, Appendix 1
The Impact of the Crisis on Subnational Governments	April 2010, Appendix 4

V. Emerging Markets

Nonresident Holdings of Emerging Market Economy Debt	April 2014, Box 1.2
Potential Sources of Contingent Liabilities in Emerging Market Economies	April 2013, Box 4
Fiscal Fundamentals and Global Spillovers in Emerging Economies	April 2012, Box 2
Too Good to Be True? Fiscal Developments in Emerging Economies	September 2011, Chapter 4
Determinants of Domestic Bond Yields in Emerging Economies	September 2011, Box 4

VI. Employment

Can Fiscal Policies Do More for Jobs?	October 2014, Chapter 2
Methodology for Estimating the Impact of Fiscal Consolidation on Employment	October 2014, Appendix 1
Do Old Workers Crowd Out the Youth?	October 2014, Box 2.2
Fiscal Policies to Address Weak Employment	October 2012, Appendix 2

VII. Financial Sector

The Fiscal Implications of International Bond Issuance by Low-Income Developing Countries	October 2014, Box 1.2
Nonresident Holdings of Emerging Market Economy Debt	April 2014, Box 1.2
A One-Off Capital Levy?	October 2013, Box 6
Bond Yields and Stability of the Investor Base	April 2013, Box 3
Long-Run and Short-Run Determinants of Sovereign Bond Yields in Advanced Economies	October 2012, Box 3
Financial Sector Support	October 2012, Box 4
Reassuring Markets about Fiscal Sustainability in the Euro Area	September 2011, Chapter 2
Determinants of Domestic Bond Yields in Emerging Economies	September 2011, Box 4
Financial Sector Support and Recovery to Date	September 2011, Box 7
Financial Sector Support and Recovery to Date	April 2011, Box 1.1
Sovereign Financing and Government Debt Markets	November 2010, Chapter 2
Advanced Economies: Financial Market Spillovers among Sovereigns	November 2010, Box 2.2
Market Concerns about Economies and Default Risks	November 2010, Box 2.1
Are Sovereign Spreads Linked to Fundamentals?	November 2010, Appendix 2
Measures to Finance the Cost of Financial Sector Support	April 2010, Box 3

VIII. Fiscal Outlook

Recent Fiscal Developments and Outlook	October 2014, Chapter 1
Recent Fiscal Developments and Outlook	April 2014, Chapter 1
Recent Fiscal Developments and the Short-Term Outlook	October 2013, Chapter 1
Recent Fiscal Developments and the Short-Term Outlook	April 2013, Chapter 1
The Fiscal Outlook	October 2012, Chapter 1
Moving Forward	October 2012, Chapter 3
Continued Fiscal Tightening Is in Store for 2012, Particularly among Advanced Economies	April 2012, Chapter 1
Conclusion and Risk Assessment	April 2012, Chapter 7
Risk to the Baseline	September 2011, Box 2
Fiscal Developments in Oil-Producing Economies	September 2011, Box 3
The Fiscal Indicators Index	September 2011, Box 5
Addressing Fiscal Challenges to Reduce Economic Risks: Introduction	September 2011, Chapter 1
Addressing Fiscal Challenges to Reduce Economic Risks: Conclusion	September 2011, Chapter 7
Too Good to Be True? Fiscal Developments in Emerging Economies	September 2011, Chapter 4
Shocks to the Baseline Fiscal Outlook	April 2011, Chapter 3
Fiscal Developments and Near-Term Outlook	November 2010, Chapter 1
Fiscal Adjustment Plans and Medium-Term Fiscal Outlook	November 2010, Chapter 3
Assessing Fiscal Risks	November 2010, Chapter 4
The Near-and Medium-Term Fiscal Outlook	April 2010, Chapter 1

IX. Government Debt

Lowflation and Debt in the Euro Area	October 2014, Box 1.1
Moment of Truth: Unfunded Pension Liabilities and Public Debt Statistics	April 2014, Box 1.1
Public Debt Dynamics and Fiscal Adjustment in Low-Income Countries in Sub-Saharan Africa	April 2013, Box 6
Debt Ratios Are Still on the Rise, but Peaks Are within Sight	April 2012, Chapter 2

High Gross Debt Levels May Overstate Challenges in the Short Run	April 2012, Chapter 4
. . . But Long-Run Debt-Related Challenges Remain Large	April 2012, Chapter 5
The Legacy of the Crisis: How Long Will It Take to Lower Public Debt?	September 2011, Chapter 5
Factors Underlying the Debt Increase Precrisis versus End-2015	September 2011, Box 6
The Importance of Monitoring Both Gross and Net Debt	September 2011, Appendix 3
Stock-Flow Adjustments and Their Determinants	September 2011, Appendix 4
Fiscal Deficits and Debts: Development and Outlook	April 2011, Chapter 1
Sovereign Financing and Government Debt Markets	April 2011, Chapter 2
Debt Dynamics and the Interest Rate-Growth Differential	April 2011, Box 3.1
Sovereign Financing and Government Debt Markets	November 2010, Chapter 2
Implications of Fiscal Developments for Government Debt Markets	April 2010, Chapter 2
Are Sovereign Spreads Linked to Fundamentals?	November 2010, Appendix 2
Risks to Medium-Term Public Debt Trajectories Methodological and Statistical Appendix	November 2010, Appendix 4
Debt Dynamics in G-20 Economies: An Update	April 2010, Box 1
Gross versus Net Debt	April 2010, Box 2
Fiscal Adjustment Requirements: Gross and Net Debt Targets	April 2010, Appendix 2
Government Debt and Growth	April 2010, Appendix 3

X. Growth

Taxation and Growth: Details Matter	October 2013, Box 4
Debt Dynamics and the Interest Rate-Growth Differential	April 2011, Box 3.1
Interest Rate-Growth Differential	November 2010, Appendix 1
Government Debt and Growth	April 2010, Appendix 3

XI. Interest Rates

The Dog That Didn't Bark (So Far): Low Interest Rates in the United States and Japan	September 2011, Chapter 3
Debt Dynamics and the Interest Rate-Growth Differential	April 2011, Box 3.1
Interest Rate-Growth Differential	November 2010, Appendix 1

XII. Low-Income Countries

The Fiscal Implications of International Bond Issuance by Low-Income Developing Countries	October 2014, Box 1.2
Confronting Trade-Offs: Accommodating Spending Pressures in Low-Income Countries	September 2011, Chapter 6
Global Fuel and Food Price Shocks and Fiscal Performance in Low-Income Countries	September 2011, Box 8

XIII. Policy and Reform

Public Expenditure Reform: Making Difficult Choices	April 2014, Chapter 2
Expenditure Rules: Effective Tools for Sound Fiscal Policy	April 2014, Appendix 1
The Future of the State: Testing the Wagner and Baumol Hypotheses	April 2014, Box 2.1
Fiscal Reforms to Unlock Economic Potential in the Arab Countries in Transition	October 2013, Box 2
Tricks of the Trade	October 2013, Box 5
How Can Fiscal Councils Strengthen Fiscal Performance?	April 2013, Box 1
The "Two-Pack": Further Reforms to Fiscal Governance in the Euro Area	October 2012, Box 6

Commonly Used Definitions of the Fiscal Balance	October 2012, Box 1
Measuring Fiscal Space: A Critical Review of Existing Methodologies	April 2012, Box 1
Anchoring Medium-Term Fiscal Credibility: The Second Generation of Fiscal Rules	April 2012, Chapter 6
The "Fiscal Compact": Reforming EU Fiscal Governance	April 2012, Box 5
Assessing the Cyclicality of Subnational Government Policies	April 2012, Box A3.2
"Fiscal Devaluation": What Is It—and Does It Work?	September 2011, Appendix 1
Fiscal Aspects of EU Economic Governance Reforms	April 2011, Box 4.1
Fiscal Transparency Under Pressure	April 2011, Appendix 2
The European Union: Reforming Fiscal Governance	November 2010, Box 3.2
Fiscal Rules—Recent Developments	April 2010, Box 7

XIV. Privatization, Public Enterprises

General Government Nonfinancial Assets: What Do We Know?	October 2012, Box 7
Government Shares in Publicly Listed Companies	April 2012, Box 3
United States: Government-Sponsored Enterprises and Contingent Liabilities	September 2011, Box 1
Adjusting Public Capital Stock for Investment Inefficiency	September 2011, Box 9
Insights for Privatization Plans from Previous Large Episodes	September 2011, Appendix 2

XV. Revenue

Assessing Potential Revenue: Two Approaches	October 2013, Appendix 2
Increasing Revenue from Real Property Taxes	October 2013, Appendix 3
Past Episodes of Sustained Fiscal Revenue Increases	April 2010, Box 6

XVI. Social Expenditures

Targeted Employer Social Security Contribution Cuts: Lessons from Experiences in Advanced Economies	October 2014, Box 2.1
Public Expenditure Reform: Making Difficult Choices	April 2014, Chapter 2
Moment of Truth: Unfunded Pension Liabilities and Public Debt Statistics	April 2014, Box 1.1
Structural Measures and Social Dialogue	April 2014, Box 2.2
Health System Inefficiencies	April 2014, Box 2.3
Recent Developments in Public Health Spending and Outlook for the Future	October 2013, Appendix 1
Confronting Trade-Offs: Accommodating Spending Pressures in Low-Income Countries	September 2011, Chapter 6
Potential Reform Strategies to Contain the Growth of Public Health Spending	April 2011, Box A1.1
The U.S. National Commission Report	April 2011, Box A5.1
Tackling the Challenge of Health Care Reform in Advanced Economies	April 2011, Appendix 1
Selected Spending and Tax Issues	November 2010, Chapter 5
Advanced Economies: The Outlook for Public Health Spending	November 2010, Box 3.1
Increasing Social Expenditures and Household Consumption in China	April 2010, Box 4
Health Care Reforms in United States	April 2010, Box 5

XVII. Stimulus

The G-20 Economies: Crisis-Related Discretionary Fiscal Stimulus	November 2010, Box 1.1
Update on Crisis-Related Discretionary Fiscal Stimulus in G-20 Economies	April 2010, Appendix 1

XVIII. Subsidies

Reforming Energy Subsidies	April 2013, Appendix 1
Reforming Petroleum Subsidies	April 2010, Appendix 5

XIX. Sustainability

Reassuring Markets about Fiscal Sustainability in the Euro Area	September 2011, Chapter 2
Assessing and Mitigating Fiscal Sustainability Risks	April 2011, Chapter 4
Assessing Fiscal Sustainability Risks: Deriving a Fiscal Sustainability Risk Map	April 2011, Appendix 3

XX. Taxes

Taxing Our Way out of—or into?—Trouble	October 2013, Chapter 2
Learning from the Crisis? Taxation and Financial Stability	October 2013, Box 3
Taxation and Growth: Details Matter	October 2013, Box 4
A One-Off Capital Levy?	October 2013, Box 6
Increasing Revenue from Real Property Taxes	October 2013, Appendix 3
Do Pensioners Get Special Treatment on Taxes?	October 2012, Box 5
Containing Tax Expenditures	April 2011, Appendix 5
Selected Spending and Tax Issues	November 2010, Chapter 5

IMF EXECUTIVE BOARD DISCUSSION SUMMARY

The following remarks were made by the Chair at the conclusion of the Executive Board's discussion of the World Economic Outlook, Global Financial Stability Report, *and* Fiscal Monitor *on April 3, 2015.*

Executive Directors noted that a moderate recovery continues in the global economy, with uneven prospects across countries and regions. Growth in emerging market economies is softening, reflecting an adjustment to weaker medium-term growth expectations, lower commodity prices and exports, and country-specific factors. The outlook for advanced economies shows some signs of improvement on the back of lower oil prices, continued support from accommodative monetary policy stances, and some moderation in the pace of fiscal adjustment. A number of Directors considered that global economic developments might turn out to be more positive than currently expected. A few other Directors emphasized the importance of decisive policy actions to counter the "new mediocre."

Directors noted that global growth should continue to increase gradually as crisis legacies fade and advanced economies benefit from accommodative macroeconomic policies. Emerging market economies are likely to slow further in 2015, but growth should pick up again in 2016 and beyond, as the current setbacks to activity begin to dissipate. Directors agreed that the near-term distribution of risks to global growth has become more balanced, although most noted that it remains tilted to the downside. The decline in oil prices could boost activity more than expected, but geopolitical tensions continue to pose threats, and risks of abrupt shifts in asset prices—including exchange rates—have increased. In some advanced economies, protracted below-target inflation or deflation could affect activity and public and private debt dynamics. A few Directors considered that this risk has diminished. A few others urged greater focus on global imbalances.

Despite the expected improvement in the outlook, Directors broadly agreed that short-term financial stability risks have increased. Oil- and commodity-exporting countries and firms generally face revenue losses and higher risks. Emerging market corporations that have borrowed heavily in U.S. dollars and are not sufficiently hedged are now faced with potential balance sheet pressures from the appreciating U.S. dollar. A retrenchment of overinvested industries and property price declines—especially in China—could spill over to emerging markets more broadly. In advanced economies, the low-interest-rate environment poses challenges for long-term investors, including weaker life insurance companies in Europe. High debt levels and nonperforming loans in the private sector continue to pose headwinds to growth and financial stability in some advanced economies. Recent declines in liquidity in some markets may amplify financial stability risks.

At the same time, Directors also noted important medium-term risks to the global recovery. In emerging market economies, tighter financial conditions or unaddressed supply-side constraints represent significant risks. Growth prospects in advanced economies are held down by aging populations, weak investment, and lackluster productivity growth while sustained weakness in demand could weigh on potential output.

To address these risks and challenges, Directors underscored that boosting actual and potential growth remains a policy priority. In emerging market economies, macroeconomic policy space to support growth remains limited, but lower oil prices will alleviate inflation pressures and could increase fiscal space in oil importers. In oil exporters, adjusting public spending in view of lower fiscal revenues is a priority, although countries with strong financial buffers may adjust more gradually. Better fiscal frameworks with clear medium-term objectives are needed in many countries to anchor fiscal policy and avoid a procyclical policy stance. Directors also emphasized that lower oil prices provide an

opportunity to reform inefficient energy subsidies and provide breathing room for more productive and equitable spending and growth-enhancing tax reforms.

Directors broadly concurred that continued accommodative monetary policy is essential in many advanced economies. To support credit markets, additional measures are needed to restore balance sheet health in the private sector, including in the euro area. At the same time, many Directors noted the limitations and risks of prolonged accommodative monetary policies and divergent monetary stances, and some underscored the need to better understand their implications for emerging market and developing countries. Fiscal policy could be used to support demand and contribute to global rebalancing, for example through infrastructure investment in some advanced economies, while countries constrained by high levels of public debt should pursue growth-friendly reforms affecting the composition of revenues and expenditures. Credible medium-term fiscal consolidation plans are still needed in a number of countries, especially in Japan and the United States.

Directors highlighted the importance of a sound international banking system, and noted that more progress on the implementation of regulatory standards and cross-border resolution is needed. Strengthening microprudential policies and building a macroprudential toolkit remains a priority in many emerging market and developing economies. In advanced economies, the oversight of certain parts of the nonbank financial sector needs to be strengthened, particularly the asset management industry, as well as the life insurance industry in Europe, with better microprudential supervision and stronger emphasis on systemic risk. A number of Directors noted progress in the international regulatory reform agenda and increased efforts to monitor financial risks and build resilience. They cautioned that additional regulation and oversight should be commensurate to the systemic risk posed and take into account both costs and benefits.

Directors emphasized the importance of exchange rate flexibility for emerging markets without currency pegs, while recognizing that measures may be necessary to limit excessive exchange rate volatility. Bolstering resilience to external shocks will also require stronger macroeconomic and macroprudential policy frameworks, and robust prudential regulation and supervision. In China, further progress to gradually shift the composition of demand toward domestic consumption and reduce reliance on credit and investment would help forestall medium-term risks of financial disruption or a sharp slowdown.

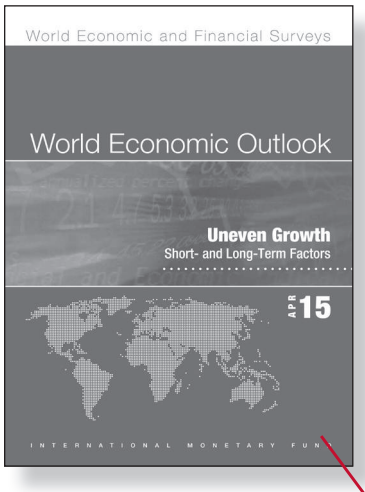
Directors called for further structural reforms to raise potential growth. In emerging market and developing economies, the main priorities are removing infrastructure bottlenecks, reforming labor and product markets, strengthening education, easing limits on trade and investment, improving business conditions, and enhancing government services delivery. In advanced economies, strengthening public infrastructure, increasing labor force participation, and enabling innovation and productivity-enhancing investment are key priorities. In the euro area, reforms need to tackle legacy debt overhang, barriers to product market entry, labor market regulations that hamper adjustment, and obstacles to investment activity. In Japan, there is scope to improve service sector productivity and support investment through corporate governance reform.

Directors also stressed that continued strong growth in low income developing countries calls for greater progress in diversification and structural transformation. Key requirements include boosting fiscal positions with stronger revenues and rationalized public spending, strengthening public financial management, achieving greater monetary policy independence, promoting financial deepening, and attracting capital flows. Infrastructure investment, anchored in well-designed debt management strategies, is essential to increase growth potential. Advanced and systemically important emerging economies should play a supportive role in maintaining an enabling external environment for low-income developing countries. Priorities include further trade liberalization, providing development aid and technical assistance, completing the global regulatory reform agenda, and cooperating on international taxation and climate change issues.

Hunting for global analysis? Find it at the IMF Bookstore

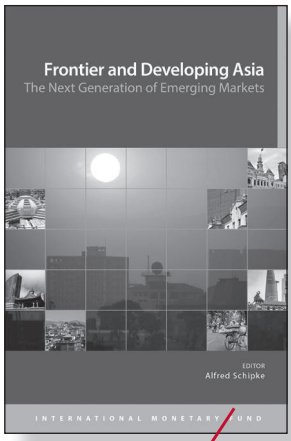
World Economic Outlook

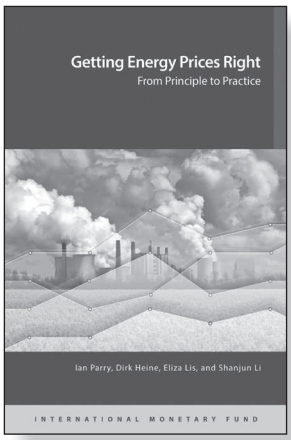
The *World Economic Outlook*, packed with country-specific facts, figures, and global projections, presents the outlook for growth, inflation, trade, and other economic developments in a clear, practical format.



Frontier and Developing Asia: The Next Generation of Emerging Markets

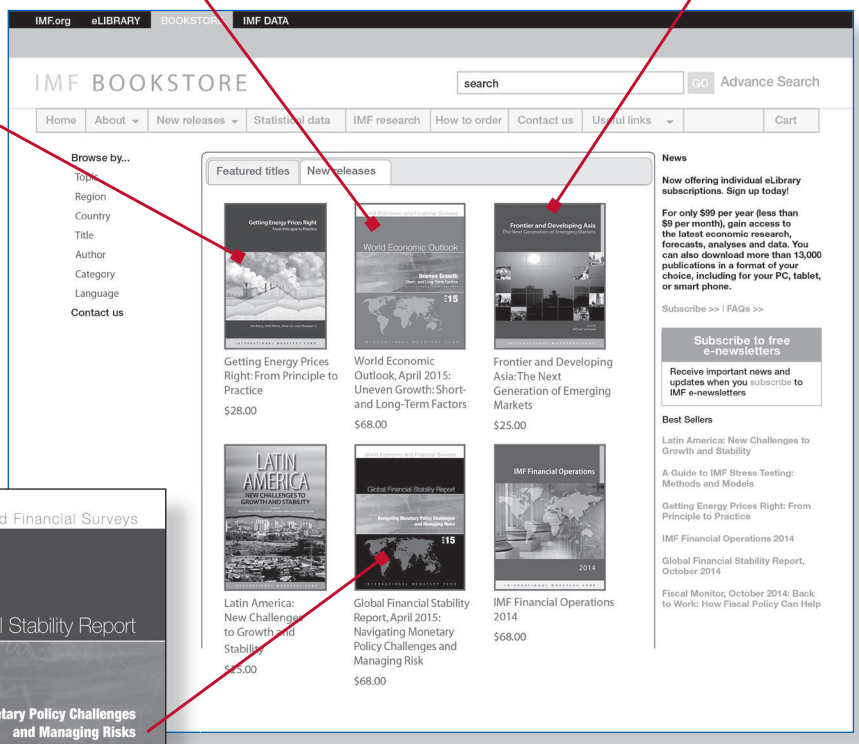
An analysis of Asia's fastest-growing low-income countries and their impact on the region's economic growth and structural transformation.





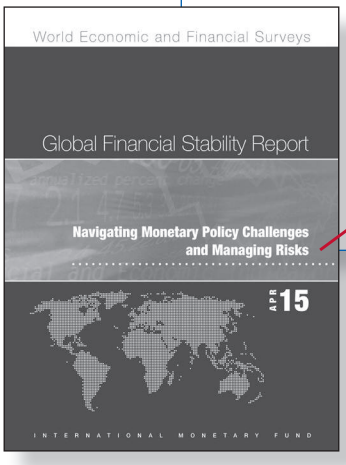
Getting Energy Prices Right: From Principle to Practice

This book develops a practical methodology and associated tools to show how the major environmental damages from energy can be quantified for different countries and used to design efficient energy taxes.



Global Financial Stability Report

The *Global Financial Stability Report* provides expert and up-to-date analysis of global capital flows that play a critical role in world economic growth and financial stability.



Order Now: *Visit the IMF Bookstore today and browse to find the latest reports, publications, and data.*

ISBN: 978-1-49839-638-7

Fiscal Monitor, April 2015