World Economic and Financial Surveys

Fiscal Monitor

The Commodities Roller Coaster

A Fiscal Framework for Uncertain Times

OCT 15

INTERNATIONAL MONETARY FUND

World Economic and Financial Surveys

Fiscal Monitor

October 2015

The Commodities Roller Coaster

A Fiscal Framework for Uncertain Times

INTERNATIONAL MONETARY FUND

©2015 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 September 21, 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—The Commodities Roller Coaster: A Fiscal Framework for Uncertain Times* (Washington, October 2015).

ISBN: 978-1-51357-070-9 (paper)
ISBN: 978-1-51355-285-9 (ePub)
ISBN: 978-1-51355-263-7 (Mobipocket)
ISBN: 978-1-51354-676-6 (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

Assumptions and Conventions vi

Further Information and Data vii

Preface viii

Executive Summary ix

Chapter 1. The Commodities Roller Coaster: A Fiscal Framework for Uncertain Times 1

How Commodity Cycles Affect the Economy 2
Fiscal Policy during Booms and Busts: A Difficult Balancing Act 4
Long-Term Fiscal Management under Uncertainty 10
A Risk-Based, Comprehensive Approach to Fiscal Policy 14
Conclusion 20
Annex 1.1. Data Sources 21
Annex 1.2. Selected Experiences with Fiscal Rules and Resource Funds in Latin America and the Caribbean 21
Annex 1.3. Public Investment in Oil-Producing Countries of the Middle East 23
Annex 1.4. How Selected Sub-Saharan African Countries Have Used Commodity Windfalls 23
Box 1.1 Long-Term Management of Natural Resources 25
Box 1.2. A Benchmark for Stabilization Savings 26
Box 1.3. IMF Technical Assistance to Help Countries Manage Their Natural Resource Wealth 27
Box 1.4. The Vital Role of Transparency for the Successful Management of Natural Resources 28
Box 1.5. Fiscal Rules for Resource-Rich Countries 29
Box 1.6. The Large Size of Global Energy Subsidies 30
References 32

Country Abbreviations 35

Glossary 37

Methodological and Statistical Appendix 39

Data and Conventions 39
Fiscal Policy Assumptions 42
Definition and Coverage of Fiscal Data 46
Table A. Advanced Economies: Definition and Coverage of *Fiscal Monitor* Data 48
Table B. Emerging Market and Middle-Income Economies: Definition and Coverage of *Fiscal Monitor* Data 49
Table C. Low-Income Developing Countries: Definition and Coverage of *Fiscal Monitor* Data 50
List of Tables
Advanced Economies (A1–A8) 51
Emerging Market and Middle-Income Economies (A9–A16) 59
Low-Income Developing Countries (A17–A22) 67

***Fiscal Monitor,* Selected Topics** 73

IMF Executive Board Discussion Summary 79

Figures

Figure 1.1. Nonrenewable Commodity Exporters, 2014 2
Figure 1.2. Sovereign Wealth Funds, 2014 3
Figure 1.3. A Poor Record of Forecasting Oil Prices 3
Figure 1.4. Impact of Commodity Price Swings on Fiscal Revenues and Exports 4
Figure 1.5. Impact of the 1970s–80s Boom-Bust on Growth 5
Figure 1.6. Public Expenditure Procyclicality across Countries 6
Figure 1.7. Cyclically Adjusted Nonresource Balance and Procyclicality 7
Figure 1.8. Procyclicality and Growth 7
Figure 1.9. Positive Impact of Good Institutions on Fiscal Policy 8
Figure 1.10. Institutional Quality in Resource-Rich Countries 9
Figure 1.11. Spending during the 2000–08 Boom 9
Figure 1.12. Current and Capital Spending during the 2000–08 Boom 10
Figure 1.13. Impact of Public Capital Spending Scaling up on Growth 11
Figure 1.14. Health and Education during the 2000–08 Commodity Boom 12
Figure 1.15. Fuel Subsidies in Oil-Exporting Countries 12
Figure 1.16. Simulation of the Impact of Various Strategies to Manage Resource Wealth under Uncertainty 13
Figure 1.17. Saving Rates during Boom Years 14
Figure 1.18. Impact of the Fall in Commodity Prices on Fiscal Balances in Resource-Rich Countries 15
Figure 1.19. Tax Revenue in Resource-Rich Countries 18
Figure 1.20. Resource and Nonresource Revenues 19
Figure 1.21. Revenue Shares from Taxation in Resource-Rich Countries, 1990–2014 20
Figure 1.2.1. Precautionary Buffers under Different Degrees of Risk Tolerance 26
Figure 1.5.1. Size of Global Energy Subsidies 30

Tables

Table 1.6.1. Energy Subsidies in Selected Oil Exporters 31
Table A. Advanced Economies: Definition and Coverage of *Fiscal Monitor* Data 48
Table B. Emerging Market and Middle-Income Economies: Definition and Coverage of *Fiscal Monitor* Data 49
Table C. Low-Income Developing Countries: Definition and Coverage of *Fiscal Monitor* Data 50
Table A1. Advanced Economies: General Government Overall Balance, 2006–20 51
Table A2. Advanced Economies: General Government Primary Balance, 2006–20 52
Table A3. Advanced Economies: General Government Cyclically Adjusted Balance, 2006–20 53
Table A4. Advanced Economies: General Government Cyclically Adjusted Primary Balance, 2006–20 54
Table A5. Advanced Economies: General Government Revenue, 2006–20 55
Table A6. Advanced Economies: General Government Expenditure, 2006–20 56
Table A7. Advanced Economies: General Government Gross Debt, 2006–20 57
Table A8. Advanced Economies: General Government Net Debt, 2006–20 58
Table A9. Emerging Market and Middle-Income Economies: General Government Overall Balance, 2006–20 59
Table A10. Emerging Market and Middle-Income Economies: General Government Primary Balance, 2006–20 60
Table A11. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Balance, 2006–20 61
Table A12. Emerging Market and Middle-Income Economies: General Government Cyclically Adjusted Primary Balance, 2006–20 62
Table A13. Emerging Market and Middle-Income Economies: General Government Revenue, 2006–20 63

Table A14. Emerging Market and Middle-Income Economies: General Government Expenditure, 2006–20 64
Table A15. Emerging Market and Middle-Income Economies: General Government Gross Debt, 2006–20 65
Table A16. Emerging Market and Middle-Income Economies: General Government Net Debt, 2006–20 66
Table A17. Low-Income Developing Countries: General Government Overall Balance, 2006–20 67
Table A18. Low-Income Developing Countries: General Government Primary Balance, 2006–20 68
Table A19. Low-Income Developing Countries: General Government Revenue, 2006–20 69
Table A20. Low-Income Developing Countries: General Government Expenditure, 2006–20 70
Table A21. Low-Income Developing Countries: General Government Gross Debt, 2006–20 71
Table A22. Low-Income Developing Countries: General Government Net Debt, 2006–20 72

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.

For details on the terms and conditions for usage of the contents of this publication, please refer to the IMF Copyright and Usage website, www.imf.org/external/terms.htm.

PREFACE

The *Fiscal Monitor* is prepared by the IMF Fiscal Affairs Department under the supervision of Vitor Gaspar, Director of the Department; Christopher Towe, Deputy Director; and Benedict Clements, Division Chief. The main authors of this issue are Paulo Medas (team leader), Chadi Abdallah, Olivier Basdevant, Elva Bova, Paolo Dudine, David Gentry, Tom Josephs, Tigran Poghosyan, and Jasmin Sin. It also includes contributions from Jose Delgado, Mark Lutz, Cameron McLoughlin, Diego Mesa Puyo, Randa Sab, Gonzalo Salinas, Marika Santoro, and Fabian Valencia. Exceptional research assistance was provided by Juan Farah Yacoub and Tafadzwa Mahlanganise. The methodological and statistical appendix was prepared by Younghun Kim under the supervision of Marta Ruiz-Arranz. Jeffrey Pichocki provided outstanding 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

Natural resource-rich countries benefited from an exceptional commodity price boom during the 2000s, with metal and oil prices reaching historic highs. This provided a substantial boon to resource-rich developing countries, which benefited from large increases in fiscal revenues and the opportunity to promote economic transformation and development.

However, the more recent reversal in commodity prices has driven home the fact that commodity prices are volatile, unpredictable, and subject to long-lasting shocks. It has also meant that commodity exporters will need to adjust to a—possibly protracted—period of lower export and fiscal revenues.

In light of this recent development, this issue of the *Fiscal Monitor* examines the conduct of fiscal policy under the uncertainty caused by dependence on natural resource revenues. It draws on extensive past research on the behavior of commodity prices and their implications for macroeconomic outcomes, as well as on extensive IMF technical assistance to resource-rich economies seeking to improve their management of natural resource wealth.

Although natural resources represent a tremendous opportunity for economies seeking to promote economic development and the well-being of their populations, in fact this has proven to be surprisingly difficult. Especially in the case of exhaustible mineral and hydrocarbon wealth, many countries have apparently suffered from what is often termed a "resource curse." In some countries, efforts to jump-start growth and development have not borne fruit, fiscal policies were too procyclical, and underlying institutions were not strengthened sufficiently.

Of course, the experience of these countries has varied considerably and there are examples where these resources have been used in a manner that fosters successful development. In recent decades there has also been greater attention paid by resource-rich countries to upgrading their fiscal policies, rules, and institutions. This has meant that many countries were successful in saving a larger share of the resource revenue windfall during the 2000s, while also scaling up public investment and social spending.

Important lessons for fiscal policies derive from these divergent experiences and serve as a further reminder of the uncertainty related to commodity prices. Countries face important trade-offs between how much to consume of their nonrenewable resource wealth and how much to save in the form of financial savings and other assets (for example, public infrastructure). For low-income countries there are good arguments to use natural resource wealth to help kick-start development. But it is critical to ensure that public infrastructure investment and social spending be scaled up at a pace that can withstand possible adverse shocks to commodity revenues, and that public investment management be strengthened to ensure the anticipated growth dividends. And since commodity-based revenues are both volatile and exhaustible, it is important that resource-rich countries diversify their sources of revenues, ensuring that the tax base includes the nonresource economy.

Financial (stabilization) buffers should also be built especially to help withstand the uncertainty that commodity-exporting countries are particularly prone to. These buffers will allow for countercyclical fiscal policies, as the economic cycle moves together with the commodity cycle (October 2015, *World Economic Outlook*). And finally, recent experience also confirms that sound fiscal policy and institutions provide the essential basis for ensuring that these policies are well-designed and sustained.

Countries with stabilization buffers are better prepared to manage the sharp fall in commodity prices since 2012. These have led to a substantial growth slowdown in commodity exporters. For countries with sufficient buffers and output at or below potential, prudent fiscal management and smoothing macroeconomic fluctuations go together. For countries that need to adjust and build up buffers, macroeconomic conditions may recommend gradual adjustment to minimize adverse effects on economic activity and growth.

CHAPTER

1 THE COMMODITIES ROLLER COASTER: A FISCAL FRAMEWORK FOR UNCERTAIN TIMES

Exporters of nonrenewable commodities such as oil, gas, and metals are a key part of the global economy (Figure 1.1).[1] They are a mix of high-, middle-, and low-income countries that represent close to 20 percent of world GDP and global exports, and are an important destination for foreign direct investment (FDI). They hold a large share of the world's natural resources, accounting for almost 90 percent of crude oil reserves and 75 percent of copper reserves.

Natural resource wealth has enabled some of these countries to accumulate substantial assets. These assets provide a buffer in the event of shocks and allow countries to share the benefits of exhaustible natural resources with future generations. In a growing number of countries, these assets have been placed in sovereign wealth funds and invested abroad (Figure 1.2).

Natural resources would seem to be a blessing for a country. Resource wealth should make it easier to finance investment for sustainable growth while allowing the government to provide fundamental social services. However, quite a number of resource-rich countries have struggled to leverage these resources to raise economic growth and living standards, falling prey to the so-called resource curse.

When governments rely heavily on revenues derived from commodities, they are subject to the unpredictable ebb and flow of commodity prices. If not adequately managed, this volatility can result in disappointing economic performance.[2] For example, economic activity fell on average by 1 percent a year in several countries (Iran, Libya, Peru, Saudi Arabia) during the commodity price bust of the 1980s, as public spending collapsed by a third or more. Conversely, several countries (Angola, Azerbaijan, Equatorial Guinea, Kuwait, Libya) experienced strong growth during the 2000–08 commodity price boom—partly fueled by a tripling of public spending in real terms—but in some cases did not accumulate enough buffers to protect from falling prices.

The IMF (2012a) examined these issues and developed new macroeconomic policy frameworks for resource-rich developing economies. The analysis there demonstrated that some frontloading of consumption spending to benefit presently poorer generations may be welfare improving and that some scaling up of domestic investment would normally be part of an optimal development strategy. At the same time, the analysis suggested that a high saving rate is necessary if there is to be a lasting impact on development, and that the volatility and uncertainty of resource flows also argues for liquidity buffers.

In light of the large and unexpected decline in global commodity prices since 2012, this issue of the *Fiscal Monitor* reviews the recent experience of resource-rich economies and examines their fiscal policy frameworks. In doing so, several interrelated questions arise: Did policies help shield the economy from large and unexpected commodity price movements? How did governments use the latest period of abundant resources? How can policies and fiscal institutions be improved to cope with uncertainty and better support economic growth?

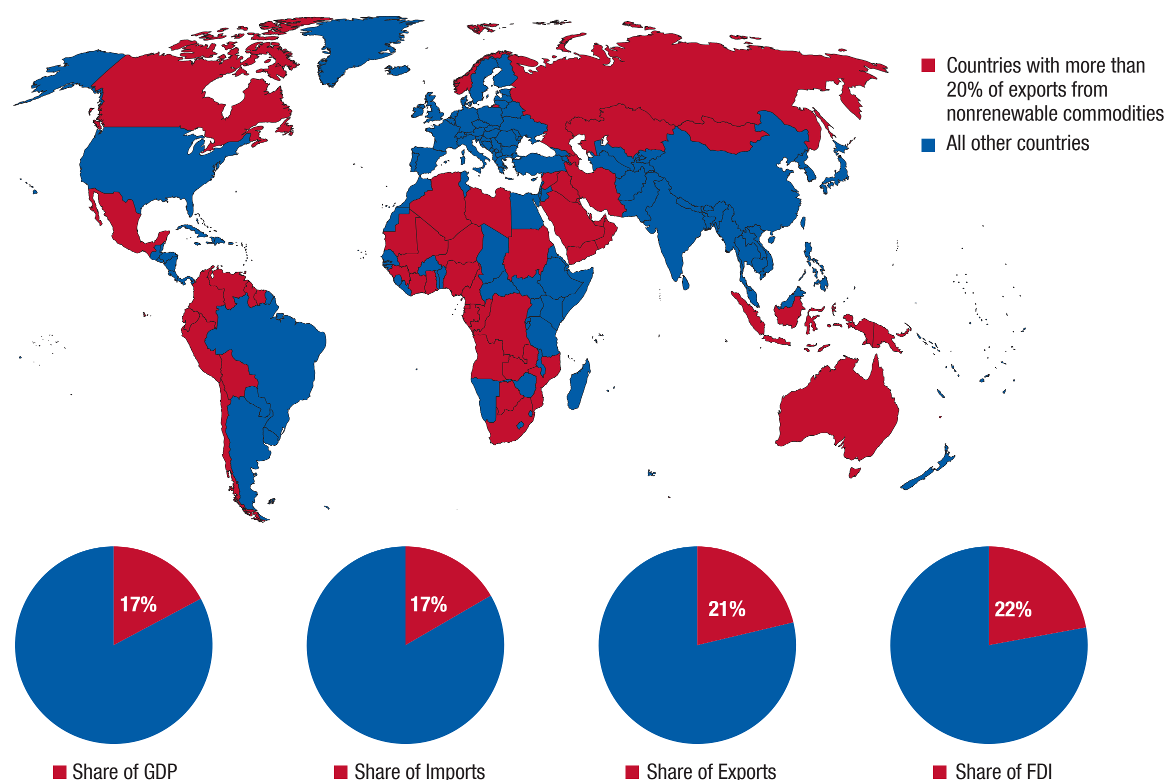
The experience of the past few decades, including the latest boom, has shown that fiscal policy plays a crucial role in managing the effects of commodity price volatility on the domestic economy, but this has been a difficult challenge for many countries. In particular, public expenditure growth has tended to accelerate during price upswings and fall during price downswings, and this procyclical response has intensified the volatility in the economy and could have hampered economic growth. Moreover, although some countries accumulated significant financial buffers during the 2000–08 revenue boom, which have helped them to manage the downturn since 2009, many others will have to endure sharper fiscal contractions due to insufficient buffers.

Against this backdrop, this issue of the *Fiscal Monitor* argues that fiscal policies in commodity-exporting countries need to be sufficiently mindful of uncertainty.

[1] The chapter looks at exporters of extractive commodities (oil, gas, and metals), where these commodities represent a significant share of exports or fiscal revenues (Annex 1.1).

[2] Other important factors that explain weak growth include real exchange rate appreciations (Sachs and Warner 2001; van der Ploeg 2011), rent seeking, and fragile political institutions (Arezki, Hamilton, and Kazimov 2011).

Figure 1.1. Nonrenewable Commodity Exporters, 2014



Sources: BP Statistical Review of World Energy, 2015; *Institutional Investor's* Sovereign Wealth Center; national authorities; Sovereign Wealth Fund Institute; and U.S. Geological Survey.
Note: FDI = foreign direct investment.

The discussion below draws heavily on extensive past IMF research, technical assistance to resource-rich countries, and policy analysis (including IMF 2012a). This past work—as well as the recent collapse in commodity prices—has underscored the need for fiscal policies to pay closer attention to the large volatility and uncertainty to which commodity exporters are particularly prone. And consistent with past IMF advice to these countries, this *Fiscal Monitor* concludes that addressing these challenges requires a comprehensive strategy:

- A longer-term anchor is needed to guide fiscal policy. Countries need to set a long-term strategy that ensures an appropriate level of savings to deal with the eventuality of depleted resources and to help stabilize the economy and promote long-term growth under high uncertainty. This calls for long-term stabilization savings to weather the large and persistent shocks.
- Sound fiscal rules, institutional frameworks, and tax policies can further support these goals, along with improvements in public investment management and reform of fuel subsidies. Strong fiscal institutions and appropriate stabilization buffers will also increase the chances of a successful scaling up of public investment.
- Strong underlying institutions (including good governance) are essential for ensuring that countries are able to leverage their natural wealth to achieve higher long-term growth.

How Commodity Cycles Affect the Economy

Commodity prices are highly volatile and unpredictable, posing significant challenges to policymakers in resource-rich economies (Figure 1.3). Shocks to commodity prices are often large and persistent. Booms and busts can involve prices moving by as much as 40–80 percent for as long as a decade. Hence, forecasting commodity prices has proved exceptionally difficult (Cashin, Liang, and McDermott 2000), and even more so in recent years as commodity prices have been highly volatile (Arezki and others 2013).

Macroeconomic performance of commodity exporters tends to move with commodity price cycles (April 2012 *World Economic Outlook*). The direct impacts of commodity price shocks, whether positive or negative, are felt via exports and the effect that shocks to the country's terms of trade have on the rest of the economy. Typically, economic activity and external and fiscal balances deteriorate (improve) during commodity price downswings (upswings). These price fluctuations can have significant impacts on growth and investment.[3]

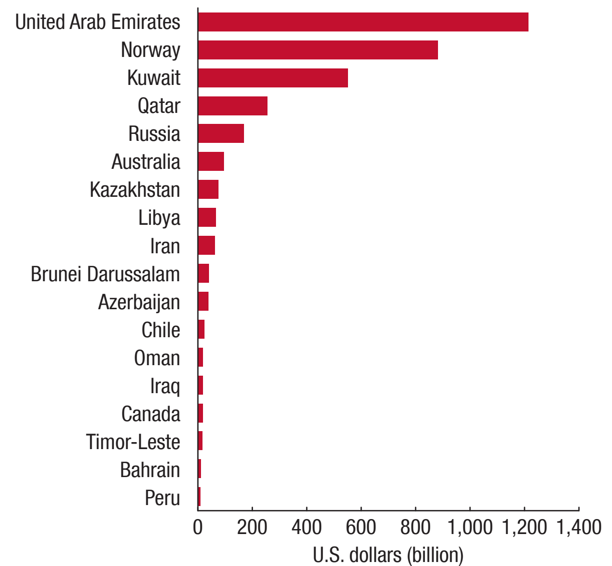
The principal transmission channel appears to be through the government budget, especially for oil exporters. In many commodity-exporting countries, a large share of government revenue is provided by the resource sector. As illustrated in Figure 1.4, commodity price shocks tend to cause large fluctuations in fiscal revenues and, correspondingly, very large changes in government spending. Indeed, empirical analysis of oil-exporting countries suggests that oil price shocks affect growth mostly through public expenditure.[4]

[3] See the October 2015 *World Economic Outlook* for an analysis of economic growth in resource-rich countries over commodity price cycles.

[4] The empirical analysis draws on Husain, Tazhibayeva, and Ter-Martirosyan (2008). See also background notes http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

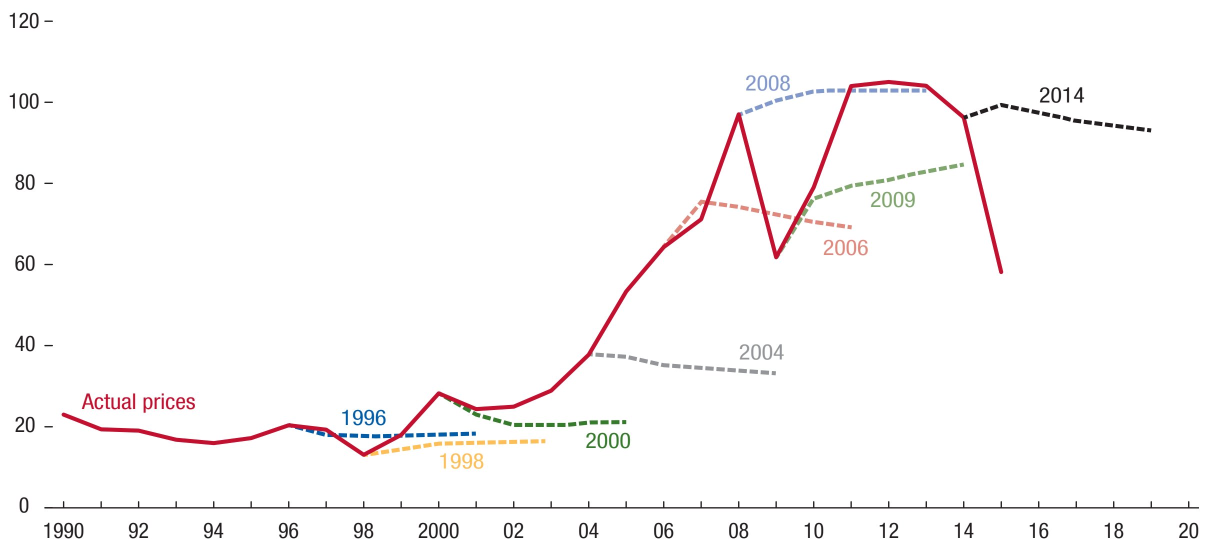
Figure 1.2. Sovereign Wealth Funds, 2014

Many commodity exporters have established sovereign wealth funds, which now hold more than $3.6 trillion.



Sources: *Institutional Investor's* Sovereign Wealth Center; national authorities; Sovereign Wealth Fund Institute; and IMF staff reports.
Note: The total amount for each country takes into account available data for all sovereign wealth funds. Saudi Arabia's Monetary Authority, although not a wealth fund, holds significant reserves at the central bank ($0.8 trillion).

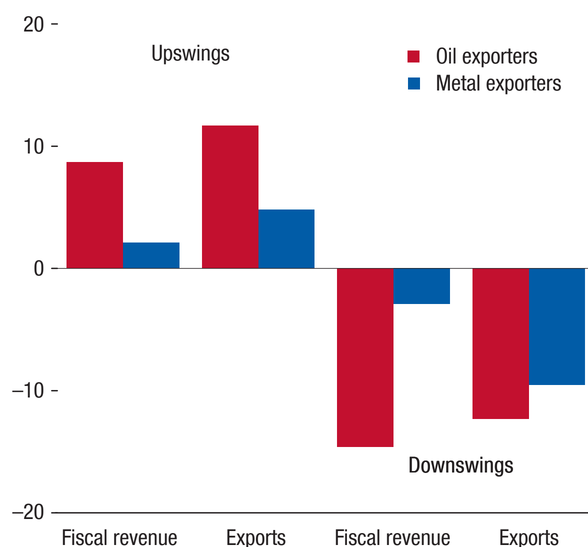
Figure 1.3. A Poor Record of Forecasting Oil Prices
(Crude oil, U.S. dollars a barrel)



Sources: IMF staff estimates and market projections. 2015 represents an estimate based on actual data for part of the year and future contracts.
Note: The solid line represents actual crude oil average prices for the year. The dashed lines are based on market projections for prices (futures contracts).

Moreover, commodity price shocks appear to have had damaging effects on long-term growth. Although some countries have been able to sail successfully through the turbulence of commodity price cycles and achieve sustainable growth (including Botswana, Chile, and Norway), many have not. For example, after the boom-bust in the late 1970s, many resource-rich countries endured a long period of low or negative growth, and in some cases, per capita GDP in the late 1990s was at or below 1970 levels (Figure 1.5). Economic growth accelerated in many resource-rich countries during the 2000s, boosted by the large commodity boom, but it is expected to slow down significantly in the years ahead (October 2015 *World Economic Outlook*). Analysis of the experience of 64 resource-rich countries during commodity boom-bust periods suggests that although countries that maintained a pegged exchange rate and did not accumulate fiscal buffers grew the fastest during boom periods, they also suffered the most after the price bust (Adler and Sosa 2011).

Figure 1.4. Impact of Commodity Price Swings on Fiscal Revenues and Exports
(Percent of GDP, average)



Source: IMF staff estimates.
Note: For upswings (downswings), the impact is estimated by multiplying fiscal revenue and exports as a share of GDP during the most recent trough (peak) by the average percentage change of commodity prices from trough to peak (peak to trough). Based on Cashin, McDermott, and Scott (2002), the following parameters are used to date commodity cycles for the period 1957–2015: minimum duration of each phase = 12 months; minimum duration of a complete cycle = 24 months.

Fiscal Policy during Booms and Busts: A Difficult Balancing Act

Fiscal policymakers in resource-rich countries have often tried to meet two challenging, and at times conflicting, objectives. One is to reduce the dependence of public expenditures on unpredictable fluctuations in commodity prices, so as to avoid overheating the economy during price upswings or making large cuts in expenditures during downswings. The other is to leverage resource revenue to support long-term growth, including by scaling up public investment. This section examines how resource-rich countries have fared with respect to these two objectives.

Procyclical Fiscal Policy during Revenue Windfalls

Stabilization of economic activity is particularly challenging in resource-rich countries given the high uncertainty around commodity price shocks. As discussed in the April 2015 *Fiscal Monitor*, fiscal policies that reduce output volatility could have the added benefit of increasing long-term growth. The high volatility of fiscal revenues in resource-rich economies implies that the role of fiscal policy in achieving these objectives is even more critical, but also more difficult.

There are two approaches to gauging the success of fiscal policymakers in acting in a manner that dampens the effects of cyclical shocks. One looks at the extent to which fiscal policy is reacting to the business cycle in the nonresource sector. The other approach measures the responsiveness of the rate of growth of public expenditures to year-to-year changes in commodity prices (Céspedes and Velasco 2014). A key policy challenge is to limit the expenditure response to the year-to-year commodity prices to protect macroeconomic stability (Arezki, Hamilton, and Kazimov 2011).

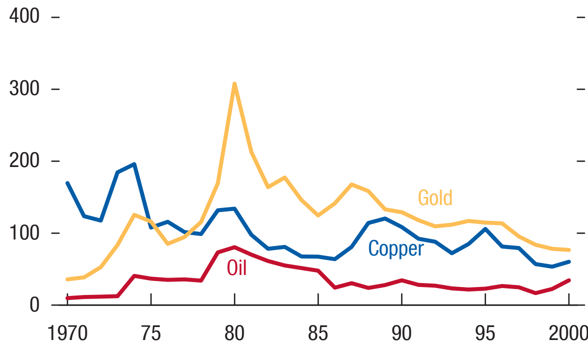
The evidence suggests that, on average, fiscal policies have not been stabilizing. In particular, government spending growth has been positively correlated with commodity prices; that is, it has been procyclical—increasing when commodity prices rise and decreasing when prices fall.[5] To some extent this is not surprising given the large shocks that have occurred to commodity prices, the uncertainty regarding their persistence, and the impact on the balance sheet of the govern-

[5] By focusing on government spending growth and commodity price changes, the analysis abstracts from positive long-run comovement in the level of both variables and focuses on their cyclical association. The results are robust to using an error-correction model that accounts for a long-term comovement between commodity prices and government spending.

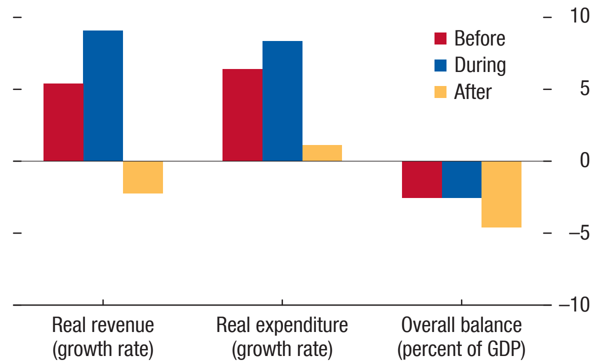
Figure 1.5. Impact of the 1970s–80s Boom-Bust on Growth

The 1970s–80s boom-bust had a long-lasting negative impact on growth for commodity-exporting countries. Oil producers and metal exporters struggled to grow after the 1970s boom.

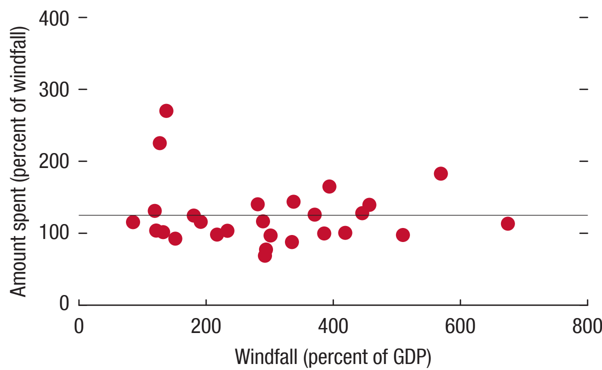
1. Commodity Prices
(U.S. dollars, deflated by U.S. GDP deflator)



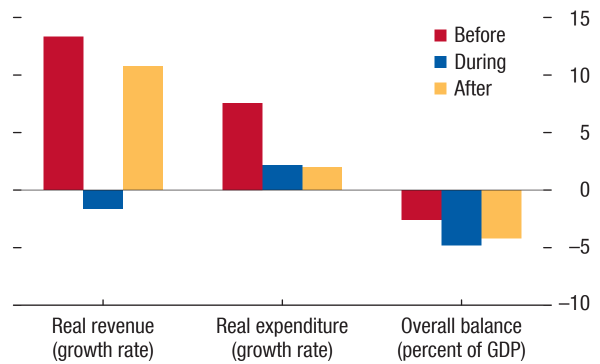
2. Before, during, and after the 1973–80 Boom
(Percent)



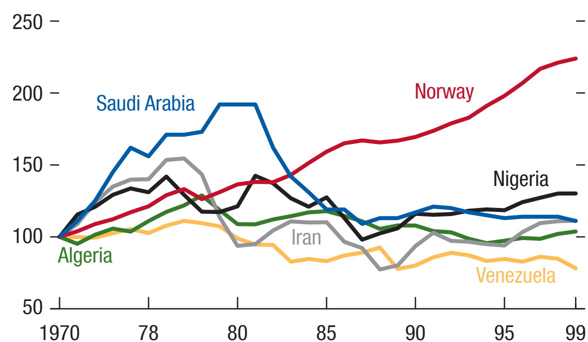
3. Windfall Spent, 1973–80 Boom



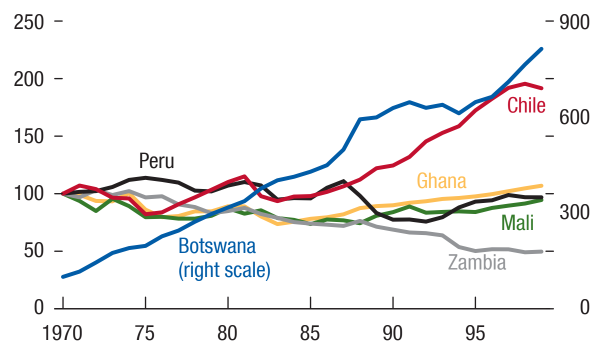
4. Before, during, and after the 1982–88 Bust
(Percent)



5. Oil Producers: GDP, 1970–99
(Real GDP per capita, 1970 = 100)



6. Metal Exporters: GDP, 1970–99
(Real GDP per capita, 1970 = 100)



Source: IMF staff estimates.
Note: For panel 2, before = 1971–72, during = 1973–80, after = 1982–83; for panel 4, before = 1980–81, during = 1982–88, after = 1989–90.

ment.[6] However, a strong response of expenditures to prices implies that fiscal policy has exacerbated rather than mitigated the effect of commodity price volatility on the economy. On average, a 10 percent increase in commodity prices has led to a 1.2 percentage point increase in the growth of real expenditures (the increase is even higher for public investment) among resource-rich economies.[7] Moreover, the response of government spending has been asymmetric. Procyclicality has been significant in commodity price upturns but less so in downturns (Figure 1.6), which suggests that there has been a strong tendency for countries to spend the revenue windfalls during good times.[8] Procyclicality has tended to be higher among countries with larger commodity sectors, whereas advanced economies (Australia, Canada, Norway) have been successful in delinking expenditures from commodity prices.

The tendency toward procyclicality is also confirmed when the relationship between the nonresource fiscal balance (NRB) and the domestic (nonresource) economy is examined (Figure 1.7). In particular, the cyclically adjusted NRB (that is, the overall fiscal balance excluding revenues from the resource sector, adjusted for the business cycle) provides a measure of the underlying fiscal position. The analysis finds that governments tended to loosen the fiscal stance when the domestic nonresource economy strengthened, and tighten the fiscal stance when the economy weakened. Specifically, a 1 percentage point improvement in the output gap of the nonresource sector (that is, the difference between actual output and output at full employment) led to a 1 percentage point deterioration of the cyclically adjusted NRB as a share of potential nonresource GDP.[9] Moreover, commodity exporters tend to be more procyclical than other emerging economies. Notably, the April 2015 *Fiscal Monitor* found that emerging market and developing economies also tend to act procyclically in expansions (albeit with a coefficient of about 0.5, half the size of the figure found here for commodity exporters).

As shown in the literature, by exacerbating output volatility, procyclical fiscal policy could dampen

[6] A positive and persistent shock to prices will allow countries to sustain increases in public spending. Likewise, during persistent price downswings, most countries will adjust downward spending.

[7] See background notes for methodology http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

[8] This difference is statistically significant.

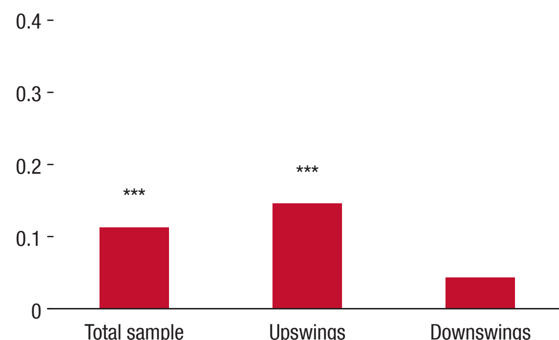
[9] Given the high uncertainty with respect to measuring the output gap in resource-rich countries, we also run regressions using output growth rates as a robustness check. The results are qualitatively similar (as shown in Figure 1.7).

Figure 1.6. Public Expenditure Procyclicality across Countries

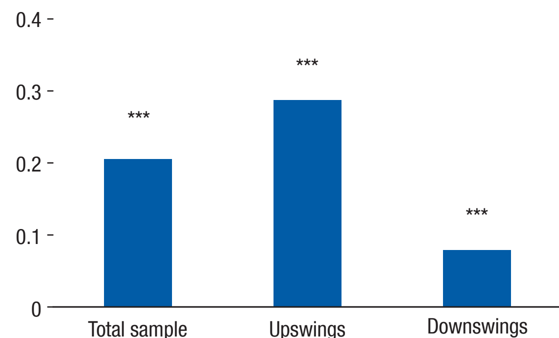
(Procyclicality coefficient)

Total government expenditure growth is positively correlated with changes in commodity prices (procyclical), with capital expenditure even more procyclical. The procyclicality of public spending increases with commodity dependence.

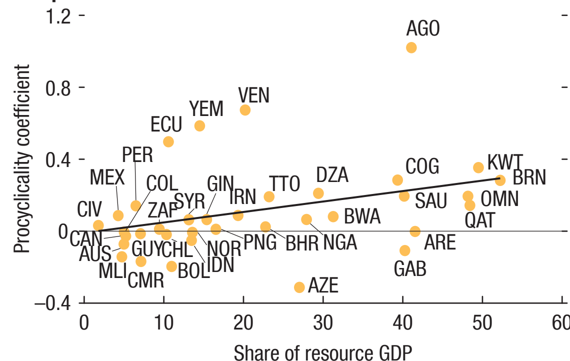
1. Procyclicality of Total Spending



2. Procyclicality of Capital Spending



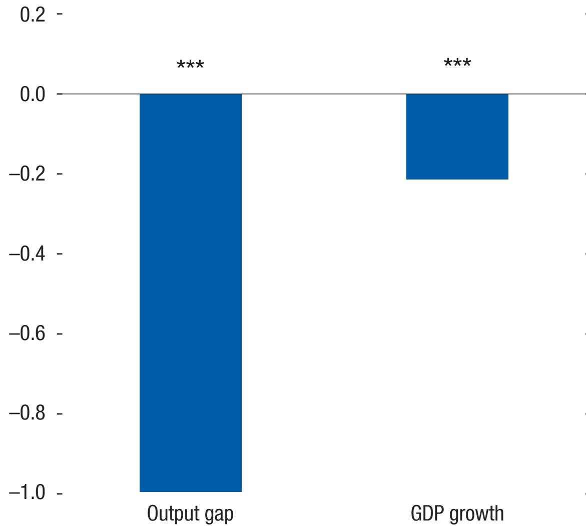
3. Procyclicality of Total Spending in Relation to Commodity Dependence



Sources: United Nations; and IMF staff estimates.
Note: Data labels in the figure use International Organization for Standardization (ISO) country codes. Sample period is 1972–2014, but length varies across countries; minimum sample length is set to 10 observations for each country. Panels 1 and 2 show coefficients from panel regressions of real expenditure growth on commodity price changes. Panel 3 shows coefficients from country-specific regressions of real expenditure growth rates on commodity price changes. Positive numbers indicate procyclicality (see background notes for details http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf). Share of resource GDP is calculated using annual averages for the whole sample period.
*** $p < 0.01$.

Figure 1.7. Cyclically Adjusted Nonresource Balance and Procyclicality
(Procyclicality coefficient)

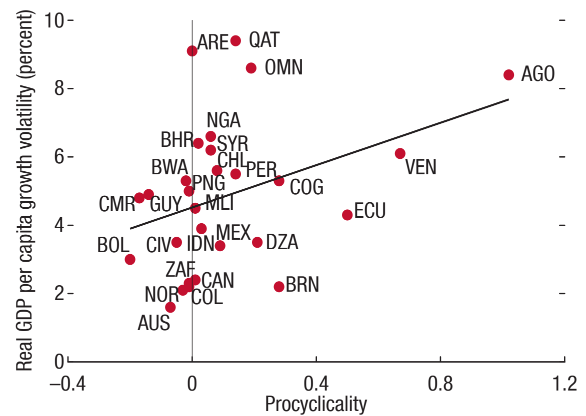
The tendency toward fiscal procyclicality is confirmed by the relationship between the cyclically adjusted nonresource fiscal balance and the output gap.



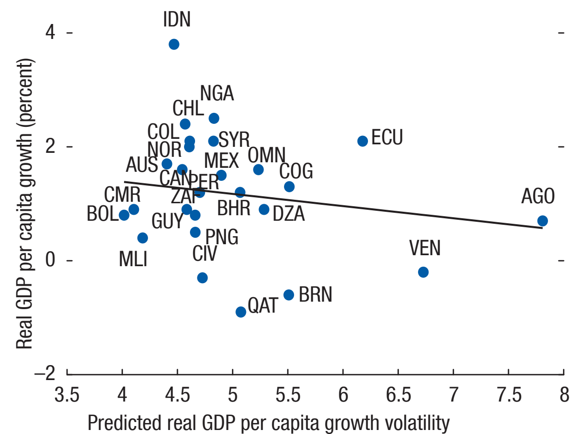
Source: IMF staff estimates.
Note: The sample period is 1990–2014. The bars show the estimated impact of a 1 percent increase in the nonresource output gap and nonresource GDP on the cyclically adjusted nonresource balance. Estimations are performed using panel time and country fixed effects, and robust error estimator.
*** $p < 0.01$.

Figure 1.8. Procyclicality and Growth

1. Procyclicality and Output Volatility



2. Procyclicality and Output Growth



Source: IMF staff estimates.
Note: Data labels in the figure use International Organization for Standardization (ISO) country codes. Countries with at least 30 real GDP per capita observations are reported. Procyclicality is measured using country-specific regressions of real expenditure growth rates on commodity price changes. Predicted real GDP per capita growth volatilit is obtained from a linear regression on procyclicality. The sample period is 1972–2014, but length varies across countries.

economic growth. The April 2015 *Fiscal Monitor* finds that an increase in fiscal stabilization (equivalent to 1 standard deviation of the sample) would boost long-run annual growth rates of developing economies by 0.1 percentage points.[10] Van der Ploeg and Poelhekke (2008) also show that volatility hurts growth among commodity exporters, with the former partially explained by volatile government expenditures.[11] These findings suggest that the higher fiscal procyclicality in resource-rich economies could partially explain the disappointing long-term growth performance of these countries. Figure 1.8 illustrates the relationship between procyclicality and economic growth for a sample of commodity exporters.

There are several reasons why fiscal policies have been procyclical in the face of unexpected commodity price swings. In part this reflects the persistence of shocks exacerbated by procyclical amplification by financial markets (Gavin and Perotti 1997; Riascos and Vegh 2003). If there is overoptimism, countries may react to price windfalls by excessively increasing expenditures, requiring large adjustments once price dynamics disappoint, resulting in procyclical policies. Moreover, countries with weak political institutions are more prone to rent-seeking in the face of large commodity-related windfalls, which in turn can result in rapid and wasteful spending (Alesina, Campante, and Tabellini 2008; Tornell and Lane 1999).

[10] Fatas and Mihov (2003) show that the volatility in expenditures (a proxy for discretionary policy) hurts economic growth. McManus and Gulcin Ozkan (2012) also find a negative impact of procyclical policies on volatility and economic growth.

[11] The procyclical indicator relative to commodity prices has a high correlation with expenditure volatility.

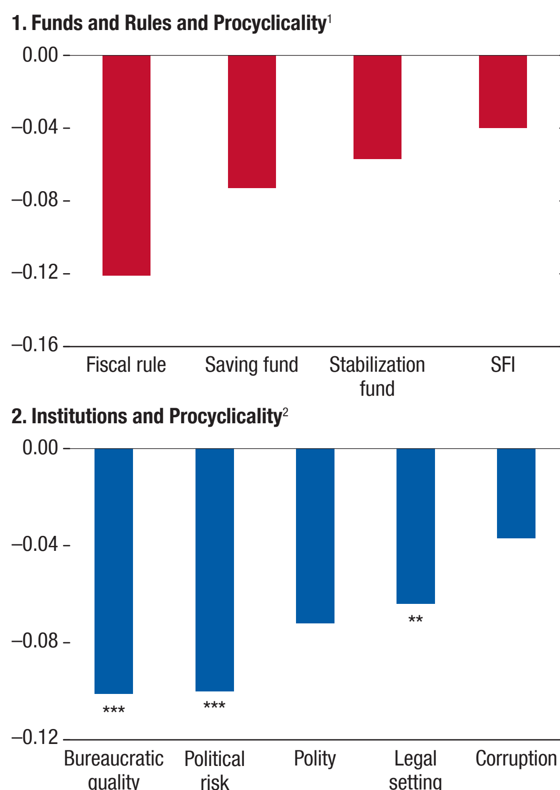
One way to shield the budget from this procyclical tendency is through the use of resource funds and fiscal rules. Resource funds are typically used to save for future generations, but can also serve a stabilization objective, with an allowance to release funds when the economy (or the budget) is faced with an adverse shock. Fiscal rules are often established in resource-rich economies to act as a constraint on expenditures, debt, or deficits (see Annex 1.2 for country examples) or to regulate the flows of revenues to and from resource funds (for example, Equatorial Guinea, Iran, and Venezuela).

The experience with resource funds and fiscal rules has been mixed. There have been notable successes (Botswana, Chile, Norway),[12] but the cross-country evidence suggests that these approaches have not reduced procyclicality in a statistically significant way (Figure 1.9, panel 1). The reasons for this lack of success are varied—for example, it may reflect weak design, but it could also reflect the fact that rules were not followed—but specific country experiences can be instructive. In Timor-Leste, the fiscal rule was breached because policymakers preferred to place a greater priority on scaling up public investment. Mongolia's efficacy of the fiscal rule was undermined by off-budget spending and overly optimistic revenue forecasts. Nigeria's oil-price-based fiscal rule was undermined by weak enforcement. In a number of cases (Chad, Ecuador, Papua New Guinea) resource funds were abandoned partly because they were deemed to be incompatible with budget needs.[13] In some cases (Azerbaijan, Kazakhstan, Libya) the ability to use these funds to finance extra-budgetary spending risks leading to a loss of control over expenditures and a weakening of the budget process. Some countries (Ghana, Trinidad and Tobago) accumulate financial assets in funds while having to borrow extensively to finance deficits.

There is empirical support, however, that "institutional quality" helps limit the procyclical bias in spending (Figure 1.9, panel 2). These results are similar to those found in earlier studies (Fasano 2000; Ossowski and others 2008).[14] This evidence suggests that the lack of success of rules and funds in some countries may owe more to the underlying weaknesses of their institutional frameworks than to the rules themselves. This body of evidence underscores the importance of improving the quality of institutions, which tends

Figure 1.9. Positive Impact of Good Institutions on Fiscal Policy
(Procyclicality coefficient)

The use of resource funds and fiscal rules has had varying levels of success in reducing the procyclicality of government expenditures to commodity prices, but there is stronger empirical evidence that better institutions do help limit procyclicality.



Source: IMF staff estimates.
Note: Sample period is 1972–2014. Procyclicality is measured using regressions of real expenditure growth rates on commodity price changes
[1] Reported numbers show the change in procyclicality following the introduction of a fiscal rule, saving fund, or stabilization fund. SFI = Special fiscal institutions (includes both fiscal rules and resource funds).
[2] Reported numbers show the impact of a 1 standard deviation increase in the institutional quality index on procyclicality.
*** $p < 0.01$; ** $p < 0.05$.

to be weaker in resource-rich countries than in other countries (Figure 1.10).

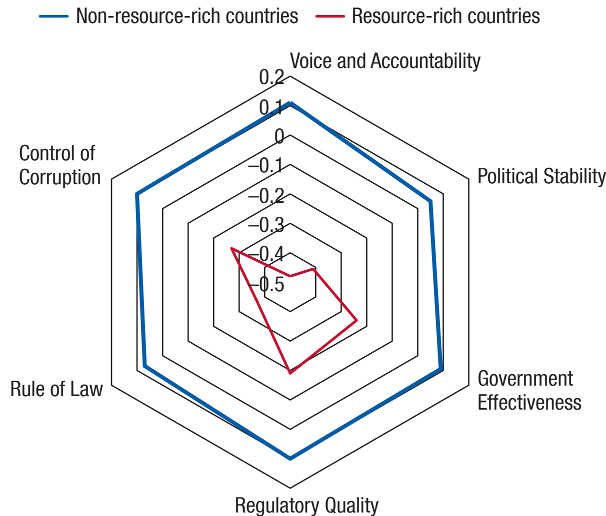
How Have Commodity Price Windfalls Been Used?

Commodity exporters benefited from a very large revenue windfall from 2000 to 2008, when many countries experienced cumulative windfalls of about 230 percent of 2000 GDP (Figure 1.11). On average, resource-rich countries spent about two-thirds of this windfall—a smaller share than during the large boom in the 1970s (see Figure 1.5, Panel 3),

[12] See Annex 1.2 and Ossowski and others (2008).
[13] Papua New Guinea is in the process of creating a new fund.
[14] See background notes for details http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

Figure 1.10. Institutional Quality in Resource-Rich Countries

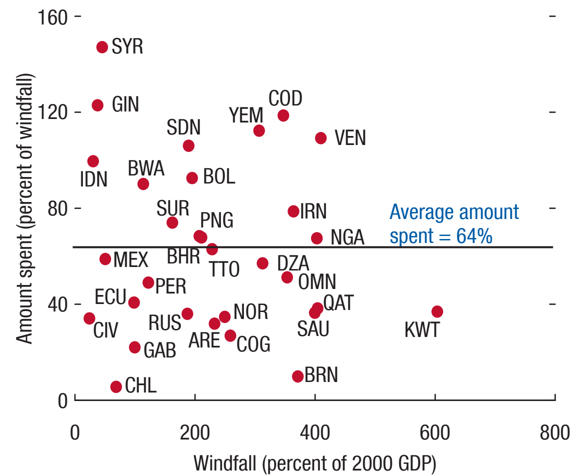
Resource-rich countries tend to have lower institutional quality relative to other countries.



Sources: Worldwide Governance Indicators (World Bank) for 1996–2014; and IMF staff calculations.
Note: The figure shows the average levels of institutional quality for resource-rich and non-resource-rich countries with the same level of GDP per capita (sample average for resource-rich countries).

Figure 1.11. Spending during the 2000–08 Boom

Commodity exporters spent a significant share of the 2000–08 large resource windfall.



Source: IMF staff estimates.
Note: Data labels in the figure use International Organization for Standardization (ISO) country codes. Windfall is the cumulative increase in commodity revenues between 2000 and 2008; amount spent is the share of the windfall that was spent.

but amounting to a boost to expenditures equivalent to 150 percent of 2000 GDP in just eight years. This posed the difficult challenge of ensuring the quality of spending, and of managing the procyclical consequences for the economy as a whole (such as avoiding high inflation).

A significant proportion of the spending during the most recent commodity price boom was on capital outlays. Public investment grew at an average of more than 15 percent a year (in real terms) during the 2000–08 period. This increase was especially pronounced among low-income countries, where public capital is relatively scarce (Figure 1.12).

What effect has the scaling up of public investment had on growth among low- and middle-income commodity-exporting countries? To provide an illustration, 12 episodes of significant booms in public investment during the 1970–2009 period were identified, that is, cases in which public investment rose by at least 5 percent of GDP. In only a few cases was economic growth in the subsequent five years higher than in the period before the public investment boom (Figure 1.13).[15]

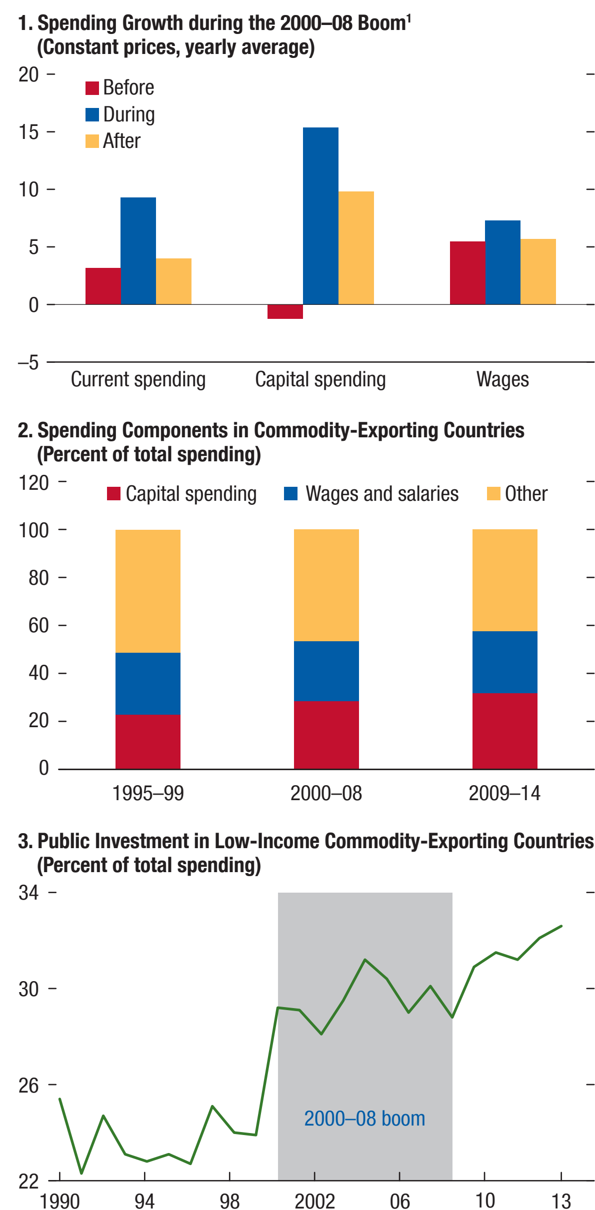
This suggests that although public investment can have significant growth dividends, a successful scaling up requires attention to several factors:

- *Macroeconomic constraints and volatility.* Scaling up of public investment needs to be implemented at a pace that does not crowd out private investment, takes into account supply bottlenecks, and avoids undermining the impact on growth (Sturm, Gurtner, and Alegre 2009). It is also important to build up financial buffers that can help insulate spending plans from the volatility of resource revenues and avoid costly "stop-go" cycles in public investment.
- *Microeconomic constraints.* The pace of public investment also needs to be consistent with institutional capacity to ensure that it does not lead to poor project selection or inefficient implementation. Indeed, Gupta and others (2014) show that the increase in spending during the 2000–08 boom resulted in a much smaller increase in the "efficiency-adjusted" capital stock (see also Annexes 1.3 and 1.4 for country examples). IMF (2015) discusses

[15] The analysis compares the post–scaling up period with the previous period to assess whether the investment had a sustained impact on growth (during scaling up growth will tend to be higher due to the boost to aggregate demand). The growth impact may be affected by other factors not considered in the analysis. Gelb and Associates (1988) and Sachs and Warner (1999) find similar results.

Figure 1.12. Current and Capital Spending during the 2000–08 Boom

Countries took advantage of the windfall to accelerate both current and capital spending.



Source: IMF staff estimates.
[1]Before = 1998–99, during = 2000–08, after = 2009–10.

the various areas to improve inefficiencies in public investment management processes.[16]

- *Political economy constraints.* Especially if institutional frameworks are weak, accountability is poor, and rent-seeking is prevalent, there is a risk that funds will be used for the benefit of special interests, rather than for the development of the economy.

Current spending also expanded at a robust pace during the 2000–08 period, which may not be sustainable in the future. Current expenditures grew by almost 10 percent yearly (in real terms), while public wage bills expanded by 7¼ percent yearly. Encouragingly, these increases reflected higher outlays on education (Chad, Ghana, Iran, Mexico) and health (Democratic Republic of the Congo, Equatorial Guinea, Sudan), which have led to improvements in social indicators—although progress has been limited in some other countries (Figure 1.14). However, as with spending on public capital, the challenge is to ensure that scaling up in these areas also avoids overheating the economy in the shorter term, or leads to spending levels that cannot be sustained when commodity prices decline.

Finally, many oil exporters directed some of their revenue windfall to fuel subsidies. In many of these countries, and particularly in the Middle East, the retail price of fuel adjusts only slowly, if at all, to movements in international prices (Figure 1.15). The pretax fuel subsidies typically are not reflected in the budgets, but are sizable (amounting to 10–50 percent of budgetary expenses).[17] In addition to the revenues foregone, these subsidies can lead to domestic overconsumption of fuel products and reduce oil exports—a tendency observed in oil exporters (Algeria, Oman, Saudi Arabia). They also have important health and environmental costs. But progress is being made. Many countries have already initiated energy subsidy reforms (Angola, Cameroon, Iran, Kuwait, Qatar, United Arab Emirates).

Long-Term Fiscal Management under Uncertainty

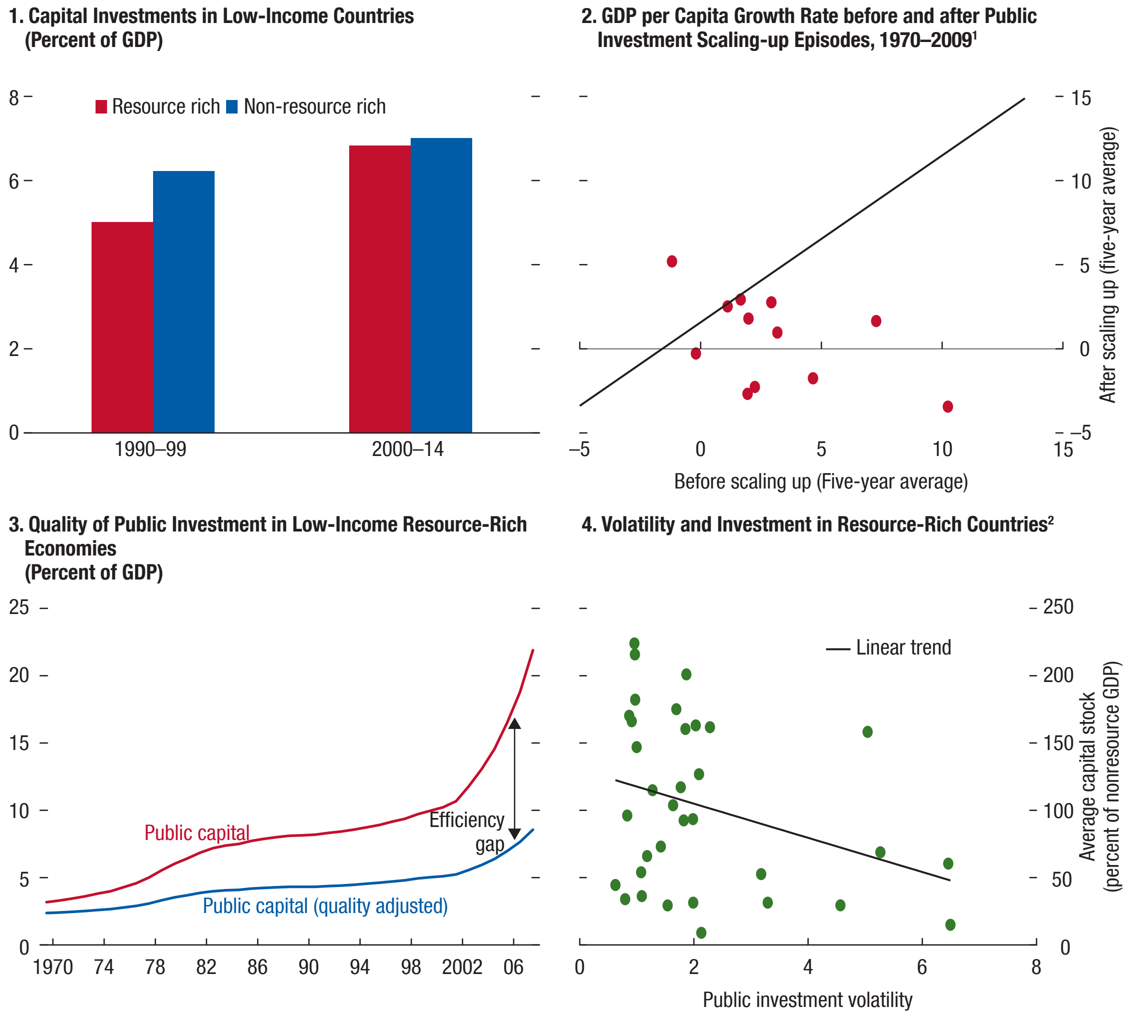
A central fiscal challenge facing resource-rich countries is to reconcile long-term objectives with the

[16] In addition, the October 2014 *World Economic Outlook* illustrated the important growth payoff of public infrastructure investment, but also noted that payoffs were highest where project selection processes direct spending to high-return investments and when project execution capacity is high.

[17] These pretax subsidies are estimated as the difference between domestic and international prices.

Figure 1.13. Impact of Public Capital Spending Scaling up on Growth

In some cases, the scaling up of capital spending in response to the commodity windfalls did not deliver significant growth dividends, in part reflecting low efficiency and high volatility of public investment in resource-rich countries.

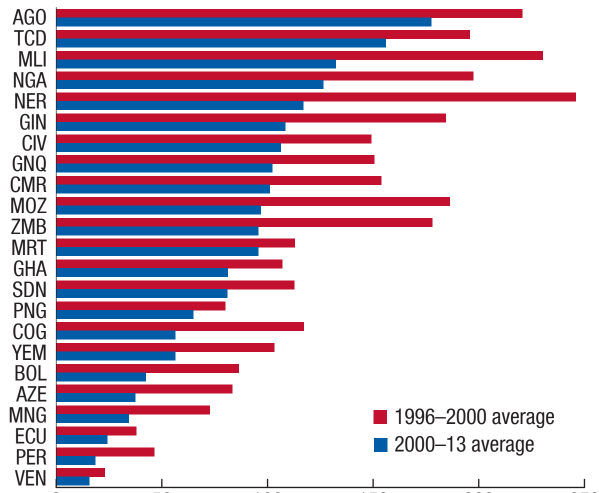


Sources: Gupta and others (2014); and IMF staff calculations.
Note: All capital investment refers to public capital investment.
[1] Scaling-up episodes were identified as five consecutive years of investment increases, for a total increase of at least 5 percent of GDP over those five years.
[2] The horizontal axis refers to the coefficient of variation of the volatility of the real growth rate of public investment.

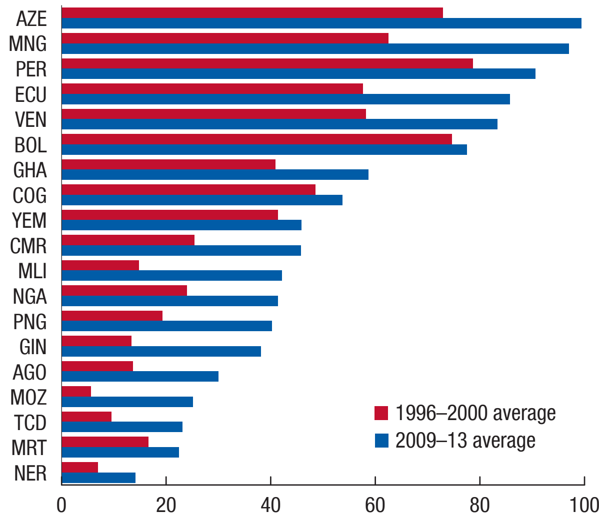
Figure 1.14. Health and Education during the 2000–08 Commodity Boom

Health and education improved after the recent boom, partly as a result of the rise in public spending.

1. Infant Mortality Rate before and after the 2000–08 Boom
(Deaths before age 5 per 1,000 live births)



2. Secondary School Enrollment Rate before and after the 2000–08 Boom
(Percent of total secondary-age population)

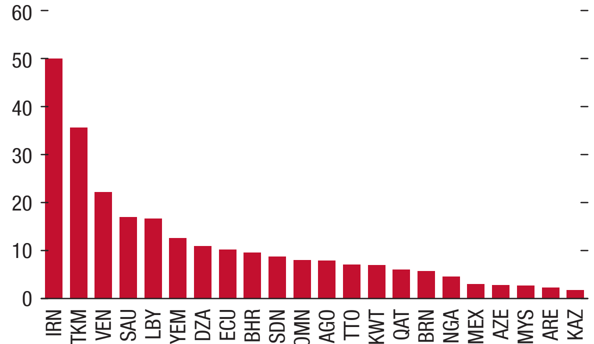


Sources: Global Health Observatory, World Health Organization; and the World Bank.
Note: Data labels in the figure use International Organization for Standardization (ISO) country codes.

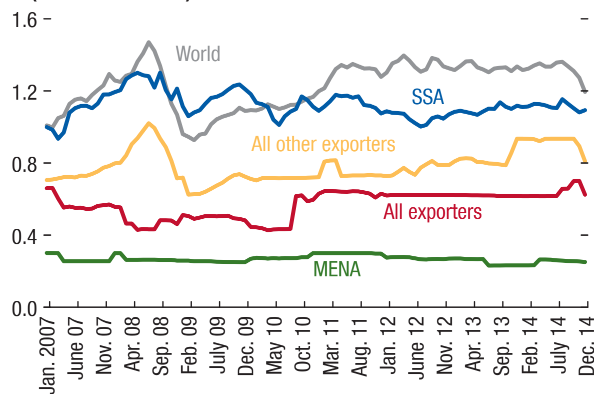
Figure 1.15. Fuel Subsidies in Oil-Exporting Countries

Fuel subsidies are large and fuel prices are low in oil-exporting countries.

1. Pretax Fuel Subsidies
(Average 2011–14, percent of total expenditure)



2. Domestic Retail Gasoline Prices
(U.S. dollars a liter)



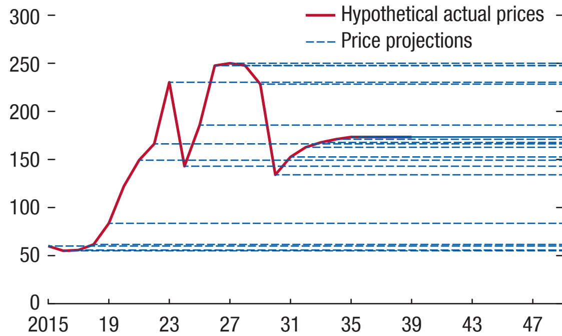
Source: IMF staff estimates.
Note: MENA = Middle East and North Africa; SSA = Sub-Saharan Africa. Data labels in the figure use International Organization for Standardization (ISO) country codes. All other exporters = all exporters except for SSA and MENA.

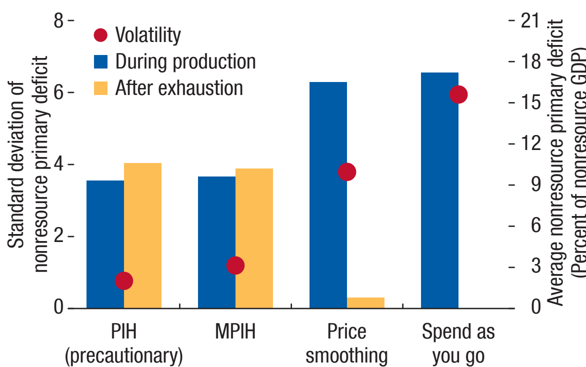
need to manage the high volatility and uncertainty surrounding resource revenue. Policymakers usually face three key choices: how to leverage this wealth to promote economic development; how to allocate the nonrenewable natural resource wealth across generations; and how to shield the economy from the large volatility associated with commodity prices. Developing economies tend to prioritize the promotion of economic development whereas advanced economies tend to focus on the intergenerational sharing of the natural resources. However, conceptual frameworks for the design of fiscal policy in resource-rich countries have paid less attention to the issue of how to manage the long-term uncertainty regarding commodity prices. This remains a key challenge, as discussed.

Designing an appropriate long-term strategy to manage natural resources is a complex task. Governments need to decide how much of the resource wealth to consume at any given year and how much to save. These savings can be used to accumulate financial assets or other assets (such as public infrastructure, or

Figure 1.16. Simulation of the Impact of Various Strategies to Manage Resource Wealth under Uncertainty

Different strategies can have a large impact on the volatility of public spending and the fiscal stance.





Source: IMF staff estimates and calculations.
Note: PIH = permanent income hypothesis, MPIH = modified version of the PIH. The simulated price path is similar to price developments since 2000. The simulations assume that shocks are highly persistent (coefficient equal to 1). Production is assumed to be fairly stable and reserves are estimated to last 50 years. The “price smoothing rule” assumes that spending is linked to resource revenues evaluated at a reference price (the average of the previous three years of prices, the current price, and the three-year forward projections). The coefficient of risk aversion used was set at 6 (usually the literature uses between 4 and 8).

human capital, or both), with the allocation depending on the returns of the different assets. Indeed, for developing economies, where infrastructure may be scarce and where access to capital markets is limited, the growth dividends may be highest from using a larger share of the savings to scale up investment. These decisions are complicated because of the need to project resource prices and reserves of commodities over the very long run. There is also uncertainty regarding the returns on the different types of investments. Box 1.1 discusses some of the long-term fiscal benchmarks that have been proposed for resource-rich countries.

The experience of recent years has driven home the need for commodity exporters to also take into greater account the considerable uncertainty that surrounds commodity revenues when establishing their fiscal goals.[18] In particular, because commodity prices are highly volatile and shocks can be very persistent, it is prudent to accumulate long-lasting precautionary savings. The size of the buffers will depend on several factors, including the size and persistence of shocks and the cost of insurance.[19] The approaches typically used (Box 1.1) do not envisage precautionary balances to insure against long-term uncertainty. Recent studies discuss in greater depth the need for significant levels of stabilization savings (for example, van der Ploeg 2013).[20]

The implications for both fiscal savings and stabilization policies of taking account of long-term uncertainty can be illustrated by simulating the experience of a typical oil exporter (Figure 1.16). For these illustrations we use the modified version of the permanent income hypothesis (PIH) approach and a precautionary version of the PIH (Box 1.1 describes these approaches).[21]

- The “*spend as you go*” *approach,* whereby resource revenues are fully spent. This approach results in more spending (higher nonresource fiscal deficits) upfront, a more volatile and procyclical nonresource fiscal balance, and no financial buffers.
- The *price-smoothing rule,* whereby only a share of revenue consistent with a reference price is spent (implicitly targeting a balanced budget over the medium term). This approach still involves significant volatility but would result in some degree of savings during a windfall.
- The *modified PIH approach (MPIH),* which assumes a temporary scaling up of public investment, results in significantly higher levels of financial savings and considerably more stable spending patterns.

[18] Other sources of uncertainty include fluctuations in production, costs of production, and the return on the physical investment that has been scaled up.

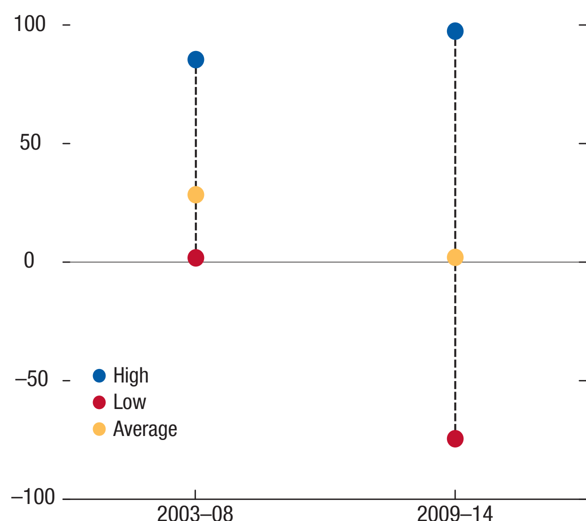
[19] See background notes http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

[20] Cherif and Hasanov (2013) also argue that there is a strong case for precautionary savings for oil exporters. They estimate that the precautionary savings rate is sizable (about 30 percent of income) for oil exporters, whereas investment is relatively low, given high (persistent) shocks to oil revenues and the low productivity of the tradable sector.

[21] See background notes with a simple illustrative model http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

Figure 1.17. Saving Rates during Boom Years
(Share of commodity revenues)

Some resource-rich countries increased their net financial assets (or reduced net debt) during the 2003–08 resource revenue windfall.



Source: IMF staff estimates.
Note: Saving rates are calculated as the change in net assets as a percentage of commodity revenue during the 2003–08 and 2009–14 periods (used the longest sample available for each country within the specified periods). Countries included in the sample are Angola, Algeria, Azerbaijan, Chile, Equatorial Guinea, Iran, Kazakhstan, Kuwait, Libya, Nigeria, Norway, Peru, Qatar, Saudi Arabia, Trinidad and Tobago, United Arab Emirates.

- The *precautionary version of the PIH approach (PPIH)* results in even higher levels of savings and even less volatile spending than the previous approaches. The PPIH is derived in the same manner as the PIH benchmark, but takes into account the uncertainty that surrounds commodity revenues and the preference that policymakers have for stability. Simulations of this benchmark result in a somewhat higher level of financial savings in the early years, leaving fiscal policy better prepared to manage the volatility of commodity prices.[22]

These illustrative simulations suggest that building precautionary balances beyond simple price smoothing is likely to be desirable. However, the approaches based on the PIH models, which envisage large long-term savings, are likely not affordable for many countries. In the next section, we discuss an alternative operational benchmark for precautionary savings to shield spending plans from the volatility.

The evidence shows that many countries did save considerably during the 2003–08 revenue windfall, but much less so in the subsequent years. As the precautionary approach suggests, many countries did accumulate buffers (net financial assets) during the height of the latest revenue windfall (2003–08). Among those that saved part of the windfall, the savings rate averaged 30 percent of the resource revenue (Figure 1.17). Some countries saved more than half (for example, Algeria, Chile, United Arab Emirates, Norway). However, there was no improvement in financial buffers on average in the more volatile 2009–14 period—when many countries experienced a large deceleration in economic growth relative to the 2003–08 period. Initially, as an appropriate response to the sharp fall in commodity revenue in 2009, some countries (for example, Angola, Chile, Iran, Nigeria) reduced significantly their buffers (or increased their debt levels). However, some are now more vulnerable to the latest commodity price shock because buffers were not subsequently replenished.

A Risk-Based, Comprehensive Approach to Fiscal Policy

The preceding analysis illustrates the potential benefits for resource-rich countries of adopting fiscal frameworks that take better account of the large uncertainty they face. Although fiscal policy will need to reflect country-specific circumstances to be most effective, fiscal frameworks need to be comprehensive. In particular, they should encompass four priorities: (1) setting appropriate levels of stabilization savings, (2) strengthening the broad institutional framework, (3) establishing more effective spending policies, and (4) making better use of taxation to reduce revenue volatility.

Fiscal Indicators Need to Account for Commodity Price Volatility and Uncertainty

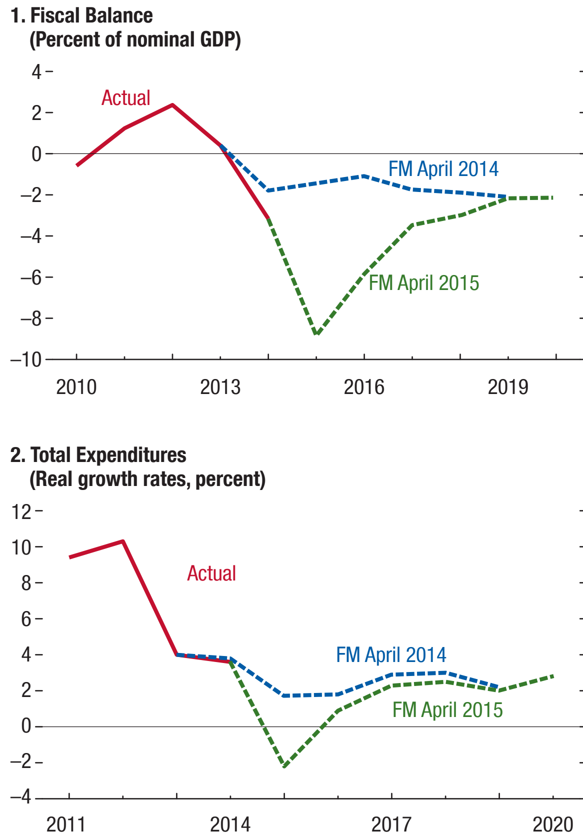
Fiscal policy in resource-rich countries can benefit from more systematically using fiscal indicators that take into account their countries' specific characteristics. Three indicators, in particular, can be helpful:

- *A long-term anchor*. This is particularly important for resource-rich countries, given that their resource base is exhaustible and subject to persistent shocks. A long-term benchmark can provide guidance as to the appropriate fiscal stance and would need to be tailored

[22] The level of precautionary savings will depend especially on the uncertainty regarding commodity prices. The simulations assume that shocks have a high degree of persistence (that is, they follow a random walk). The amount of precautionary savings also increases with the degree of volatility, the dependence on resource revenues, and the degree of risk aversion (see background notes http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.).

Figure 1.18. Impact of the Fall in Commodity Prices on Fiscal Balances in Resource-Rich Countries

The fall in commodity prices has led to a significant upward revision in projected fiscal deficits, especially among oil exporters, despite much lower public expenditures.



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

to account for country-specific circumstances. For example, some countries may prefer to direct resource revenues to infrastructure and social needs instead of accumulating financial assets for future generations.

- *A benchmark for stabilization savings*. Regardless of the approach chosen for the long-term sustainability benchmark, there should be an explicit consideration of uncertainty. Countries that set a benchmark based on the projection for commodity prices should add additional precautionary (stabilization) savings to protect spending plans from the shocks. Importantly, such a buffer would be countercyclical, especially during large commodity prices booms and busts. Box 1.2 illustrates a possible operational benchmark for stabilization buffers.
- *A short-term fiscal target.* This should be set informed by the long-term benchmark. Since the overall fiscal balance will be distorted by the volatility of commodity prices, the nonresource balance as a share of nonresource GDP (NRB) provides a better indicator of the underlying fiscal stance and the impact on aggregate demand. The NRB is especially used by oil exporters as a target (Norway, Timor-Leste).[23] Several countries, especially metal exporters, target the structural balance (SB), which corresponds to the overall balance excluding the cyclical component of resource revenues and the business cycle of the nonresource economy. The SB is especially useful when the economy is less dependent on the commodity cycle. Because this indicator can be heavily influenced by assumptions regarding the "structural" price (Villafuerte, Lopez-Murphy, and Ossowski 2010), Chile relies on an independent committee to assess the long-term reference price while other countries use price formulas. Countries should also monitor other indicators depending on country circumstances (Medas and Zakharova 2009).[24]

Fiscal policy will need to be set in coordination with other policy objectives. For example, in deciding on the level of the nonresource primary balance, it will be important to assess the absorption capacity of the economy. Fiscal policy will also need to be coordinated with monetary policy and will vary depending on the exchange rate regime, as flexible exchange rates provide some buffer to the budget.[25]

What is the relevance of these benchmarks in the current circumstances, which involve a large fall in commodity prices? Commodity prices have been on a downward trend over the past few years; however, the drop in oil prices in the second half of 2014 was particularly pronounced (almost 50 percent). This decline is expected to persist, and for many commodity exporters will mean the erosion of a sizable share of government revenues (Figure 1.18). The deficits in oil-exporting countries are expected to widen the most (amounting to a decline of 8 percent of GDP in 2015, on average) compared with metal exporters (a 2 percent decline).

[23] The NRB can also be used to correct for the nonresource economic cycle. For example, Norway's target is implemented flexibly over the cycle.

[24] These could include the overall balance and gross financing needs (for countries under tight financing conditions) and public gross debt.

[25] A flexible exchange rate will partially protect the budget from the first impact of movements in commodity prices. However, this implies that the domestic economy will receive the brunt of the shock—and thus tax revenues will eventually fall.

Most countries will need to adjust their budgets to the new commodity prices.

Fiscal consolidation should rely on measures that minimize the effects on growth. Those countries that had taken advantage of the earlier boom to accumulate sufficient financial buffers, or that have relatively ready access to capital markets, can adopt a more gradual fiscal adjustment. Others will have fewer options and may have to make more painful adjustments:

- Spending cuts should be as growth friendly as possible. Nevertheless, in some cases a scaling down of public investment may be unavoidable; it is already being implemented or planned in several countries (Angola, Gabon, Nigeria). Further efficiency gains in health, education, and the social sectors could be pursued to contain pressures on the budget, especially in Latin America (Celasun and others 2015).
- Many of the policies proposed in this *Fiscal Monitor* can also help. Energy pricing reforms can deliver significant gains to the budget. Improvements in public investment management systems will help increase the efficiency of investment and mitigate the negative impact of lower resources. Most countries also have space to increase nonresource taxation.

The Broad Institutional Framework Needs to Be Strengthened

The volatility that commodity exporters face make it exceptionally challenging for policymakers to adhere to medium- and long-term plans. Thus, strong fiscal institutions are especially critical. These need to translate long-term policy objectives for the use of large and volatile resource revenues into operational guidance for the annual budget, and to hold policymakers accountable for meeting these objectives. The key elements follow:

- *Medium-term fiscal framework.* This needs to provide a clear linkage between medium-term and long-term objectives, and a guide for annual budgets. A well-defined mechanism is also needed to reassess these objectives at regular intervals. Several countries (Angola, Sierra Leone, Tanzania, Timor-Leste) have been moving forward with reforms in these areas with support from the IMF (Box 1.3).
- *Enhanced management of fiscal risks.* As part of a more risk-based approach to fiscal policy, budget documents should include alternative macro-fiscal scenarios that present the fiscal implications of changes in key macroeconomic assumptions, including different price and production scenarios.[26] This analysis of fiscal risks should also consider the implications for precautionary savings and other policies to mitigate risks.
- *Transparency.* A commitment to transparency should be a core principle in all areas related to the management of resource revenues (Box 1.4). Transparency allows for informed understanding and scrutiny of resource revenues by lawmakers, external analysts, and the broader public. It also helps build a constituency for precautionary approaches to policymaking, ensures that resources are used in line with national objectives, and reduces the risk of their misuse.

Numerical fiscal rules or resource funds can help achieve policy objectives if they are supported by strong institutions, are well designed, are closely linked to broader policy objectives, and are backed by a strong political commitment. The examples of Chile and Norway show that these fiscal rules can both help discipline policies and provide the necessary flexibility to respond to shocks.

The preceding discussion argues that the design of fiscal rules for resource-rich economies should be based on fiscal anchors that take account of volatility and uncertainty (Box 1.5). Instead, some countries rely on price-smoothing rules that are not adequately linked to long-term fiscal benchmarks. These rules often define the amount of resource revenue that is made available to the budget based on an average of past prices or forecasts of future prices, thereby limiting the extent to which budgetary revenues respond to actual prices. They can dampen price-related procyclicality, but they are less effective than rules that take into consideration a risk-adjusted longer-term fiscal anchor. As such, price-smoothing rules should be used in conjunction with appropriate fiscal anchors and financial buffers.

The creation of a natural-resource-revenue fund can provide a useful mechanism for managing saved resource revenue flows. While keeping financial assets at the central banks (Algeria, Saudi Arabia) is an option, some countries have opted to establish resource funds to manage their assets. These funds can be used

[26] Countries could bring the two approaches together into stochastic projections of the key fiscal aggregates (see Gaspar, Hughes, and Jaramillo 2015).

to save for future generations and for short-term stabilization purposes. Cross-country experience with these, including in the context of IMF technical assistance, suggests that to be successful their design should be shaped by the following principles:

- They should support the fiscal policy framework. In particular, the accumulation of financial assets in funds should be derived from actual fiscal surpluses. Otherwise, accumulating revenue in funds without regard for budget needs can result in a simultaneous and undesirable buildup of expensive debt.[27] The budget should specify how much of the fund would be used each year in line with fiscal policy objectives. It should also specify how much will be retained in the fund for stabilization and saving purposes.
- The fund should be fully integrated into the budget process and should not have independent spending authority. All withdrawals should require legislative approval and flow through the government budget. Spending should be subject to the same scrutiny and accountability as any other public spending—at a minimum. Financing funds are preferable because they are fully linked to the budget and do not attempt to limit the availability of resources to the budget (Ossowski and others 2008).
- The operations of the fund should be transparent and there should be a strong governance structure (see Box 1.4).[28] Transparency requirements should include regular and frequent disclosure and reporting on the principles governing the fund, its inflows and outflows, the investment policy, and the allocation and return on assets.
- Fund assets should be prudently managed in line with a transparent investment strategy. Funds could be operated by the central bank or by a body created for asset management purposes, with a strategy set by the ministry of finance.[29]
- The assets of a resource fund should be part of the government's overall asset and liability position. This will allow for better asset-liability management of the public balance sheet.

An important asset-liability issue is the extent to which market-based insurance (such as hedging instruments) can be used to shield the budget from commodity price volatility. A detailed examination of this issue is beyond the scope of this chapter, but it is important to recognize that, despite their potential advantages, these instruments have in general not been used by resource-rich economies. One exception is Mexico, which uses options to hedge the value of roughly half its oil exports for one year ahead (Annex 1.2). The fact that other countries have shown less interest may reflect the lack of liquidity for contracts with long horizons, and the unwillingness of policymakers to place themselves in a position of having to justify the cost of hedges in years when the insurance is not used. Countries tend to prefer to self-insure by accumulating financial savings, which also has the advantage of helping to protect against production volatility.

Well-Designed Tax Systems Can Also Help Reduce Vulnerabilities

Resource-rich countries tend to collect relatively more revenue, relative to GDP, than do other countries, but less from the nonresource sector (Figure 1.19). This is not surprising since taxes on the resource sector can be less distortionary than most instruments applied to the nonresource sector.

Nonetheless, even many countries with large revenues from the resource sector can benefit from developing tax systems with more meaningful and well-designed tax collection from the nonresource sector. This is important for several reasons:

- It helps to better insulate spending plans from disruptive price and supply shocks to the resource sector (Figure 1.20).
- A more developed tax system can enhance equity by better matching contributions to government revenues to the ability to pay, or, in some cases, to

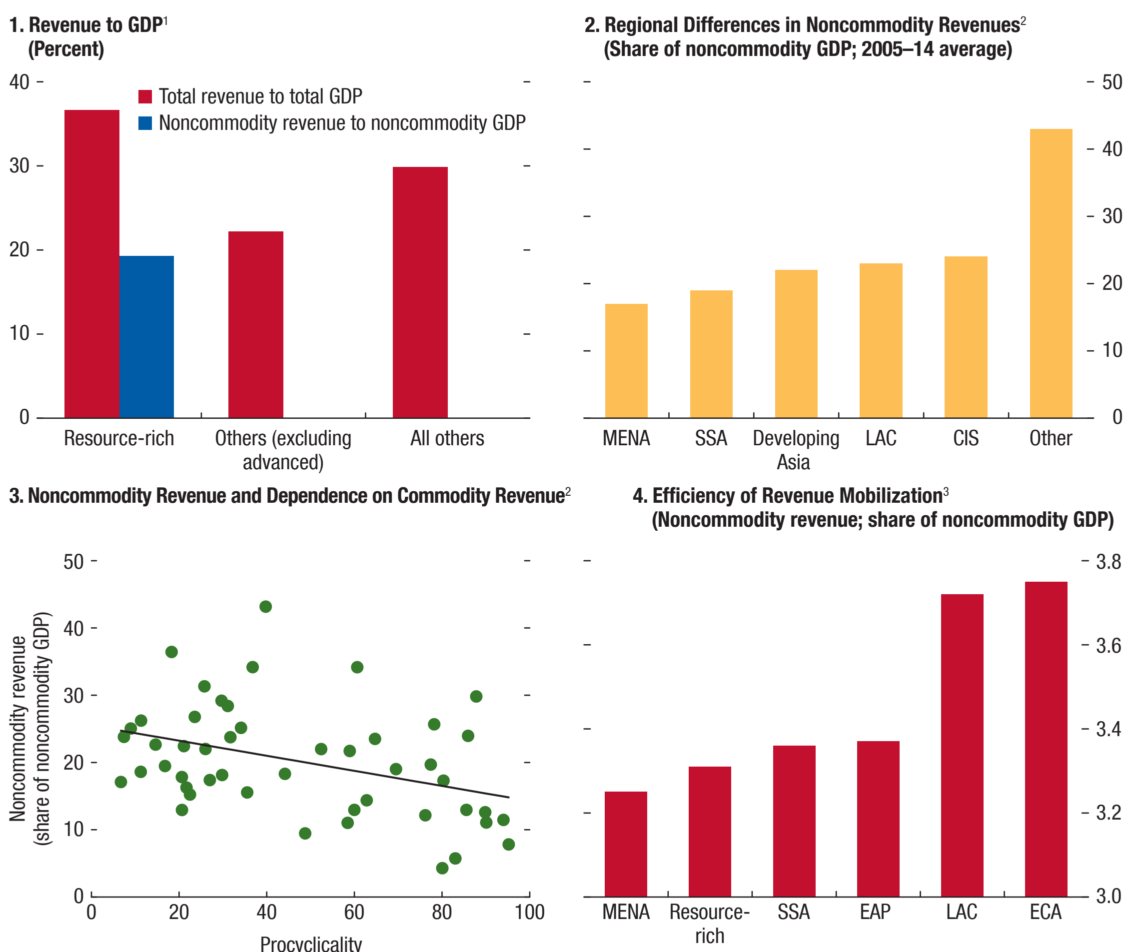
[27] Countries with a large nonconcessional debt might opt to pay down public debt rather than accumulate financial assets. Such a strategy can be justified not only on purely financial grounds (for example, borrowing rates are higher than lending rates) but also to reduce the country's interest premium and thereby foster private sector growth. By the same token, countries with low levels of debt may opt to issue debt to support the development of local financial markets or to provide a yield curve that serves as a reference for private sector development.

[28] There are several initiatives on improving transparency, including the International Forum of Sovereign Wealth Funds (see http://www.ifswf.org).

[29] For more details on investment strategies and operational management of these funds, see IMF 2014a. Best practice guidelines are also provided by the International Working Group of Sovereign Wealth Funds (2008) (the "Santiago Principles").

Figure 1.19. Tax Revenue in Resource-Rich Countries

Tax revenue tends to be low in resource-rich countries, which have a low revenue effort outside the resource sector.



Sources: World Bank; and IMF staff calculations.
Note: CIS = Central and Eastern Europe and the Commonwealth of Independent States; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SSA = Sub-Saharan Africa.
[1] The averages of an unbalanced panel of resource-rich and non-resource-rich countries are displayed for 1990–2014.
[2] The averages of an unbalanced panel of resource-rich countries are shown for 2005–14.
[3] The latest available data are as of 2013.

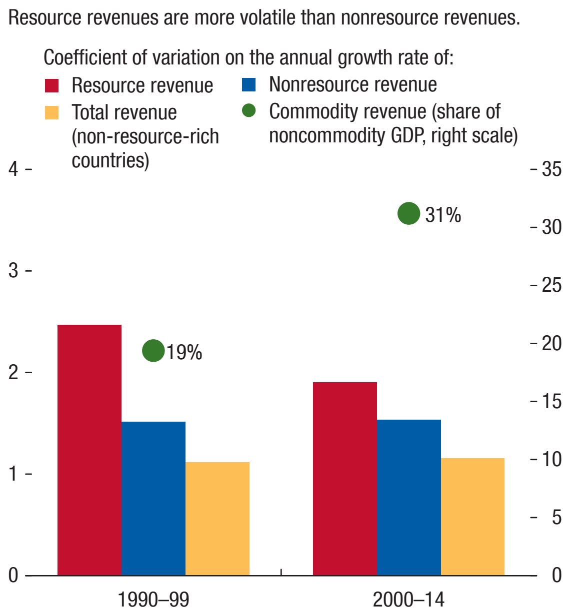
the benefits received from public spending. It can also improve incentives for good governance (since paying taxes increases incentives to scrutinize fiscal policies). The tax reform agenda in many of these countries is large, especially to improve the relatively low levels of efficiency of revenue mobilization (Figure 1.19, panel 4).

- Building better tax systems requires time and effort, and cannot be achieved quickly as circumstances turn sour or resources are depleted: it requires substantial investment in building effective tax administrations and educating taxpayers on both the general need for and precise nature of changes in the tax system. Evidence suggests that although resource-rich countries adjust the tax effort in response to persistent changes in commodity revenues, the response tends to be relatively modest and takes several years. For example, a permanent increase in resource revenues by 10 percent of nonresource GDP reduces nonresource revenues by only 0.4 percent of nonresource GDP.[30]

[30] See background notes http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf. See also Bornhorst, Gupta, and Thornton (2009); Thomas and Treviño (2013); Crivelli and Gupta (2014).

Figure 1.20. Resource and Nonresource Revenues
(Fiscal buffers; percent of 2015 GDP)

Resource revenues are more volatile than nonresource revenues.



Source: IMF staff estimates.

Two broad areas in which many nonresource tax systems can usefully be strengthened stand out. One is establishing a simple and broad-based value-added tax (VAT). This can improve the efficiency of the tax system and reduce the costs associated with complex fees and charges, which are prevalent in many resource-rich countries in the Middle East (Mansour 2015). Generally, a VAT tends to be a more stable and growth-friendly source of revenue than most other taxes (Acosta-Ormaechea and Yoo 2012). However, resource-rich countries on average collect only about half of what resource-poor countries do from goods and services taxes, suggesting considerable scope for boosting these revenues (Figure 1.21). The other avenue to pursue is increased reliance on the personal income tax, which in these countries typically generates revenues equivalent to only about 2 percent of GDP. A properly designed personal income tax system can help improve equity and serve a critical role in complementing, and ensuring acceptability of, the VAT. Other areas that merit attention include property taxation, often identified as relatively pro-growth and capable of being aligned to equity objectives, and the corporate tax, whose importance in these countries largely reflects its role in capturing resource returns.

Encouragingly, a number of countries have made helpful efforts to increase nonresource taxation. For example, Iran introduced a VAT in 2008, which brought in revenues of 1 percent of GDP in 2013–14 (and is expected to increase further in the future). Bolivia increased tax revenues by more than 3 percent of GDP from 2005 to 2013, strengthening tax administration and significantly broadening the tax base. Mozambique made strides in improving its tax administration; this has helped boost revenues by the equivalent of 1¼ of GDP each year from 2010 to 2014, excluding windfall taxes.

The fiscal treatment of the resource sector itself requires close attention. Of the many challenges,[31] one of the most fundamental is that of striking a balance between mitigating the volatility of government revenue and ensuring that the public sector receives an appropriate share of the natural resource wealth. A broadly progressive fiscal regime that increases the government share as profits and commodity prices rise has the advantage of encouraging investment and maximizing government revenues during windfalls. However, more progressivity inherently generates more volatility in revenues. Some governments, especially those with liquidity constraints, may prefer early and more stable revenues, even if the budget will benefit less when prices increase—which generally calls for stronger reliance on royalties. Balancing these considerations, some countries use, as is often recommended, a combination of royalties and some form of resource rent tax alongside the corporate income tax.[32]

Expenditure Policy Can Help Reduce Vulnerabilities and Achieve Development Objectives

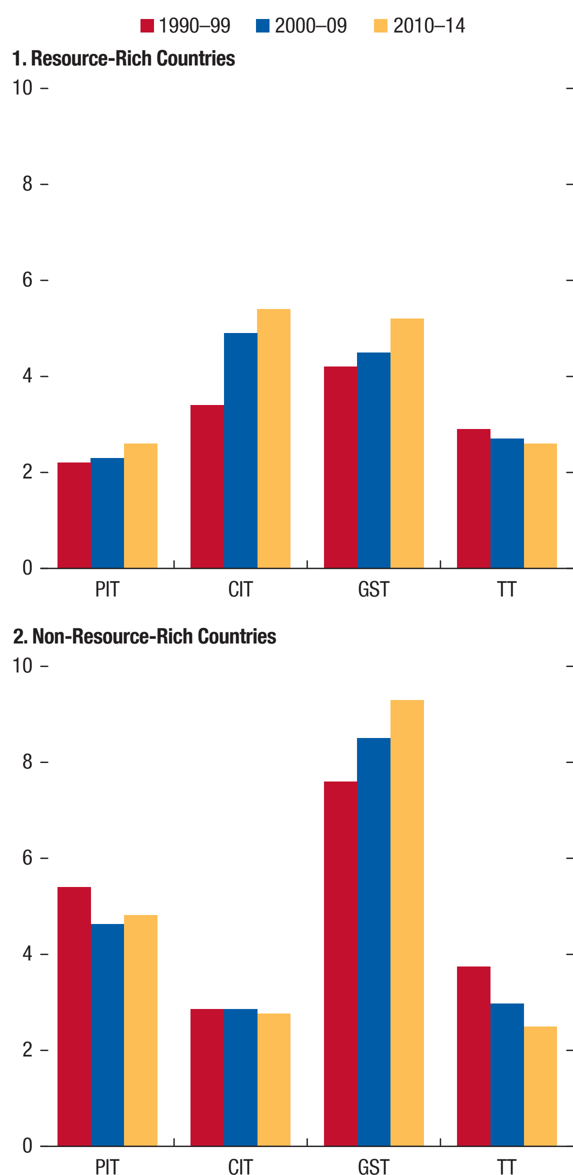
Several studies have suggested that resource-rich economies have an important opportunity to improve their public investment management (PIM), which in turn could boost growth prospects. Dabla-Norris and others (2011) find that on average oil exporters had lower PIM scores than others, particularly in the project appraisal and evaluation stages of the PIM process. Albino-War and others (2014) find that oil exporters in the Middle East and North Africa region lag behind the most efficient international performers in all PIM

[31] These challenges are reviewed in IMF (2012b) and, in more detail, in Daniel, Keen, and McPherson (2010).

[32] These industries also require careful attention to treaty policy and withholding taxes (IMF 2014b) given the prevalence of multinational companies, as well as to the distinct challenges that effective administration of fiscal regimes for the extractive industries pose (Calder 2014). See also background notes http://www.imf.org/external/pubs/ft/fm/2015/02/pdf/fmtn1502.pdf.

Figure 1.21. Revenue Shares from Taxation in Resource-Rich Countries, 1990–2014
(Percent of 2015 GDP)

Resource-rich countries have lower revenue shares from personal income tax and goods and services tax.



Source: IMF staff estimates.
Note: Personal income taxes (PIT), corporate income taxes (CIT), goods and services taxes (GST), and trade taxes (TT) as a share of GDP for resource-rich and non-resource-rich countries.

areas (Annex 1.3). A study by IMF staff (IMF 2015) discusses the different areas to make public investment more efficient. Developing PIM practices should therefore be a priority in resource-rich countries, and ideally should take place before investment spending is scaled up.

In addition, reforming fuel subsidies would allow better use of resources and reduce fiscal vulnerabilities. Although fuel subsidies can be used to share the resource wealth and shield the domestic economy from volatile oil prices, subsidies have several disadvantages. They are very poorly targeted devices for supporting the poor (Clements and others 2013). Moreover, they can generate significant environmental and health costs. The issue is not just—or even mainly—addressing the global harm from climate change. It is very much a matter of the local damage (Box 1.6). Fuel subsidy reforms should be accompanied by well-targeted transfers to those most vulnerable. For oil exporters, where fuel subsidies are seen as a way to share the oil wealth, it may also be useful to design a transfer system that allows some direct sharing of oil revenue that would accompany the reform of fuel subsidies.

Conclusion

The experience of the past several years has provided a stark reminder of the considerable uncertainty that resource-rich economies face and the implications this has for fiscal policy. In particular, as the analysis in this chapter has shown, fiscal policies have not been successful in shielding the domestic economy from the effects of commodity price shocks, and in many cases have actually exacerbated their effects, with possibly important adverse consequences for growth and intergenerational equity.

More efforts are needed to establish a comprehensive fiscal policy framework in resource-rich countries that can help them cope with heightened uncertainty. The key elements of this framework should include the following:

- *A solid longer-term anchor to guide fiscal policy.* Countries face important trade-offs between how much of the nonrenewable resource wealth to consume and how much to save in financial and other assets (such as public infrastructure). Given their large development needs, for low-income countries a large share of the savings should likely be allocated to public investment, commensurate with their absorptive and institutional capacity.
- *Stabilization savings to help weather the large and persistent shocks.* The long-term strategy should also ensure an appropriate level of financial savings for precautionary purposes, which will lead to countercyclical policies that will help stabilize the economy

and promote long-term growth. To achieve this, such benchmarks will need to account for the uncertainty that surrounds the returns to natural resource wealth.

- *Stronger institutional fiscal frameworks to help ensure longer-term objectives.* These should include the following:
  - Comprehensive medium-term budget frameworks, which demonstrate and ensure consistency between the longer-term objective, fiscal targets, and the annual budgets.
  - Fiscal risk statements that explore the consequences of uncertainty for the government's fiscal plans and explain how these might be addressed.
  - Strong public investment management and expenditure policies that help ensure that government spending plans are efficient and are likely to yield important growth dividends.
  - Tax policies that diversify the revenue base and avoid an overdependence of government spending on the resource sector.
  - Fiscal regimes for extractive industries that strike a balance between limiting the volatility of government revenue and ensuring an appropriate share of the resource wealth for government. A combination of fiscal instruments is usually recommended.
  - Sufficient transparency in each aspect of this policy framework to help ensure adherence.
- *Strong underlying institutions.* Experience suggests that such institutions (including governance) are essential for ensuring that natural resources are used in a manner that supports long-term growth and avoids disruptive procyclicality. In the context of strong institutions, fiscal rules can help constrain the response to windfalls and avoid unhelpful procyclicality. Resource funds can be a useful tool to manage financial assets.

Achieving these objectives has become even more difficult in the current environment, given the recent collapse in commodity prices. After a period of abundance in the 2000s, many countries will need to adjust to a period of scarcer resources that is likely to persist. Countries that have accumulated savings will be able to adjust gradually. But in some cases, large adjustments in spending may be unavoidable. These countries may have options for ameliorating the effects on priority spending by examining the scope for curbing subsidies and other unproductive outlays, or by boosting tax revenue. In the current circumstances, the priority is to ensure that fiscal positions are brought to sustainable levels (in cases in which they are not, given the commodity price declines). But steps to strengthen the underlying fiscal and policy frameworks as described in this chapter could both enhance confidence and place countries in a better positon to manage future shocks.

Annex 1.1. 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, and fiscal rules databases; United Nations Statistics Division "National Account Official Country Data" database; the World Bank's *World Development Indicators* and *Worldwide Governance Indicators*; the Macro Data Guide Political Constraint Index (POLCON) Dataset; and Polity IV and *International Country Risk Guide* data. Data for all variables of interest are collected on an annual basis from 1970 to 2013, where available.

The sample comprises 51 countries that are exporters of oil, gas, and metals (such as copper, gold, iron, and silver), where these commodities represent a large share of exports (20 percent or more of total exports) or fiscal revenues. The countries are Algeria, Angola, Australia, Azerbaijan, Bahrain, Bolivia, Botswana, Brunei Darussalam, Cameroon, Canada, Chad, Chile, Colombia, Democratic Republic of the Congo, Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Ecuador, Gabon, Ghana, Guinea, Guyana, Indonesia, Iran, Iraq, Kazakhstan, Kuwait, Libya, Mali, Mauritania, Mexico, Mongolia, Mozambique, Nigeria, Norway, Oman, Papua New Guinea, Peru, Qatar, Russia, Saudi Arabia, South Africa, Sudan, Suriname, Syria, Timor-Leste, Trinidad and Tobago, United Arab Emirates, Venezuela, Yemen, and Zambia. The sample varies for each analysis depending on data availability.

Annex 1.2. Selected Experiences with Fiscal Rules and Resource Funds in Latin America and the Caribbean[33]

Chile bases its fiscal framework on a fiscal rule. The rule was introduced in 2001 and institutionalized by the 2006 Fiscal Responsibility Law. According to the law, the government, at the beginning of its mandate,

[33] With contributions from M. Santoro, J. Delgado, F. Valencia, and M. Lutz.

must set a fiscal objective in terms of a structural balance position to be reached by the end of its term (four years). The structural fiscal balance is calculated by adjusting expected revenues for the cycles in economic activity and expected copper prices (with a committee of experts providing estimates for potential output and long-term copper prices for the annual budget). The path of spending is thus the residual, to be determined on an annual basis given the estimated structural revenues and the target at the end of the government mandate.

The presence of the fiscal rule has reduced the procyclical fiscal bias and increased the credibility of fiscal policy in Chile. The rule contributed to a reduction in net public debt by more than 20 percentage points of GDP before the financial crisis. Moreover, the rule combines a commitment at the end of the mandate with flexibility, in terms of adjusting the path of spending to both the end-of-mandate target and the position in the business and commodity cycles (see Schmidt-Hebbel 2012). The flexibility allows for countercyclical policy, while the fiscal target at the end of the mandate helps anchor expectations. By striking the right balance between rules and discretion, Chile has been able to build a strong reputation for fiscal responsibility.

Colombia reformed its fiscal framework as a response to a large accumulation of debt in the late 1990s and early 2000s. In 1997–98, two laws established strict limits for subnational expenditure and debt accumulation. In 2003, a fiscal transparency law was enacted that aims to protect fiscal sustainability by requiring a detailed 10-year, medium-term fiscal framework each year and establishing indicative balance targets for the nonfinancial public sector.

The introduction of the structural balance fiscal rule in 2012 strengthened the framework for countercyclical fiscal policy. The new law established a quantitative target for the central government overall balance, adjusted for the oil and GDP cycles (structural balance). The rule also allows the deficit target to be relaxed through countercyclical expenditures under some circumstances, and includes an escape clause when macroeconomic stability is at risk.

Mexico hedges a large fraction of oil exports through put options to insure against a decline in international oil prices. Each year, Mexico purchases Asian put options[34] with a strike price equal to the oil reference price used in the budget (which corresponds to an average between historical and future oil prices). Mexico hedges roughly half the volume of its oil exports at a cost that has varied between $2.50 and $5.60 a barrel over the past five years. The program was particularly useful after the collapse of oil prices at the onset of the global financial crisis, when oil prices were 20 percent below the budgeted price.

To further insulate fiscal revenues from transitory fluctuations in oil-related revenues, Mexico recently created a sovereign wealth fund. Since early 2015, the Mexican Oil Fund has managed all oil-related revenues and payments (except for taxes). The federal government receives transfers from the Oil Fund for up to 4.7 percent of GDP—roughly the amount of oil-related revenues received in 2013. Revenues in excess of this threshold will accumulate in the fund. Long-term assets in the Mexican Oil Fund can be used to cover persistent declines in revenues only after smaller stabilization funds have been exhausted.

Peru approved a new fiscal framework in 2013, which became operational in the 2015 budget. It amended a fiscal framework introduced in 1999 with the enactment of the Law on Fiscal Prudence and Transparency (LPTF). The LPTF's main objective is to establish a commitment to fiscal balance over the business cycle through fiscal rules at the national level and by establishing a multiyear fiscal framework.

The fiscal framework set out in the 2000s was not sufficiently flexible to adapt to the economic and institutional changes facing Peru. In particular, the growing importance of resource revenues was not addressed, contributing to the volatility of government revenues. The 1999 framework also did not reduce the bias toward procyclicality, as the rule targeted the nominal deficit. The framework has been repeatedly amended over the past decade, hurting its predictability, simplicity, and transparency.

The new framework, amended in 2013, was named the Fiscal Responsibility and Transparency Law. It includes a new structural deficit target for the nonfinancial public sector, an important shift relative to the past. Like the previous version, it includes a multiyear macroeconomic framework that sets three-year projections for the main macroeconomic and fiscal variables. It allows the national government to use the

[34] The payoff of an Asian put option is determined by the difference between the strike price and the average price of the underlying asset over a predetermined period, which in the case of Mexico covers one year. More details about Mexico's hedging program can be found in Duclaud and Garcia (2012).

fiscal stabilization fund if revenue declines below the average of the past three years. A fiscal council will provide independent analyses of macro-fiscal projections, the evolution of public finances, and compliance with fiscal laws and rules.

In *Trinidad and Tobago,* fiscal performance has been mixed in the absence of multiyear budgeting and other formal rules. The 1973–74 oil price boom sharply improved the country's fiscal position. However, the oil price collapse in the early 1980s led to a procyclical fiscal retrenchment. A sovereign wealth fund, the Heritage and Stabilization Fund, was established in 2004, to be built over time with "above-normal" fiscal energy revenues. Its assets reached about 20 percent of GDP in September 2014 (external reserves are an additional 35 percent of GDP).[35] While there have been no legally binding fiscal rules, various governments have made pledges regarding overall (or non-energy) balances.

Annex 1.3. Public Investment in Oil-Producing Countries of the Middle East[36]

During the past decade, drawing on oil revenues, most oil-producing countries of the Middle East and Central Asia (MCDOE) have sustained the level of investment spending at about 7–8 percent of GDP—about 3–4 percentage points higher than levels in the early 2000s.

Overall, public investment efficiency[37] in these countries has been lower than in comparator countries. The quality of infrastructure in MCDOE is about 10 percent lower compared with advanced countries or resource-rich countries with strong institutions such as Australia and Canada. It is also about 18 percent lower than the maximum quality index (GCI index), suggesting that significant efficiency gains could be generated. A particular source of concern is the cost of mass transit projects, which appear significantly more expensive than similar projects in advanced countries.

Strong institutions could improve the quality and efficiency of public investment in MCDOE. The Public Investment Management Index (PIMI) suggests that issues arise primarily at the appraisal and selection phases (Dabla-Norris and others 2011). Cost-benefit analyses (at least for large projects), as well as improved fiscal planning with medium-term frameworks, could help.

In *Kuwait*, the authorities are engaged in public investment programs, in part to increase oil production, but also to diversify the economy. Overall, while these investments could lead to significant gains, potential risks remain. In the oil sector, the main risk relates to macroeconomic conditions, as the development of shale gas in competitor countries could lower the profitability of investment in the sector. In the non-oil sector, the main issue relates to the quality of investment, as delays in implementation and potential cost overruns could harm efficiency.

Qatar has enjoyed strong growth rates in the recent past, in part due to large public investments aimed at diversifying the economy. Aware of the need for continued improvements in investment quality, the authorities have taken steps to review capital spending (and related operational costs), and intend to integrate investment spending plans within medium-term fiscal planning, including by establishing a public investment management department at the ministry of finance. The authorities are also in the process of developing a medium-term fiscal framework.

In *Saudi Arabia*, capital spending grew by 24 percent on average annually from 2000 to 2008, on the back of high hydrocarbon revenues. In turn, Saudi Arabia's economy grew strongly from 2000 to 2013; nonhydrocarbon output growth averaged more than 7 percent annually. Large public investments have improved the quality of infrastructure, with the ranking of infrastructure quality by the *Global Competitiveness Report* improving from 41 in 2008/09 to 31 in 2013/14. Efficiency could be further strengthened by adopting a medium-term fiscal framework and by improving the public investment process, notably regarding the assessment and selection of projects.

Annex 1.4. How Selected Sub-Saharan African Countries Have Used Commodity Windfalls[38]

Angola has used windfalls from the recent commodity price boom to rebuild reserves and scale up public investment. Central government deposits at the National Bank of Angola rose from 1 percent of GDP

[35] Given that contributions are triggered by above-normal energy revenues, contributions have sometimes coincided with overall fiscal deficits.

[36] See Albino-War and others (2014).

[37] As measured by the infrastructure component of the Global Competitiveness Indicator (GCI) developed by the World Economic Forum.

[38] With contributions from R. Sab, C. McLaughlin, and G. Salinas.

in 2004 to 9½ percent in 2014. The sovereign wealth fund was created in 2012 and had accumulated assets of 4 percent of GDP by end-2014. Public investment was scaled up significantly during the boom period, in part driven by the need to rebuild infrastructure after the civil war that ended in 2002. However, there is considerable room to boost the quality of public investment. Measures to improve PIM include enhancing the compliance of the PIM process with existing legislation; better prioritizing and monitoring of the execution of investment projects; conducting ex ante and ex post project evaluations; and improving technical capacity to appraise, select, and monitor investment projects.

The Republic of Congo has also used windfalls to increase financial assets, directing part of them to scale up capital spending and address large social gaps. Government oil revenues more than tripled from 2003 to 2008. This allowed a substantial buildup of financial assets and doubled domestically financed capital spending as a share of non-oil GDP. Higher oil prices also have driven the Republic of Congo's ambitious 2012–16 National Development Plan, which is aimed at addressing large social and infrastructure gaps and diversifying the economy, funding reconstruction and rehabilitation in the aftermath of the 2012 ammunitions explosion, and supporting a large amount of construction spending for the Fall 2015 All Africa Games. The Republic of Congo's investment efficiency still lags substantially behind that of other low-income countries. Improving the quality of capital expenditures is essential for maximizing their effect on non-oil growth and enhancing economic diversification.

Gabon used a large part of the first phase of the windfall (2003–08) to repay and restructure its debt and rebuild reserves. Public debt was brought down from 126 percent of non-oil GDP in 2003 to 32 percent in 2008, while deposits at the central bank rose to 7 percent of non-oil GDP in 2008. Capital spending increased only moderately during this period, but was scaled up substantially when oil prices rose following the global crisis.

Capital spending grew from 8 percent of non-oil GDP in 2008 to about 20 percent in 2011–13, mainly to improve the country's transport and energy infrastructure and to finance the infrastructure needed to host the 2012 Africa Cup of Nations football championship. Favorable oil prices also allowed the government to draw on external financing sources to finance part of the scale up.

However, the very high level of capital spending proved unsustainable. By early 2014, the government started drawing on its deposits, having accumulated significant domestic arrears (equivalent to 12 percent of non-oil GDP), and had to resort to central bank statutory advances at the maximum permissible level. The government was ultimately forced to undertake a fiscal adjustment and cut back its capital spending in 2014 to about 10 percent of non-oil GDP to repay part of its arrears.

Box 1.1. Long-Term Management of Natural Resources

Assessing the long-term sustainability of macro-fiscal policy in resource-rich countries is both crucial and highly complex. Broadly, the approaches to long-term management of natural resources fall into three main groups (Davis, Ossowski, and Fedelino 2003):

- Under the *"bird-in-hand"* approach, countries would save all oil revenue as financial assets, with only the yield from the accumulated financial assets spent. This approach shields the budget from the impact of oil price movements, but can be very restrictive (particularly in the first years). It is better suited for when there is a strong preference for leaving a substantial share of the oil wealth to future generations. (Norway follows a similar approach.)
- Countries can also target a level of spending guided by the return on overall net government wealth. This follows the *permanent income hypothesis (PIH)*. Under the standard PIH approach, governments would consume a constant share of the net government wealth every year. A country with net government wealth substantially higher than its present financial assets could afford to make higher expenditures earlier than under a "bird-in-hand" approach. The standard PIH has been criticized as not being an appropriate framework for low-income countries especially when there are large infrastructure needs. IMF (2012a) discusses variations that address some of the weaknesses in the standard PIH:
    - A *modified PIH (MPIH)* with scaling up of capital spending. Instead of preserving financial wealth over time, this approach allows financial assets to be drawn down for a few years during the scaling-up period. The drawdown would be offset by fiscal adjustment in the future to rebuild financial assets to the same level as under the traditional PIH. This approach does not explicitly account for the potential impact of the scaling up on growth and nonresource revenues.
    - The *Fiscal Sustainability Framework* explicitly takes into account the expected impact of higher investment on growth and nonresource revenues. Fiscal sustainability can be consistent with a fiscal target that allows a drawdown of government wealth and eventually stabilizes it at a lower level than the PIH or the MPIH. Lower financial wealth will generate a lower stream of income to the budget than in the PIH-based framework, but this would be compensated for by "fiscal returns" in the form of larger nonresource revenues.
- Under another alternative, countries would spend all current-period oil revenue. This approach poses significant risks and leads to highly volatile spending.

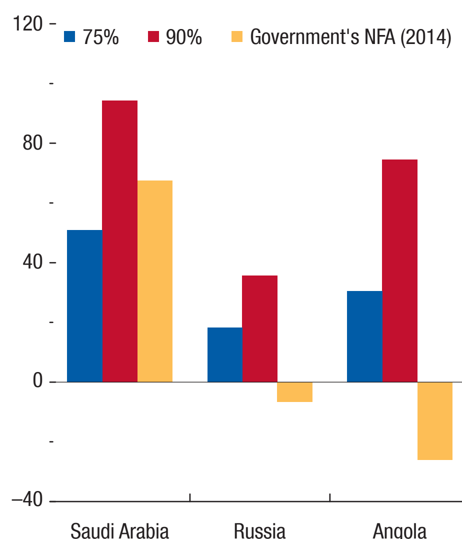
Box 1.2. A Benchmark for Stabilization Savings

Resource-rich countries need larger and more durable buffers than other countries because shocks can be large and highly persistent. Countries could accumulate financial savings to ensure that the investment returns on those assets are enough to avoid large adjustments in the event that commodity prices fall.[1] Such a buffer would be for stabilization purposes, assuming the expenditure plan is sustainable.

The size of the buffer would depend on the degree of resource dependence and risk tolerance. Countries that already save significant amounts of resource revenues for future generations would have to save less for stabilization purposes (as these are only to guard against shocks to resource revenue that directly funds the annual budgets). The advantage would be that it would help reduce the tendency to spend during revenue booms and provide countercyclical relief during downturns.

As an illustration, the simulations presented in Figure 1.2.1 consider the level of assets that would be sufficient to generate investment returns to cover half the lost revenue over the next five years with 75 percent and 90 percent probability for three major oil exporters: Angola, Russia, and Saudi Arabia.[2] The estimated levels of net financial assets are equivalent to two years of annual resource revenues (for the 75th percentile shocks). Of the three, only Saudi Arabia has net financial assets to provide significant protection over time.

Figure 1.2.1. Precautionary Buffers under Different Degrees of Risk Tolerance
(Fiscal buffers; percent of 2015 GDP)



Source: IMF staff estimates.
Note: NFA = net financial assets. Estimates of fiscal buffers needed to ensure five-year spending plans (WEO projections) are largely protected with probability of 75 percent and 90 percent under oil price uncertainty. The simulations assume countries would make half of the adjustment in the non-oil balance in the advent of a fall in prices.

[1] Under the PIH with precautionary savings, countries accumulate additional financial assets and use the investment returns on those assets to reduce the volatility. The benchmark proposed here is line with those recommendations.

[2] The simulations assume that the investment returns on these buffers would be used only to shield the budget from downside shock. The level of financial assets would be adjusted annually to ensure the desired level of protection for the next five years.

Box 1.3. IMF Technical Assistance to Help Countries Manage Their Natural Resource Wealth

The IMF has had a long history of providing technical assistance to resource-rich countries. In 2010, the IMF extended such efforts in the context of the establishment of the Managing Natural Resource Wealth (MNRW) topical trust fund.

The MNRW is supported by Australia, the European Commission, Kuwait, the Netherlands, Norway, Oman, and Switzerland, and aims to assist low- and lower-middle-income countries endowed with oil, gas, and metals in their efforts to establish the institutional frameworks needed to ensure the management of natural resource wealth in a manner that supports good governance and growth.

The MNRW has funded technical assistance in about 20 countries since its inception, with a focus on improving five areas: fiscal regimes, revenue administration, macro-fiscal policies and public financial management, asset-liability management, and statistics for natural resources.

Box 1.4. The Vital Role of Transparency for the Successful Management of Natural Resources

There are several areas in which greater transparency around resource revenues is particularly important:

- *Estimates of resource wealth.* It is important to provide regular estimates of the value of a country's resource reserves using a range of price scenarios, as well as the rate at which the reserves are being extracted and consumed or converted to financial assets. This information is vital to underpin decisions around the long-term use of natural resources.
- *The collection of resource revenues and their use.* There should be clear reporting on the fiscal regime and on the amount of revenue the government is collecting, and informed understanding and scrutiny of the use of resource revenues by lawmakers, external analysts, and citizens. This should help ensure that revenue collection is effective, resources are used efficiently in line with national objectives, revenues are all incorporated within the budget, and the risk of misuse is reduced.
- *Risks and uncertainty.* Dealing with the volatility of resource revenues, and their finite nature requires effective medium-term and long-term fiscal planning. This should be accompanied by wide-ranging fiscal risk analysis to help ensure the plans are robust in the face of shocks.

The IMF has proposed a draft standard template for the collection of data on government revenues from natural resources, which could be used as a broad guide (*Template to Collect Data on Government Revenues from Natural Resources* 2014). An independent agency, such as the auditor general, could be assigned to assess that the reported revenues are based on the official definition.

An important indicator of the integrity of reporting is the application of international standards, in addition to those developed specifically for reporting on natural resources, such as the Extractive Industries Transparency Initiative. The IMF has also recently published a draft Fourth Pillar of its Fiscal Transparency Code, devoted to resource revenue management, which lays out a set of transparency practices in the full range of areas. Among the key areas are the following:

- The fiscal regime for natural resources should be comprehensive, open, and governed by law.
- Fiscal reporting should cover stocks as well as flows, and include specific assurances of integrity of reported data.
- Specific practices should be stipulated for forecasting and budgeting for resource revenues. This includes transparency around the setting of objectives for the use of resource revenues, the incorporation of all revenues in budget documents, and the transparent operation of any natural resources fund.
- Transparency concerning the fiscal risks arising from natural resource revenues is an important element in the governance of resource revenues. Good practice includes disclosure, analysis, and management of risks, and the publication of a long-term fiscal sustainability analysis. Transparency concerning the activities and finances of public corporations operating in natural resource sectors is also important.

Box 1.5. Fiscal Rules for Resource-Rich Countries

Nonresource primary balance rules (Norway, Timor-Leste). Targeting the nonresource primary balance as a share of nonresource GDP, instead of overall fiscal balance, can lead to a more stabilizing fiscal policy. The target should preferably be set in line with long-term fiscal sustainability goals. This is especially relevant for countries with limited years of commodity reserves. For others, the target could be set to ensure appropriate levels of precautionary savings and be gradually adjusted to converge to the long-term benchmarks over time.

Structural balance budget rules (Chile, Colombia). An alternative rule is based on a structural balance, correcting for both the economic cycle and the commodity price cycle. This approach is especially relevant to countries in which the nonresource economy is significant and the business cycle is not highly correlated with the commodity cycle. It can help avoid procyclical fiscal policy and should be set to ensure an appropriate level of net financial savings. In practice, the rule is heavily dependent on how the level of the "structural" commodity price is computed.

Price-smoothing rules. Typically, the rule will set commodity reference prices based on a specific formula. If actual revenues exceed the expected revenues, the difference is usually accumulated in a resource fund and can be used in periods of shortfalls. However, such rules have important weaknesses. Usually, they are not linked to sustainability benchmarks, and they are not well prepared to deal with sudden large shocks. They also disregard other shocks (such as those related to production and reserves of natural resources). This type of rule, if used, should be set consistently with a fiscal anchor and ensure that financial buffers are appropriate.

Expenditure rules. These can be useful to contain spending growth during booms and are a good complement to rules based on fiscal aggregates. The rules can reduce the degree of procyclicality and can be set to be consistent with the absorptive capacity constraints (IMF 2012a).

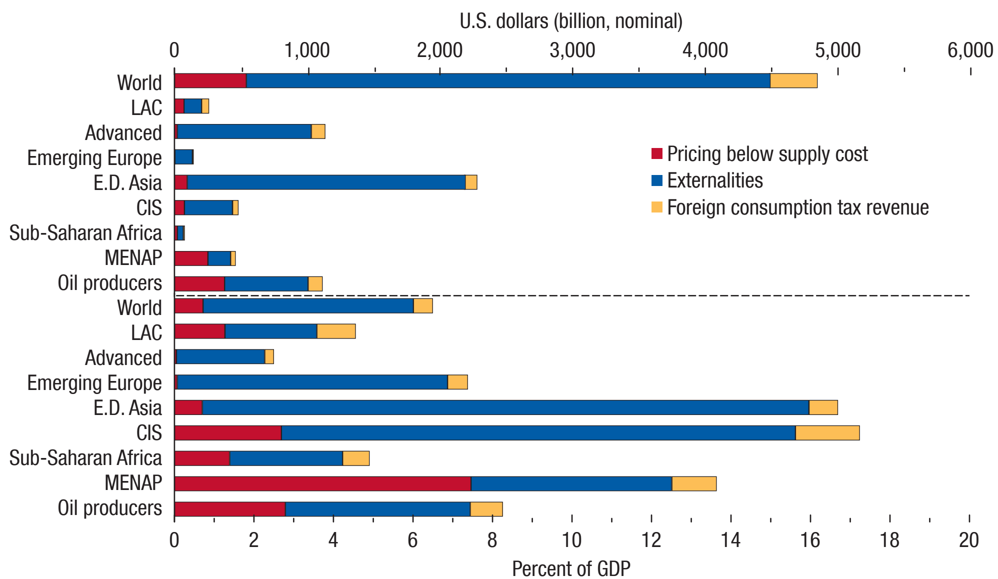
Box 1.6. The Large Size of Global Energy Subsidies

A recent IMF staff study (Coady and others 2015) provides country-level energy subsidy estimates under two different definitions of energy subsidies. Under the first definition, energy subsidies arise when consumer prices are below the opportunity costs of supplying energy—this is the traditional definition of energy subsidies. A broader notion, based on the true costs of energy consumption, also accounts for undercharging for environmental costs—carbon emissions, local air pollution, traffic congestion, and so on—and the failure to fully apply standard rates of consumption taxation.

At a global level, energy subsidies based on the traditional definition were estimated at $541 billion in 2013 (0.7 percent of global GDP), with oil producers accounting for nearly 70 percent of these subsidies. By region, both in dollar terms and in percent of GDP, subsidies were highest in the Middle East, North Africa, Afghanistan, and Pakistan, reflecting the prevalence of oil producers, and lowest in emerging Europe in dollar terms and in advanced economies in percent of GDP.

However, subsidies with respect to the true costs of energy consumption were dramatically larger at $4.9 trillion (6.5 percent of global GDP), with oil producers accounting for a much smaller share (23 percent) (Figure 1.6.1). Energy subsidies under this broader notion are sizable in nearly all countries, with regional averages greater than 2 percent of GDP in all regions. The bulk of these subsidies—over 75 percent at the global level and about 80 percent for oil producers (Table 1.6.1)—are due to underpricing of energy from a domestic perspective (as opposed to global warming). It is therefore in countries' own interests to reflect not only the opportunity costs of supplying energy but also domestic environmental costs in energy prices. Doing so can lead to a substantial fiscal benefit—4.0 percent of GDP at the global level and 6.1 percent of GDP for oil producers—and a significant reduction in deaths related to fossil fuel emissions (55 percent at the global level and 41 percent for oil producers).

Figure 1.6.1. Size of Global Energy Subsidies



Sources: Coady and others (2015); and IMF staff calculations.
Note: CIS = Commonwealth of Independent States; E.D. Asia = emerging and developing Asia; LAC = Latin America and the Caribbean; MENAP = Middle East, North Africa, and Pakistan.

Box 1.6. *(continued).*

Table 1.6.1. Energy Subsidies in Selected Oil Exporters

	Energy Subsidies by Component in Dollars (billions)			Energy Subsidies by Component in Percent of GDP		
	Pricing below supply cost	Externalities	Foregone consumption tax revenue	Pricing below supply cost	Externalities	Foregone consumption tax revenue
Angola	4.6	2.7	0.6	3.7	2.2	0.5
Colombia	0.8	7.4	2.4	0.2	2.0	0.6
Iran	76.2	40.8	1.1	20.8	11.1	0.3
Mexico	11.4	33.9	12.7	0.9	2.7	1.0
Nigeria	3.7	4.4	0.8	0.7	0.8	0.2
Norway	0.1	3.7	0.2	0.0	0.7	0.0
Russia	43.7	241.9	32.2	2.1	11.5	1.5
Saudi Arabia	65.4	49.3	14.2	8.7	6.6	1.9
United Arab Emirates	18.2	12.9	3.5	4.5	3.2	0.9
Venezuela	36.5	19.2	4.4	16.1	8.5	1.9

Source: IMF staff estimates.
Note: The table refers to only energy subsidies in oil exporters. However, some oil importers have similar or even higher energy subsidies in dollar terms and as a share of GDP. See estimates by country: http://imf.org/external/np/fad/subsidies/index.htm

References

Acosta-Ormaechea, S., and J. Yoo. 2012. "Tax Composition and Growth: A Broad Cross-Country Perspective." IMF Working Paper 12/257, International Monetary Fund, Washington.

Adler, G., and S. Sosa. 2011. "Commodity Price Cycles: The Perils of Mismanaging the Boom." IMF Working Paper 11/283, International Monetary Fund, Washington.

Albino-War, M., S. Cerovic, F. Grigoli, J. Flores, J. Kapsoli, H. Qu, Y. Said, B. Shukurov, M. Sommer, and S. Yoon. 2014. "Making the Most of Public Investment in MENA and CCA Oil-Exporting Countries." IMF Staff Discussion Note 14/10, International Monetary Fund, Washington.

Alesina, A., F. Campante, and G. Tabellini. 2008. "Why Is Fiscal Policy Often Procyclical?" *Journal of the European Economic Association* 5 (5): 1006–36.

Arezki, R., K. Hadri, P. Loungani, and Y. Rao. 2013. "Testing the Prebisch-Singer Hypothesis since 1650: Evidence from Panel Techniques that Allow for Multiple Breaks." IMF Working Paper 13/180, International Monetary Fund, Washington.

Arezki, R., K. Hamilton, and K. Kazimov. 2011. "Resource Windfalls, Macroeconomic Stability and Growth: The Role of Political Institutions." IMF Working Paper 11/142, International Monetary Fund, Washington.

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

Calder, J. 2014. *Administering Fiscal Regimes for the Extractive Industries: A Handbook*. Washington: International Monetary Fund.

Cashin, P., H. Liang, and J. McDermott. 2000. "How Persistent Are Shocks to World Commodity Prices?" *IMF Staff Papers* 47 (2): 177–217.

Cashin, P., J. McDermott, and A. Scott. 2002. "Booms and Slumps in World Commodity Prices." *Journal of Development Economics* 69 (1): 277–96.

Celasun, O., F. Grigoli, K. Honjo, J. Kapsoli, A. Klemm, B. Lissovolik, J. Luksic, M. Moreno-Badia, J. Pereira, M. Poplawski-Ribeiro, B. Shang, and Y. Ustyugova. 2015. "Fiscal Policy in Latin America: Lessons and Legacies of the Global Financial Crisis." IMF Staff Discussion Note 15/06, International Monetary Fund, Washington.

Céspedes, L., and A. Velasco. 2014. "Was This Time Different? Fiscal Policy in Commodity Republics." *Journal of Development Economics* 106 (January): 92–106.

Cherif, R., and F. Hasanov. 2013. "Oil Exporters' Dilemma: How Much to Save and How Much to Invest." *World Development* 52: 120–31.

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

Coady, D., I. Parry, L. Sears, and B. Shang. 2015. "How Large Are Global Energy Subsidies?" IMF Working Paper 15/105, International Monetary Fund, Washington.

Crivelli, E., and S. Gupta. 2014. "Resource Blessing, Revenue Curse? Domestic Revenue Effort in Resource-Rich Countries." *European Journal of Political Economy* 35 (C): 88–101.

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.

Daniel, P., M. Keen, and C. McPherson, eds. 2010. *The Taxation of Petroleum and Minerals: Principles, Practices and Problems.* Abingdon, United Kingdom: Routledge.

Davis, J.M., R. Ossowski, and A. Fedelino. 2003. *Fiscal Policy and Implementation in Oil-Producing Countries.* Washington: International Monetary Fund.

Duclaud, J., and G. Garcia. 2012. "Mexico's Oil Price-Hedging Program." Chapter 15 in *Commodity Price Volatility and Inclusive Growth in Low-Income Countries*, edited by R. Arezki, C. A. Pattillo, M. Quintyn, and M. Zhu. Washington: International Monetary Fund.

Fasano, U. 2000. "Review of the Experience with Oil Stabilization and Savings Funds in Selected Countries." IMF Working Paper 00/112, International Monetary Fund, Washington.

Fatas, A., and I. Mihov. 2003. "The Case for Restricting Fiscal Policy Discretion." *Quarterly Journal of Economics* 118 (4): 1419–47.

Gaspar, V., R. Hughes, and L. Jaramillo. 2015. "Dams and Dikes for Public Finances." IMF Blog. http://blog-imfdirect.imf.org/2015/03/18/dams-and-dikes-for-public-finances.

Gavin, M., and R. Perotti. 1997. "Fiscal Policy in Latin America." In *NBER Macroeconomics Annual*, edited by Ben S. Bernanke and Julio J. Rotemberg. Cambridge, Massachusetts: MIT Press.

Gelb, Alan, and Associates. 1988. *Oil Windfalls: Blessing or Curse?* New York: Oxford University Press for the World Bank.

Gupta, S., A. Kangur, C. Papageorgiou, and A. Wane. 2014. "Efficiency-Adjusted Public Capital and Growth." *World Development* 57: 164–78.

Husain, A., K. Tazhibayeva, and A. Ter-Martirosyan. 2008. "Fiscal Policy and Economic Cycles in Oil-Exporting Economies." IMF Working Paper 08/253, International Monetary Fund, Washington.

International Monetary Fund (IMF). 2012a. "Macroeconomic Policy Frameworks for Resource-Rich Developing Countries." Washington. http://www.imf.org/external/np/pp/eng/2012/082412.pdf.

———. 2012b. "Fiscal Regime for Extractive Industries: Design and Implementation." IMF Policy Paper. Washington. http://www.imf.org/external/np/pp/eng/2012/081512.pdf.

———. 2014a. "Sovereign Asset-Liability Management Guidance for Resource-Rich Economies." IMF Policy Paper. Washington. http://www.imf.org/external/np/pp/eng/2014/061014.pdf.

———. 2014b. "Spillovers in International Corporate Taxation." IMF Policy Paper. Washington. https://www.imf.org/external/np/pp/eng/2014/050914.pdf.

———. 2015. "Making Public Investment More Efficient." IMF Policy Paper. Washington. http://www.imf.org/external/np/pp/eng/2015/061115.pdf.

Mansour, M. 2015. "Tax Policy in MENA Countries: Looking Back and Forward." IMF Working Paper 15/98, International Monetary Fund, Washington.

McManus, R., and F. Gulcin Ozkan. 2012. "On the Consequences of Procyclical Fiscal Policy." University of York.

Medas, P., and D. Zakharova. 2009. "A Primer on Fiscal Analysis in Oil-Producing Countries." IMF Working Paper 09/56, International Monetary Fund, Washington.

Ossowski, R., M. Villafuerte, P. Medas, and T. Thomas. 2008. "The Role of Fiscal Institutions in Managing the Oil Revenue Boom." IMF Occasional Paper 260, International Monetary Fund, Washington.

Riascos, A., and C. Vegh. 2003. "Procyclical Fiscal Policy in Developing Countries: The Role of Incomplete Markets." Unpublished. University of California-Los Angeles and Banco de la Republica, Colombia.

Sachs, J. D., and A. M. Warner. 1999. "The Big Push, Natural Resource Booms and Growth." *Journal of Development Economics* 59: 43–76.

———. 2001. "The Curse of Natural Resources." *European Economic Review* 45: 827–38.

Schmidt-Hebbel, K. 2012: "Fiscal Institutions in Resource-Rich Economies: Lessons from Chile and Norway." Working Paper 416, Pontifical Catholic University of Chile.

Sturm, M., F. Gurtner, and J. G. Alegre. 2009. "Fiscal Policy Challenges in Oil-Exporting Countries: A Review of Key Issues." ECB Occasional Paper 104, European Central Bank, Frankfurt.

Thomas, A., and J. Treviño. 2013. "Resource Dependence and Fiscal Effort in Sub-Saharan Africa." IMF Working Paper 13/188, International Monetary Fund, Washington.

Tornell, A., and P. Lane. 1999. "The Voracity Effect." *American Economic Review* 89 (1): 22–46.

van der Ploeg, F. 2011. "Natural Resources: Curse or Blessing?" *Journal of Economic Literature* 49 (2): 366–420.

———. 2013. "Guidelines for Exploiting Natural Resource Wealth." OxCarre Research Paper 128, Centre for the Analysis of Resource-Rich Economies, Oxford University.

———, and S. Poelhekke. 2008. "Volatility and the Natural Resource Curse." OxCarre Research Paper 3, Centre for the Analysis of Resource-Rich Economies, Oxford University.

Villafuerte, M., P. Lopez-Murphy, and R. Ossowski. 2010. "Riding the Roller Coaster: Fiscal Policies of Nonrenewable Resource Exporters in Latin America and the Caribbean." IMF Working Paper 10/251, International Monetary Fund, Washington.

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

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 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 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.

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.

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.)

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.

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.

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 2015–16 and the medium-term scenario for 2017–20. 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 September 22, 2015.

Data and Conventions

Country-specific data and projections for key fiscal variables are based on the October 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 most European Union (EU) member countries have been revised following the adoption of the 2010 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, Egypt, Haiti, Hong Kong SAR, India, Iran, 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 Group of Twenty (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 June 3, 2015, the Executive Board recognized the ongoing discussions with the Argentine authorities and their material progress in remedying the inaccurate provision of data since 2013, but found that some specified actions called for by end February 2015 had not yet been completely implemented. The Executive Board will review this issue again by July 15, 2016, and in line with the procedures set forth in the IMF 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. Because of this structural break in the data, the average CPI inflation for 2014 is not reported in the October 2015 *World Economic Outlook.* 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.

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: General Government (GG) data refer 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 nonfinancial public sector 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.

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 –11.0 percent of GDP for 2010; –8.7 percent of GDP for 2011; –8.0 percent of GDP for 2012; –6.1 percent of GDP for 2013; –4.2 percent of GDP for 2014; –2.3 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 the 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; and 0.5 percent of GDP for 2013. For 2014, they include one-offs of 0.5 percent of GDP, of which financial sector support of 0.1 percent of GDP. For 2015 and 2016, they include one-offs of 0.4 percent of GDP and no financial support.

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

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

Thailand: Data are on a fiscal year basis.

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

United States: Cyclically adjusted balances exclude financial sector support estimated at 2.4 percent of potential GDP for 2009; 0.3 percent of potential GDP for 2010; 0.2 percent of potential GDP for 2011; 0.1 percent of potential 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.

Uruguay: Data are for the consolidated public sector which includes the non-financial public sector (as presented in the authorities' budget documentation), local governments, Banco Central del Uruguay, and Banco de Seguros del Estado.

Fiscal Policy Assumptions

Historical data and projections of key fiscal aggregates are in line with those of the October 2015 *World Economic Outlook*, unless noted otherwise. For underlying assumptions other than on fiscal policy, see the October 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: Fiscal projections are based on the available information regarding budget outturn for the federal government and budget plans for provinces, and on IMF staff macroeconomic projections.

Australia: Fiscal projections are based on Australian Bureau of Statistics data, the 2015-16 budget documents and IMF staff estimates.

Austria: For 2014, the creation of a defeasance structure for Hypo Alpe Adria is assumed to have increased the general government debt-to-GDP ratio by 4.3 percentage points, and the deficit effect arising from Hypo is assumed at 1.4 percentage points.

Belgium: Projections reflect the authorities' 2015 budget (updated for new developments) and the 2015–18 stability program objectives, adjusted for differences in the IMF staff's macroeconomic framework.

Brazil: For 2014, outturn estimates are based on the information available as of July 2015. Projections for 2015 take into account budget performance until August 2015, adjustment measures approved by the Congress and the Senate until August 2015, and the budget proposal announced by the government on August 31, 2015. In outer years, projections are consistent with the announced primary surplus objectives.

Cambodia: Historical fiscal and monetary data are from the Cambodian authorities. Projections are based on IMF staff assumptions following discussions with the authorities.

Canada: Projections use the baseline forecasts in the Economic Action Plan 2015 and 2015 provincial budgets as available. The IMF staff makes some adjustments to this forecast for differences in macroeconomic projections. The IMF staff forecast also incorporates the most recent data releases from Statistics Canada's Canadian System of National Economic Accounts, including federal, provincial, and territorial budgetary outturns through the end of the second quarter of 2015.

Chile: Projections are based on the authorities' budget projections, adjusted to reflect the IMF staff's projections for GDP and copper prices.

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 staff's macroeconomic assumptions.

Czech Republic: Projections are based on the authorities' budget forecast for 2015 with adjustments for the IMF staff's macroeconomic projections. For 2016–18, the projections are based on the macro framework and incorporate key fiscal components of the authorities' 2015 Convergence Program.

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 EU.

Egypt: The fiscal projections are mainly based on budget sector operations (with trends of main variables discussed with the Ministry of Finance during the November 2014 consultation).

Estonia: The forecast, which is cash based, not accrual based, incorporates the authorities' 2014 budget, adjusted for newly available information and for the IMF staff's macroeconomic scenario.

Finland: Forecast is based on policies announced 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 and the April 2015 Stability Program adjusted for differences in assumptions on macro and financial variables, and revenue projections. Historical fiscal data reflect the May 2015 revision and update of the fiscal accounts and national accounts.

Germany: The IMF staff's projections for 2015 and beyond reflect the authorities' adopted core federal government budget plan and the 2015 German Stability Programme, adjusted for the differences in the IMF staff's macroeconomic framework. 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: The fiscal projections for 2015 and the medium term are staff estimates based on the fiscal package included in the ESM program agreed between Greece and its European partners and on information available as of August 12, 2015.

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 recent legislative measures, as well as fiscal policy plans announced in the 2015 budget.

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

Indonesia: IMF projections are based on 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 Stability Plan Update (SPU). 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 (GFS) submitted by the Central Bureau of Statistics. Monetary policy stance is assumed to be unchanged.

Italy: Staff estimates and projections are based on the fiscal plans included in the government's 2015 Budget and Economic and Financial Document and subsequent approved measures. Estimates of the cyclically adjusted balance include the expenditure to clear capital arrears in 2013, which are excluded from the structural balance. After 2015, 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 the Budget Law and IMF staff projections.

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

Malaysia: Fiscal year 2014 projection is based on actual outturn. Fiscal year 2015 projections are based on preliminary outturn for the first half of 2015 and IMF staff projections taking into account the budget numbers.

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 broadly in line with the approved budget; projections for 2016 onward assume compliance with rules established in the Fiscal Responsibility Law.

Moldova: Fiscal projections are based on various bases and growth rates for GDP, consumption, imports, wages, energy prices, and demographic changes.

Myanmar: Fiscal projections are made 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 June 2014 release of revised macro data by the Central Bureau of Statistics because of the adoption of the European System of National and Regional Accounts (ESA 2010) and the revisions of data sources.

New Zealand: Fiscal projections are based on the authorities' 2015–16 budget documents and IMF staff estimates.

Norway: Fiscal projections are based on the authorities' 2015 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 2016 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: Data is on ESA-2010 basis beginning 2010. Data prior to 2010 is on ESA-95 basis. Projections are based on the 2015 budget. The projections also take into account the effects of the 2014 pension changes.

Portugal: For 2014, the general government fiscal balance does not include a one-off transaction arising from banking support, pending a decision on statistical classification by the Instituto Nacional de Estatística (INE)/Eurostat. The projection for 2015 reflects the authorities' 2015 budget and the first half outturn; projections thereafter are based on the IMF staff's macroeconomic forecast, under the assumption of unchanged policies.

Romania: The 2015 fiscal projections reflect legislated changes as of August 28, 2015, including a 25 percent increase in the wages of health care workers effective October 1, 2015. The 2016 and 2017 fiscal projections reflect planned changes to the fiscal code as of August 28, 2015. The projections for the years beyond 2017 assume no additional policy changes.

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 13th-month pay awards every three years in accordance with the lunar calendar. Projections assume that capital spending falls as a percentage of GDP over the medium term as large-scale projects currently being implemented are completed and that spending in the January and April 2015 fiscal packages is not repeated.

Singapore: For fiscal year 2014/15 and 2015/16, projections are based on budget numbers. For the remainder of the projection period, the IMF staff assumes unchanged policies.

Slovak Republic: Projections for 2015 take into account developments in the first quarters of the year and the authorities' new projections presented in the draft budget for 2016. Projections for 2016 consider the authorities' 2016 draft budget. Projections for 2017 and beyond reflect a no-policy-change scenario.

Spain: For 2015 and beyond, fiscal projections are based on the measures specified in the Stability Programme Update 2015–18, new recently approved measures included in the 2016 budget, 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 the revenue measures proposed.

Sweden: Fiscal projections take into account the authorities' projections based on the Spring Fiscal Policy Bill 2015. The impact of cyclical developments on the fiscal accounts is calculated using the 2005 Organization for Economic Cooperation's 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 and capital spending will be in line with the authorities' 2013–15 Medium-Term Program based on current trends and policies.

United Kingdom: Fiscal projections are based on the U.K. Treasury's 2015 Summer Budget, published in July 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. 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 projected by the U.K. Office for Budget Responsibility.

United States: Fiscal projections are based on the August 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 sequestered 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 upon under the Bipartisan Budget Act for fiscal years 2014 and 2015, with back-loaded measures generating savings in mandatory programs and additional revenues. 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 of defined benefit pension plans and are converted to a general government basis. Historical data start at 2001 for most series because data compiled according to GFSM 2001 may not be available for earlier years.

Vietnam: 2015 expenditure is based on authorities' budget; 2015 projections for oil revenues are based on *World Economic Outlook* assumptions for oil and gas prices. For projections from 2016 and onwards staff use the information/measures in the team's macro-framework assumptions.

Yemen: Hydrocarbon revenue projections are based on *World Economic Outlook* (WEO) assumptions for oil and gas prices (authorities use $55/brl) and authorities' projections of production of oil and gas. Non-hydrocarbon revenues largely reflect authorities' projections, as do most of the expenditure categories, with the exception of fuel subsidies, which are projected based at the WEO price consistent with revenues. Monetary projections are based on key macroeconomic assumptions about the growth rate of broad money, credit to the private sector, and deposit growth.

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	Côte d'Ivoire		India	United Kingdom	Saudi Arabia
Finland	Colombia	Democratic Republic of the Congo		Indonesia	United States	South Africa
France	Croatia	Republic of Congo		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	Côte d'Ivoire	Azerbaijan
Mongolia	Nicaragua	Chad	Tajikistan	Democratic Republic of the Congo	Bahrain
Myanmar		Côte d'Ivoire	Uzbekistan	Sudan	Brunei Darussalam
Nepal		Democratic Republic of the Congo	Yemen	Vietnam	Cameroon
Papua New Guinea		Republic of Congo		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	C	. . .	. . .	. . .	GG	CG, LG, SS	C
Czech Republic	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Denmark	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, 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, LG	A	GG	CG, SS, LG	A	GG	CG, SS, LG	A
Italy	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Japan	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Korea	CG	CG	C	CG	CG	C	GG	CG, LG	C
Latvia	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C	GG	CG, LG, SS, NFPC	C
Lithuania	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Luxembourg	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Malta	GG	CG, SS	A	GG	CG, SS	A	GG	CG, 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, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
Portugal	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, 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, LG, SS	A	GG	CG, LG, SS	A	GG	CG, LG, SS	A
Switzerland	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A
United Kingdom	GG	CG, LG	A	GG	CG, LG	A	GG	CG, LG	A
United States	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A	GG	CG, SG, LG, SS	A

Note: Coverage: BCG = 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 were 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, LG	Other	. . .	. . .	. . .	GG	CG, LG	Other
Argentina	GG	CG, SG, LG, SS	C	CG	CG	C	CG	CG	C
Azerbaijan	CG	CG	C	. . .	. . .	. . .	CG	CG	C
Belarus[2]	GG	CG, LG, SS	C	. . .	. . .	. . .	GG	CG, 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, LG	A	CG	CG, LG	A	GG	CG, LG	A
China	GG	CG, LG	C	GG	CG, LG	C	GG	CG, 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	C/A	GG	CG, SG, LG, SS	C/A	GG	CG, SG, LG, SS	C/A
Ecuador	NFPS	CG, LG, SS, NFPC	C	NFPS	CG, LG, SS, NFPC	C	NFPS	CG, LG, SS, NFPC	C
Egypt	CG	CG, LG, SS, MPC	C	GG	CG, LG, SS, MPC	C	GG	CG, LG, SS, MPC	C
Hungary	GG	CG, LG, SS, NMPC	A	GG	CG, LG, SS, NMPC	A	GG	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	C	CG	CG	C	PS	CG, SS, NFPC	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, LG, SS	C	GG	CG, LG, SS	C	GG	CG, LG, SS	C
Russia	GG	CG, SG, SS	C/A	GG	CG, SG, SS	C/A	GG	CG, SG, SS	C/A
Saudi Arabia	GG	CG	C	. . .	. . .	. . .	GG	CG	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	A	GG	CG, LG, SS	A	PS	CG, SS, NFPC, NMPC	A
Turkey	GG	CG, LG, SS	A	GG	CG, LG, SS	A	GG	CG, 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, BCG, SG, SS	C	. . .	. . .	. . .	GG	CG, BCG, SG, SS	C
Uruguay	PS	CG, LG, SS, MPC, NFPC	A	. . .	. . .	. . .	PS	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: BCG = 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] Data for Thailand do 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, LG	A	. . .	. . .	. . .	GG	CG, LG	A
Republic of Congo	CG	CG	A	. . .	. . .	. . .	CG	CG	A
Côte d'Ivoire	CG	CG	A	. . .	. . .	. . .	CG	CG	A
Ethiopia	CG	CG, SG, LG, NFPC	C	. . .	. . .	. . .	CG	CG, SG, LG, NFPC	C
Ghana	CG	CG, SG, LG	C	. . .	. . .	. . .	CG	CG, SG, LG	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, LG	C	. . .	. . .	. . .	CG	CG, LG	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, SG, LG, NFPC	C	. . .	. . .	. . .	GG	CG, SG, LG, NFPC	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, LG	C	. . .	. . .	. . .	CG	CG, LG	C
Uganda	CG	CG	C	. . .	. . .	. . .	CG	CG	C
Uzbekistan[4]	GG	CG, SG, LG, SS	C	. . .	. . .	. . .	GG	CG, SG, LG, SS	C
Vietnam	GG	CG, SG, LG	C	GG	CG, SG, LG	C	GG	CG, SG, LG	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: BCG = 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] Uzbekistan's listing 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	–3.5	–2.8	–2.8	–2.4	–1.8	–0.9	–0.2	0.1	0.2
Austria	–2.5	–1.3	–1.4	–5.3	–4.4	–2.6	–2.2	–1.3	–2.4	–2.0	–1.7	–1.3	–1.1	–0.9	–0.9
Belgium	0.2	0.0	–1.1	–5.5	–4.0	–4.1	–4.1	–2.9	–3.2	–2.8	–2.3	–1.6	–1.0	–0.7	–0.4
Canada	1.8	1.5	–0.3	–4.5	–4.9	–3.7	–3.1	–2.7	–1.6	–1.7	–1.3	–1.0	–0.7	–0.6	–0.3
Cyprus	–1.1	3.3	0.9	–5.5	–4.8	–5.8	–5.8	–4.4	–0.2	–1.3	0.1	0.9	1.7	1.7	1.7
Czech Republic	–2.3	–0.7	–2.1	–5.5	–4.4	–2.7	–3.9	–1.2	–2.0	–1.8	–1.1	–1.0	–0.9	–1.0	–1.0
Denmark	5.0	5.0	3.2	–2.8	–2.7	–2.1	–3.7	–1.1	1.8	–2.7	–2.8	–2.4	–1.9	–1.5	–1.0
Estonia	2.4	2.4	–2.9	–1.9	0.2	1.0	–0.3	–0.5	0.6	–0.7	–0.5	–0.5	–0.5	–0.5	–0.4
Finland	3.9	5.1	4.2	–2.5	–2.5	–1.0	–2.1	–2.5	–3.2	–3.2	–2.8	–2.6	–2.3	–1.9	–1.4
France	–2.3	–2.5	–3.2	–7.2	–6.8	–5.1	–4.8	–4.1	–4.0	–3.8	–3.4	–2.8	–2.1	–1.4	–0.7
Germany	–1.5	0.3	0.0	–3.0	–4.1	–0.9	0.1	0.1	0.3	0.5	0.3	0.4	0.6	1.0	1.0
Greece	–6.1	–6.7	–9.9	–15.3	–11.1	–10.2	–6.4	–2.9	–3.9	–4.2	–3.6	–2.4	–1.0	–0.1	–0.3
Hong Kong SAR	4.1	8.1	0.1	1.5	4.4	4.1	3.3	1.1	3.8	3.5	2.7	2.1	2.8	3.7	3.7
Iceland	5.9	4.9	–13.1	–9.7	–9.7	–5.6	–3.7	–1.7	–0.2	1.3	0.4	1.0	–0.1	–0.3	0.3
Ireland[1]	2.8	0.2	–7.0	–13.8	–32.2	–12.4	–8.0	–5.6	–4.0	–2.0	–1.3	–0.4	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	–3.7	–3.8	–3.8	–3.8	–3.8	–3.8
Italy	–3.6	–1.5	–2.7	–5.3	–4.2	–3.5	–3.0	–2.9	–3.0	–2.7	–2.0	–1.2	–0.8	–0.4	–0.2
Japan	–3.7	–2.1	–4.1	–10.4	–9.3	–9.8	–8.8	–8.5	–7.3	–5.9	–4.5	–4.1	–3.8	–3.8	–4.1
Korea	1.1	2.2	1.5	0.0	1.5	1.7	1.6	0.6	0.8	–0.5	0.3	0.6	0.8	1.1	1.4
Latvia	–0.5	0.6	–3.1	–7.0	–6.4	–3.1	0.1	–0.6	–1.7	–1.4	–1.1	–1.8	–0.6	–0.4	–0.5
Lithuania	–0.4	–1.0	–3.3	–9.3	–6.9	–9.0	–3.2	–2.6	–0.7	–1.2	–1.4	–1.4	–1.3	–1.3	–1.1
Luxembourg	1.4	4.1	3.3	–0.5	–0.5	0.4	0.1	0.8	0.6	0.1	0.5	0.3	0.3	0.1	0.1
Malta	–2.6	–2.3	–4.2	–3.3	–3.3	–2.6	–3.6	–2.6	–2.1	–1.7	–1.4	–1.1	–0.9	–0.9	–0.8
Netherlands	0.2	0.2	0.2	–5.5	–5.0	–4.3	–3.9	–2.2	–2.3	–2.1	–1.8	–1.6	–1.4	–1.1	–0.9
New Zealand	3.7	2.8	0.8	–2.2	–6.6	–6.2	–2.6	–1.6	–0.8	–0.3	–0.1	0.1	0.4	0.7	0.8
Norway	18.0	17.0	18.5	10.3	10.9	13.2	13.5	11.0	8.8	6.0	6.2	6.7	7.0	7.0	6.7
Portugal	–2.0	–3.0	–3.8	–9.8	–11.2	–7.4	–5.6	–4.8	–4.5	–3.1	–2.7	–2.5	–2.4	–2.3	–2.3
Singapore	7.0	11.8	6.4	–0.6	6.6	8.5	7.8	5.5	3.3	1.1	2.1	2.2	2.3	2.5	2.5
Slovak Republic	–3.6	–1.9	–2.4	–7.9	–7.5	–4.1	–4.2	–2.6	–2.9	–2.5	–2.6	–2.2	–1.9	–1.8	–1.7
Slovenia	–0.8	0.3	–0.3	–5.4	–5.2	–5.5	–3.1	–13.9	–5.8	–3.7	–5.3	–5.0	–5.1	–5.2	–5.1
Spain[1]	2.2	2.0	–4.4	–11.0	–9.4	–9.4	–10.3	–6.8	–5.8	–4.4	–3.2	–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	–1.9	–1.4	–0.7	–0.4	0.0	0.4	0.7
Switzerland	0.9	1.3	1.7	0.5	0.1	0.3	–0.1	–0.1	–0.1	–0.2	–0.2	–0.1	–0.1	0.0	0.0
United Kingdom	–2.9	–3.0	–5.1	–10.8	–9.7	–7.6	–7.8	–5.7	–5.7	–4.2	–2.8	–1.6	–0.8	0.0	0.1
United States[2]	–2.0	–2.9	–6.7	–13.1	–10.9	–9.6	–7.9	–4.7	–4.1	–3.8	–3.6	–3.3	–3.4	–3.9	–4.2
Average	–1.4	–1.1	–3.5	–8.8	–7.7	–6.3	–5.5	–3.8	–3.4	–3.1	–2.6	–2.2	–2.0	–2.0	–2.0
Euro Area	–1.4	–0.6	–2.1	–6.2	–6.1	–4.1	–3.6	–2.9	–2.4	–2.0	–1.7	–1.2	–0.8	–0.4	–0.2
G7	–2.3	–2.1	–4.5	–10.0	–8.8	–7.5	–6.4	–4.5	–4.0	–3.5	–3.1	–2.6	–2.5	–2.6	–2.6
G20 Advanced	–2.1	–1.9	–4.2	–9.6	–8.3	–7.0	–6.1	–4.3	–3.8	–3.4	–2.9	–2.5	–2.3	–2.3	–2.4

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] Data include 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, they include one-offs of 0.5 percent of GDP, of which financial sector support of 0.1 percent of GDP. For 2015 and 2016, they include one-offs of 0.4 percent of GDP and no financial support.

[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	–2.8	–2.0	–1.9	–1.4	–0.7	0.1	0.8	1.1	1.2
Austria	–0.2	0.9	0.8	–3.1	–2.3	–0.4	–0.1	0.7	–0.5	–0.1	0.1	0.2	0.4	0.6	0.7
Belgium	3.9	3.6	2.4	–2.1	–0.8	–1.0	–1.0	0.0	–0.4	–0.2	0.1	0.7	1.1	1.4	1.6
Canada	2.4	2.0	–0.2	–3.7	–4.3	–3.3	–2.5	–2.3	–1.3	–1.3	–1.0	–0.8	–0.5	–0.4	–0.1
Cyprus	1.4	5.4	3.1	–3.5	–3.2	–4.0	–3.3	–2.0	2.3	1.3	2.4	3.0	3.6	3.6	3.6
Czech Republic	–1.6	0.0	–1.4	–4.5	–3.3	–1.6	–2.7	–0.1	–0.9	–0.9	–0.2	–0.1	0.0	–0.1	–0.1
Denmark	5.8	5.6	3.4	–2.4	–2.1	–1.5	–3.1	–0.6	2.2	–2.1	–2.1	–1.8	–1.6	–1.3	–0.8
Estonia	2.2	2.0	–3.3	–2.2	0.0	0.9	–0.3	–0.5	0.6	–0.8	–0.6	–0.4	–0.4	–0.4	–0.3
Finland	3.7	4.8	3.6	–2.9	–2.5	–1.0	–1.9	–2.4	–2.9	–2.9	–2.6	–2.5	–2.4	–1.9	–1.4
France	0.0	–0.1	–0.5	–4.9	–4.5	–2.6	–2.4	–1.9	–1.9	–1.8	–1.6	–1.0	–0.3	0.4	1.0
Germany	0.9	2.7	2.3	–0.6	–1.9	1.2	2.0	1.8	1.7	1.7	1.2	1.2	1.3	1.7	1.7
Greece	–1.6	–2.2	–5.0	–10.3	–5.3	–3.0	–1.4	1.0	0.0	–0.5	0.0	1.3	2.5	3.5	3.5
Hong Kong SAR	2.1	6.3	–2.6	–0.4	2.5	2.0	1.4	–0.7	1.7	1.4	0.6	0.2	0.8	1.8	1.7
Iceland	6.3	5.1	–13.3	–6.6	–6.8	–2.7	–0.2	1.9	3.5	4.0	2.6	3.3	2.3	2.4	2.8
Ireland[1]	3.5	0.8	–6.3	–12.4	–29.7	–9.6	–4.3	–1.8	–0.6	0.8	1.2	2.1	2.4	2.5	2.3
Israel	2.9	3.4	0.8	–2.2	–0.7	–0.2	–1.4	–0.5	–0.1	–0.3	–0.3	–0.3	–0.3	–0.3	–0.3
Italy	0.6	3.0	2.0	–1.1	–0.2	0.9	1.9	1.7	1.4	1.3	2.0	2.6	2.8	3.2	3.4
Japan	–3.7	–2.1	–3.8	–9.9	–8.6	–9.0	–7.9	–7.8	–6.7	–5.4	–4.0	–3.5	–3.2	–3.2	–3.2
Korea	2.3	1.4	1.2	–0.7	0.8	0.9	0.8	–0.2	–0.1	–1.0	0.0	0.6	0.8	1.1	1.6
Latvia	–0.1	0.8	–3.0	–6.3	–5.4	–2.2	1.3	0.6	–0.4	–0.2	–0.1	–0.8	0.7	0.6	0.4
Lithuania	0.1	–0.5	–2.8	–8.2	–5.2	–7.2	–1.2	–0.9	0.9	0.4	0.2	0.2	0.4	0.4	0.7
Luxembourg	0.6	3.1	2.0	–1.1	–0.8	0.2	–0.1	0.7	0.3	–0.1	0.3	0.1	0.0	–0.3	–0.4
Malta	1.1	1.2	–0.8	0.0	–0.2	0.6	–0.6	0.3	0.8	1.0	1.2	1.4	1.5	1.6	1.7
Netherlands	1.6	1.5	1.6	–4.2	–3.9	–3.1	–2.8	–1.1	–1.1	–0.9	–0.7	–0.5	–0.3	–0.1	0.1
New Zealand	4.3	3.2	1.1	–1.9	–6.1	–5.6	–1.8	–0.9	–0.2	0.2	0.3	0.6	0.9	1.2	1.2
Norway	15.9	14.1	15.5	8.0	8.8	11.1	11.7	9.2	6.7	3.9	4.1	4.6	4.9	4.9	4.5
Portugal	–0.1	–0.9	–1.7	–7.8	–9.1	–4.1	–1.9	0.1	0.5	1.7	1.8	1.9	1.8	1.8	1.8
Singapore	5.6	10.4	5.0	–2.0	5.1	7.0	6.4	4.1	1.8	–0.3	0.7	0.8	0.9	1.0	0.9
Slovak Republic	–2.7	–1.0	–1.5	–6.8	–6.4	–2.8	–2.6	–0.9	–1.2	–1.2	–1.3	–1.0	–0.9	–0.8	–0.7
Slovenia	0.3	1.2	0.5	–4.6	–4.0	–4.2	–1.4	–11.6	–2.8	–0.8	–2.5	–2.2	–2.0	–1.9	–1.8
Spain[1]	3.5	3.1	–3.4	–9.6	–7.8	–7.5	–7.9	–4.0	–2.9	–1.8	–0.7	–0.1	0.4	0.9	0.9
Sweden	2.9	4.0	2.5	–0.7	0.2	0.3	–0.6	–1.4	–2.0	–1.6	–0.9	–0.6	–0.2	0.3	0.7
Switzerland	1.8	1.9	2.3	1.1	0.7	0.8	0.4	0.2	0.3	0.2	0.2	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	–2.6	–1.1	0.3	1.2	1.9	2.0
United States	–0.1	–0.8	–4.6	–11.2	–8.9	–7.3	–5.7	–2.7	–2.0	–1.8	–1.5	–1.1	–1.0	–1.3	–1.4
Average	0.2	0.5	–1.9	–7.2	–6.0	–4.5	–3.7	–2.2	–1.7	–1.5	–1.0	–0.6	–0.3	–0.2	–0.2
Euro Area	1.1	1.9	0.4	–3.8	–3.7	–1.5	–1.0	–0.4	–0.1	0.1	0.3	0.7	1.0	1.4	1.6
G7	–0.5	–0.2	–2.6	–8.2	–6.8	–5.4	–4.4	–2.7	–2.1	–1.8	–1.3	–0.8	–0.6	–0.5	–0.5
G20 Advanced	–0.3	–0.1	–2.4	–7.8	–6.5	–5.1	–4.1	–2.6	–2.0	–1.7	–1.2	–0.8	–0.5	–0.4	–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] Data include 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, they include one-offs of 0.5 percent of GDP, of which financial sector support of 0.1 percent of GDP. For 2015 and 2016, they include one-offs of 0.4 percent of GDP and no financial support.

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	–4.5	–4.9	–4.2	–3.2	–2.4	–2.3	–1.8	–1.2	–0.4	0.2	0.3	0.3
Austria	–3.1	–3.3	–3.5	–4.2	–3.8	–3.0	–2.4	–1.1	–1.9	–1.3	–1.4	–1.3	–1.1	–1.0	–0.9
Belgium	–0.5	–1.3	–2.2	–4.7	–3.9	–4.3	–3.8	–2.2	–2.6	–2.2	–1.8	–1.2	–0.8	–0.6	–0.4
Canada	1.0	0.8	–0.6	–3.0	–4.1	–3.3	–2.7	–2.3	–1.5	–1.2	–0.8	–0.7	–0.6	–0.6	–0.3
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	–3.9	–3.0	–4.3	–5.3	–4.3	–2.8	–3.2	0.0	–1.1	–1.7	–1.1	–1.1	–1.0	–1.0	–1.0
Denmark	3.3	3.3	1.6	–1.9	–1.7	–1.3	–2.7	0.0	2.5	–2.4	–2.7	–2.6	–2.2	–1.8	–1.3
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	2.2	2.1	1.7	–0.1	–1.3	–0.9	–1.1	–0.9	–1.0	–0.9	–1.0	–1.2	–1.2	–1.2	–1.1
France	–2.9	–3.6	–3.8	–5.7	–5.9	–4.8	–4.1	–3.2	–2.7	–2.5	–2.3	–2.0	–1.6	–1.1	–0.7
Germany	–1.6	–0.9	–1.1	–0.9	–3.4	–1.4	–0.1	0.4	0.4	0.5	0.2	0.2	0.4	0.8	0.8
Greece	–8.4	–10.4	–13.9	–18.6	–12.1	–8.6	–2.9	0.9	–0.4	–0.7	–0.1	0.3	0.7	0.9	0.3
Hong Kong SAR[1]	1.8	4.2	–0.6	–0.9	0.9	0.4	0.4	–1.2	0.8	1.0	–0.1	–0.6	0.0	0.9	0.8
Iceland	4.3	2.8	–4.4	–10.0	–7.6	–4.6	–2.8	–1.3	–0.1	1.0	–0.1	0.7	–0.3	–0.4	0.3
Ireland[1]	–5.6	–9.9	–13.1	–11.0	–8.8	–6.1	–4.6	–3.7	–2.5	–1.4	–1.0	–0.3	0.0	0.0	0.0
Israel	–1.9	–1.7	–3.5	–5.3	–4.3	–4.2	–5.3	–4.2	–3.5	–3.5	–3.7	–3.8	–3.8	–3.8	–3.8
Italy	–4.4	–2.9	–3.6	–3.6	–3.5	–3.2	–1.4	–0.7	–0.6	–0.6	–0.4	0.0	0.1	0.2	0.1
Japan	–3.5	–2.2	–3.5	–7.4	–7.8	–8.4	–7.8	–8.2	–6.8	–5.5	–4.3	–3.8	–3.6	–3.8	–4.1
Korea	0.9	1.8	1.3	1.2	1.4	1.5	1.6	0.8	0.9	–0.3	0.4	0.6	0.8	1.1	1.3
Latvia	–1.4	–1.0	–8.4	–3.2	–3.2	–1.3	0.8	–0.9	–1.5	–1.2	–0.9	–1.7	–0.5	–0.3	–0.5
Lithuania	–0.4	–1.0	–3.3	–9.3	–6.9	–8.9	–3.1	–2.6	–0.7	–1.2	–1.4	–1.4	–1.3	–1.2	–1.1
Luxembourg	1.4	2.1	2.2	1.3	–0.5	0.1	1.2	1.4	0.4	–0.3	0.2	0.2	0.3	0.1	0.1
Malta	–2.7	–3.1	–5.6	–2.4	–3.1	–2.4	–3.7	–2.9	–2.5	–2.1	–1.8	–1.3	–1.0	–0.9	–0.8
Netherlands	0.5	–0.1	0.6	–3.0	–2.8	–2.5	–1.5	0.3	0.2	–0.2	–0.1	0.0	0.0	0.1	0.1
New Zealand	3.1	2.6	1.2	–1.8	–6.1	–5.9	–2.4	–1.4	–0.7	–0.3	–0.1	0.1	0.4	0.7	0.3
Norway[1]	–3.5	–3.3	–3.4	–5.7	–5.5	–4.6	–5.1	–5.3	–6.1	–7.0	–7.5	–7.3	–7.2	–7.2	–7.3
Portugal	–1.9	–3.7	–4.2	–8.9	–10.8	–6.3	–3.1	–1.7	–2.1	–1.6	–1.9	–2.1	–2.2	–2.2	–2.3
Singapore	7.0	11.5	6.6	1.0	6.2	8.0	7.7	5.2	3.1	1.3	2.3	2.4	2.5	2.6	2.4
Slovak Republic	–4.1	–4.3	–5.0	–7.2	–7.6	–4.0	–3.8	–2.0	–2.4	–2.0	–2.5	–2.3	–2.0	–1.9	–1.7
Slovenia	–2.0	–2.4	–2.9	–4.1	–4.4	–3.9	–1.6	–1.4	–2.5	–1.8	–4.5	–4.7	–5.0	–5.3	–5.3
Spain[1]	1.2	0.5	–5.6	–9.5	–7.8	–7.0	–3.7	–3.0	–2.5	–2.3	–1.8	–2.0	–2.0	–1.7	–1.9
Sweden[1]	1.1	1.4	0.8	–0.1	0.7	0.1	0.0	–0.6	–1.1	–1.0	–0.8	–0.7	–0.4	0.0	0.4
Switzerland[1]	0.5	0.4	0.8	0.8	0.2	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
United Kingdom[1]	–4.7	–5.4	–6.7	–9.7	–8.0	–5.8	–5.6	–3.6	–4.3	–3.6	–2.5	–1.5	–0.7	0.0	0.1
United States[1, 2]	–3.2	–4.0	–5.9	–7.6	–9.4	–8.1	–6.2	–4.1	–3.6	–3.1	–3.0	–3.0	–3.3	–3.8	–4.1
Average	–2.4	–2.5	–4.0	–5.9	–6.6	–5.6	–4.4	–3.2	–2.8	–2.5	–2.2	–2.0	–2.0	–2.1	–2.1
Euro Area	–2.0	–2.0	–3.2	–4.5	–4.8	–3.7	–2.5	–1.3	–1.1	–1.0	–1.0	–0.8	–0.6	–0.3	–0.2
G7	–3.1	–3.2	–4.5	–6.4	–7.5	–6.4	–5.2	–3.8	–3.3	–2.8	–2.5	–2.3	–2.3	–2.5	–2.6
G20 Advanced	–2.8	–2.9	–4.2	–6.1	–7.2	–6.1	–4.9	–3.6	–3.1	–2.7	–2.4	–2.1	–2.1	–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] The data for these countries include 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	–4.4	–4.6	–3.7	–2.5	–1.6	–1.4	–0.8	–0.1	0.6	1.2	1.3	1.3
Austria	–0.7	–1.0	–1.2	–2.0	–1.7	–0.8	–0.3	0.9	0.0	0.5	0.3	0.3	0.3	0.6	0.7
Belgium	3.3	2.4	1.4	–1.4	–0.7	–1.1	–0.7	0.6	0.3	0.3	0.5	1.0	1.3	1.5	1.6
Canada	1.6	1.4	–0.5	–2.2	–3.4	–2.9	–2.1	–2.0	–1.1	–0.8	–0.5	–0.5	–0.4	–0.3	–0.1
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	–3.2	–2.2	–3.5	–4.3	–3.3	–1.7	–2.1	1.1	0.0	–0.8	–0.2	–0.2	–0.1	–0.1	–0.1
Denmark	4.1	3.9	1.7	–1.5	–1.1	–0.7	–2.2	0.4	2.9	–1.8	–2.0	–2.0	–1.9	–1.6	–1.1
Estonia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Finland	2.0	1.7	1.1	–0.4	–1.3	–0.9	–0.9	–0.8	–0.8	–0.7	–0.8	–1.1	–1.3	–1.1	–1.1
France	–0.5	–1.1	–1.1	–3.5	–3.6	–2.3	–1.7	–1.1	–0.7	–0.7	–0.5	–0.2	0.2	0.6	1.0
Germany	0.8	1.6	1.3	1.4	–1.2	0.7	1.8	2.0	1.8	1.7	1.1	1.0	1.1	1.6	1.5
Greece	–3.6	–5.4	–8.4	–13.2	–6.1	–1.6	1.8	4.6	3.2	2.7	3.2	3.7	4.1	4.4	4.0
Hong Kong SAR[1]	–0.3	2.4	–3.4	–2.8	–1.0	–1.6	–1.5	–3.0	–1.3	–1.1	–2.1	–2.5	–1.9	–1.0	–1.1
Iceland	4.7	3.1	–4.6	–6.9	–4.7	–1.7	0.6	2.3	3.8	4.1	2.3	3.4	2.4	2.8	3.2
Ireland[1]	–4.8	–9.2	–12.4	–9.6	–6.5	–3.4	–1.2	–0.1	0.9	1.3	1.5	2.2	2.5	2.5	2.3
Israel	3.1	2.9	0.6	–1.4	–0.5	–0.5	–1.6	–0.7	0.0	–0.1	–0.2	–0.3	–0.3	–0.3	–0.3
Italy	–0.1	1.7	1.1	0.5	0.5	1.2	3.3	3.8	3.6	3.3	3.5	3.7	3.7	3.7	3.8
Japan	–3.6	–2.2	–3.2	–6.9	–7.2	–7.6	–6.9	–7.5	–6.2	–5.0	–3.8	–3.3	–3.0	–3.1	–3.2
Korea	2.2	1.0	0.9	0.5	0.7	0.8	0.8	–0.1	0.1	–0.9	0.0	0.6	0.8	1.0	1.6
Latvia	–1.0	–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	0.5
Lithuania	0.1	–0.5	–2.7	–8.3	–5.3	–7.3	–1.2	–0.8	0.9	0.4	0.2	0.2	0.4	0.5	0.8
Luxembourg	0.6	1.0	0.9	0.8	–0.8	–0.1	1.0	1.2	0.1	–0.6	0.0	–0.1	0.0	–0.3	–0.4
Malta	1.1	0.6	–2.0	0.9	0.1	0.8	–0.6	0.2	0.5	0.8	0.9	1.4	1.5	1.7	1.8
Netherlands	2.0	1.2	2.0	–1.8	–1.7	–1.3	–0.5	1.4	1.3	0.9	1.0	1.0	1.0	1.1	1.2
New Zealand	3.8	3.1	1.5	–1.5	–5.6	–5.2	–1.7	–0.8	–0.1	0.2	0.4	0.6	0.9	1.1	0.8
Norway[1]	–6.5	–7.3	–7.4	–8.8	–8.2	–7.3	–7.5	–7.7	–8.9	–9.6	–10.1	–10.0	–9.9	–9.8	–9.9
Portugal	0.0	–1.6	–2.1	–6.9	–8.7	–3.1	0.4	2.9	2.6	3.1	2.6	2.2	2.0	1.9	1.8
Singapore	5.5	10.0	5.1	–0.4	4.6	6.5	6.2	3.7	1.6	–0.1	0.9	1.0	1.1	1.1	1.0
Slovak Republic	–3.2	–3.3	–4.1	–6.1	–6.4	–2.7	–2.2	–0.3	–0.7	–0.7	–1.2	–1.0	–1.0	–0.9	–0.7
Slovenia	–0.8	–1.4	–2.1	–3.3	–3.2	–2.6	0.0	0.7	0.4	0.9	–1.8	–1.9	–2.0	–2.0	–1.9
Spain[1]	2.5	1.6	–4.5	–8.2	–6.3	–5.1	–1.4	–0.4	0.2	0.3	0.6	0.4	0.4	0.7	0.5
Sweden[1]	2.0	2.1	1.2	0.1	0.9	0.3	0.0	–0.7	–1.2	–1.2	–1.0	–0.9	–0.6	–0.1	0.4
Switzerland[1]	1.4	1.1	1.4	1.4	0.8	0.9	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3
United Kingdom[1]	–3.1	–3.7	–5.2	–8.4	–5.6	–3.1	–3.3	–2.3	–2.5	–2.0	–0.8	0.4	1.2	1.9	1.9
United States[1]	–1.2	–1.9	–3.8	–5.8	–7.5	–5.8	–4.0	–2.1	–1.5	–1.1	–0.9	–0.8	–0.9	–1.3	–1.3
Average	–0.8	–0.9	–2.3	–4.4	–5.0	–3.8	–2.6	–1.6	–1.2	–0.9	–0.6	–0.4	–0.3	–0.3	–0.3
Euro Area	0.6	0.6	–0.5	–2.1	–2.4	–1.1	0.1	1.1	1.2	1.1	1.0	1.1	1.2	1.5	1.6
G7	–1.3	–1.3	–2.5	–4.6	–5.6	–4.4	–3.2	–2.0	–1.5	–1.1	–0.8	–0.5	–0.4	–0.5	–0.5
G20 Advanced	–1.1	–1.1	–2.4	–4.5	–5.4	–4.2	–3.0	–1.9	–1.4	–1.0	–0.7	–0.4	–0.3	–0.4	–0.3

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] The data for these countries include 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	34.1	34.2	34.8	35.1	35.5	35.9	36.3	36.4
Austria	47.7	47.8	48.3	48.8	48.3	48.2	48.7	49.5	49.8	50.0	49.4	49.5	49.6	49.6	49.7
Belgium	47.9	47.6	48.3	47.7	48.4	49.3	50.7	51.5	51.1	50.6	50.4	50.4	50.4	50.4	50.4
Canada	40.4	40.1	38.9	39.1	38.3	38.0	38.0	38.0	37.7	38.1	38.1	38.3	38.3	38.4	38.7
Cyprus	38.7	41.5	39.8	37.1	37.7	37.0	36.3	37.6	40.2	39.6	39.1	38.8	38.8	38.8	38.9
Czech Republic	38.5	39.3	38.1	38.1	38.6	39.7	39.9	40.9	40.1	40.2	39.2	39.5	39.6	39.7	39.7
Denmark	54.8	54.6	53.7	54.0	54.3	54.8	55.1	56.0	58.7	51.7	51.3	50.0	50.0	50.1	50.3
Estonia	35.7	36.0	36.1	42.3	40.6	38.4	38.7	37.9	38.4	38.4	38.9	39.4	39.8	40.0	40.1
Finland	52.3	51.9	52.4	52.3	52.2	53.4	54.0	55.0	55.2	55.6	55.2	54.8	54.8	55.0	55.2
France	50.2	49.7	49.8	49.6	49.6	50.8	52.0	52.9	53.5	53.2	53.1	52.9	53.0	53.0	53.0
Germany	42.9	43.0	43.4	44.3	43.0	43.6	44.1	44.2	44.6	44.4	43.8	43.9	43.9	44.1	44.1
Greece	38.7	40.2	40.6	38.7	41.1	43.8	45.0	45.7	45.4	45.9	44.2	43.6	42.4	41.8	41.2
Hong Kong SAR	20.0	23.4	18.8	19.0	22.2	24.1	22.6	22.1	22.1	21.9	21.8	21.3	21.7	21.6	21.6
Iceland	47.0	45.9	42.5	38.9	39.6	40.1	41.8	42.4	45.4	44.9	44.2	43.7	42.6	42.6	42.6
Ireland	36.7	36.1	34.9	33.4	33.4	33.0	33.8	33.9	34.2	33.7	32.8	32.6	32.5	32.4	32.3
Israel	42.3	41.4	39.0	36.2	37.1	37.3	36.2	36.9	37.3	37.3	37.3	37.3	37.3	37.3	37.3
Italy	44.0	45.2	45.1	45.9	45.6	45.6	47.8	48.0	48.1	48.0	48.0	47.9	47.9	47.9	47.9
Japan	30.8	31.2	31.6	29.6	29.6	30.8	31.1	32.0	33.0	33.7	34.0	34.5	35.3	35.5	36.0
Korea	21.3	22.6	22.3	21.3	21.0	21.6	22.1	21.5	20.7	20.3	19.9	19.9	20.0	20.0	20.0
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	33.5	33.3	32.7
Lithuania	33.3	33.4	33.8	34.3	34.3	32.6	32.1	32.1	33.5	32.9	32.4	32.1	32.6	33.0	33.3
Luxembourg	40.9	41.4	42.6	44.3	43.3	42.9	43.9	43.4	42.6	41.9	42.0	41.7	41.7	41.6	41.6
Malta	39.7	38.9	38.4	38.6	37.8	38.3	38.9	40.0	42.0	43.2	41.7	40.8	40.3	40.2	40.1
Netherlands	43.2	42.6	43.8	42.7	43.2	42.7	43.2	44.0	43.8	42.4	41.8	41.7	41.6	41.4	41.3
New Zealand	38.3	36.8	36.4	35.1	34.3	34.4	34.3	34.1	34.1	34.9	34.9	34.7	34.7	34.6	34.6
Norway	57.4	56.5	57.4	55.4	55.0	56.2	55.8	54.4	53.7	53.9	52.7	53.2	53.3	53.3	53.2
Portugal	40.9	41.5	41.6	40.4	40.6	42.6	42.9	45.2	44.5	44.8	44.8	44.8	44.7	44.7	44.7
Singapore	19.8	23.8	24.0	17.4	21.1	23.2	22.3	21.5	21.4	21.5	21.7	21.9	22.3	22.6	22.7
Slovak Republic	34.9	34.1	34.3	35.9	34.5	36.4	36.0	38.4	38.9	39.3	38.7	38.6	38.4	38.4	38.3
Slovenia	41.1	39.8	40.4	39.8	40.8	40.6	41.7	41.0	41.5	40.8	38.7	38.4	38.4	38.3	38.4
Spain	40.5	40.9	36.7	34.8	36.2	36.0	37.0	37.5	37.8	37.6	37.6	37.6	37.7	37.7	37.6
Sweden	52.2	51.7	51.0	51.0	49.6	49.0	49.5	49.3	48.5	48.7	49.1	49.4	49.6	49.6	49.6
Switzerland	33.4	32.7	31.4	31.8	31.2	31.7	31.3	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4
United Kingdom	36.8	36.5	37.0	35.1	35.6	36.1	36.3	36.8	35.7	36.0	36.3	36.5	36.4	36.5	36.5
United States	31.5	31.6	30.1	28.4	28.7	29.0	29.4	31.5	31.6	32.2	32.3	32.0	31.5	31.2	31.1
Average	36.5	36.9	36.4	35.1	34.9	35.5	35.7	36.9	36.9	36.6	36.6	36.5	36.4	36.3	36.3
Euro Area	44.5	44.6	44.4	44.3	44.2	44.8	45.8	46.4	46.6	46.3	46.0	45.9	45.9	45.9	45.9
G7	35.7	36.1	35.7	34.3	34.1	34.8	35.0	36.4	36.6	36.5	36.5	36.4	36.3	36.1	36.2
G20 Advanced	35.3	35.7	35.3	33.9	33.7	34.2	34.5	35.8	35.9	35.8	35.9	35.7	35.6	35.5	35.5

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	36.9	36.9	37.0	37.3	36.9	36.4	36.1	36.2	36.2
Austria	50.2	49.1	49.8	54.1	52.7	50.8	50.9	50.8	52.2	52.0	51.1	50.8	50.7	50.5	50.5
Belgium	47.7	47.6	49.4	53.2	52.3	53.4	54.8	54.5	54.4	53.4	52.7	52.0	51.4	51.1	50.8
Canada	38.6	38.6	39.2	43.7	43.3	41.7	41.1	40.7	39.4	39.7	39.5	39.2	39.1	39.0	39.0
Cyprus	39.7	38.2	38.9	42.6	42.5	42.8	42.1	42.0	40.4	40.9	38.9	37.8	37.2	37.0	37.2
Czech Republic	40.8	40.0	40.2	43.6	43.0	42.4	43.8	42.0	42.1	42.0	40.3	40.4	40.5	40.6	40.7
Denmark	49.8	49.6	50.5	56.8	57.1	56.8	58.8	57.1	56.9	54.4	54.0	52.4	52.0	51.6	51.3
Estonia	33.3	33.6	39.0	44.2	40.4	37.4	38.9	38.3	37.8	39.1	39.4	39.9	40.2	40.4	40.5
Finland	48.3	46.8	48.3	54.8	54.8	54.4	56.1	57.6	58.3	58.7	58.0	57.5	57.2	56.9	56.7
France	52.5	52.2	53.0	56.8	56.4	55.9	56.8	57.0	57.5	57.0	56.5	55.7	55.1	54.4	53.7
Germany	44.5	42.7	43.4	47.3	47.0	44.4	44.0	44.1	44.3	43.9	43.5	43.5	43.4	43.1	43.1
Greece	44.9	46.9	50.6	54.0	52.2	54.0	51.4	48.6	49.3	50.1	47.8	46.0	43.4	42.0	41.5
Hong Kong SAR	15.9	15.4	18.7	17.4	17.8	20.0	19.3	21.0	18.3	18.3	19.2	19.1	18.9	17.9	17.9
Iceland	41.1	41.0	55.7	48.5	49.4	45.7	45.5	44.1	45.5	43.6	43.8	42.7	42.7	42.9	42.4
Ireland	33.9	35.9	41.9	47.2	65.6	45.4	41.7	39.5	38.3	35.6	34.1	33.1	32.5	32.4	32.3
Israel	44.4	42.6	42.3	42.4	41.7	41.2	41.3	41.0	40.8	41.1	41.1	41.1	41.1	41.1	41.1
Italy	47.6	46.8	47.8	51.1	49.9	49.1	50.8	50.9	51.1	50.7	50.0	49.1	48.7	48.3	48.1
Japan	34.5	33.3	35.7	40.0	38.9	40.6	39.8	40.5	40.3	39.7	38.5	38.6	39.0	39.4	40.1
Korea	20.3	20.5	20.8	21.3	19.5	19.9	20.6	20.9	20.0	20.8	19.5	19.3	19.2	18.9	18.6
Latvia	33.9	33.2	36.5	42.6	42.5	38.7	37.0	36.6	37.1	36.5	34.9	34.5	34.1	33.7	33.2
Lithuania	33.7	34.4	37.0	43.6	41.2	41.5	35.3	34.7	34.1	34.1	33.8	33.5	33.9	34.2	34.4
Luxembourg	39.5	37.3	39.3	44.9	43.8	42.5	43.7	42.6	42.0	41.8	41.5	41.4	41.4	41.4	41.5
Malta	42.3	41.1	42.6	41.9	41.0	40.9	42.5	42.6	44.1	44.9	43.1	41.9	41.2	41.0	40.9
Netherlands	43.0	42.5	43.6	48.2	48.2	47.0	47.1	46.2	46.1	44.5	43.6	43.3	42.9	42.6	42.2
New Zealand	34.7	34.1	35.6	37.3	40.9	40.6	36.9	35.7	34.8	35.3	35.0	34.5	34.2	33.9	33.8
Norway	39.3	39.5	38.9	45.0	44.1	43.0	42.2	43.3	44.9	47.9	46.5	46.4	46.2	46.2	46.5
Portugal	42.9	44.5	45.3	50.2	51.8	50.0	48.5	50.1	49.0	47.9	47.5	47.3	47.1	47.0	46.9
Singapore	12.8	12.0	17.6	18.0	14.5	14.7	14.5	16.0	18.2	20.4	19.6	19.8	20.0	20.1	20.2
Slovak Republic	38.5	36.1	36.7	43.8	42.0	40.6	40.2	41.0	41.8	41.8	41.4	40.8	40.3	40.2	39.9
Slovenia	41.9	39.6	40.7	45.3	46.0	46.1	44.8	54.9	47.4	44.5	44.0	43.4	43.4	43.5	43.5
Spain	38.3	38.9	41.1	45.8	45.6	45.4	47.3	44.3	43.6	42.0	40.8	40.1	39.7	39.1	39.0
Sweden	50.1	48.3	48.9	51.9	49.6	49.0	50.2	50.7	50.4	50.1	49.8	49.8	49.6	49.2	48.8
Switzerland	32.5	31.5	29.7	31.3	31.0	31.4	31.4	31.5	31.4	31.6	31.6	31.5	31.4	31.4	31.4
United Kingdom	39.7	39.5	42.1	45.9	45.2	43.8	44.1	42.5	41.4	40.3	39.2	38.1	37.2	36.5	36.4
United States	33.6	34.5	36.8	41.5	39.7	38.6	37.3	36.2	35.7	36.0	35.9	35.3	34.9	35.1	35.3
Average	37.9	38.0	39.9	43.9	42.6	41.8	41.2	40.7	40.3	39.7	39.2	38.7	38.3	38.2	38.3
Euro Area	45.9	45.2	46.5	50.5	50.4	48.9	49.5	49.3	49.0	48.3	47.6	47.1	46.7	46.3	46.0
G7	38.0	38.2	40.2	44.3	42.9	42.2	41.4	41.0	40.6	40.0	39.6	39.0	38.7	38.7	38.8
G20 Advanced	37.3	37.5	39.5	43.5	42.0	41.3	40.6	40.1	39.7	39.2	38.7	38.2	37.9	37.8	37.9

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

Note: For country-specific details, see Data and Conventions in text, and Table 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	30.9	33.9	36.0	37.3	37.6	36.6	35.4	33.9
Austria	67.0	64.8	68.5	79.7	82.3	82.1	81.5	80.8	84.4	86.7	85.6	84.1	82.7	81.2	79.8
Belgium	90.7	86.8	92.2	99.2	99.5	102.0	103.9	104.4	106.6	106.7	106.2	104.9	102.9	100.5	97.9
Canada[1]	70.4	66.7	70.8	83.0	84.6	85.3	87.9	87.7	87.9	90.4	89.4	86.7	84.3	82.1	79.9
Cyprus	59.6	53.7	44.7	53.5	56.5	66.0	79.5	102.2	107.5	106.4	98.4	93.2	87.3	82.4	77.8
Czech Republic	27.9	27.8	28.7	34.1	38.2	39.9	44.6	45.1	42.6	40.6	40.0	39.4	38.8	38.4	38.1
Denmark	31.5	27.3	33.4	40.4	42.9	46.4	45.6	45.0	45.2	47.0	48.0	48.4	48.1	47.5	46.3
Estonia	4.4	3.7	4.5	7.0	6.5	5.9	9.5	9.9	10.4	10.8	10.8	10.6	10.5	10.4	10.1
Finland	38.1	34.0	32.7	41.7	47.1	48.5	52.9	55.6	59.0	61.9	64.0	65.4	66.7	67.0	66.6
France	64.2	64.2	67.9	78.8	81.5	85.0	89.4	92.3	95.6	97.1	98.0	98.0	97.2	95.5	93.1
Germany	66.6	63.8	65.2	72.7	80.6	77.9	79.3	77.0	74.6	70.7	68.2	65.9	63.4	60.4	57.9
Greece	102.9	102.8	108.8	126.2	145.7	171.0	156.5	175.0	177.1	196.9	206.6	203.6	197.0	189.4	182.5
Hong Kong SAR[1]	1.2	1.1	0.9	0.7	0.7	0.6	0.6	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Iceland	29.3	27.3	67.6	82.9	88.3	95.1	92.7	85.3	82.5	75.3	69.5	63.5	58.4	57.0	54.9
Ireland	23.6	23.9	42.4	61.8	86.8	109.3	120.2	120.0	107.6	100.6	95.9	92.9	88.9	85.7	82.9
Israel	79.8	72.7	71.6	74.3	70.6	68.8	67.9	67.2	67.1	67.2	67.2	67.8	68.6	69.4	70.1
Italy	102.5	99.7	102.3	112.5	115.3	116.4	123.1	128.5	132.1	133.1	132.3	130.5	128.3	125.8	123.0
Japan	186.0	183.0	191.8	210.2	215.8	229.7	236.6	242.6	246.2	245.9	247.8	248.8	250.4	250.9	251.7
Korea	29.3	28.7	28.0	31.2	31.0	31.7	32.3	34.5	36.0	38.2	39.3	40.2	40.7	40.6	40.2
Latvia	9.2	7.2	16.1	32.3	39.8	37.5	36.5	35.2	37.8	37.8	37.0	36.7	35.1	33.6	32.0
Lithuania	18.0	16.7	15.4	29.0	36.3	37.3	39.8	38.8	40.9	38.8	38.5	37.9	38.0	37.8	37.1
Luxembourg	7.0	7.0	14.4	15.4	19.6	18.6	21.5	23.0	22.1	22.8	23.2	23.7	24.2	24.8	25.3
Malta	64.6	62.4	62.7	67.8	67.6	69.7	67.6	69.8	68.5	67.2	66.9	64.7	63.2	61.4	59.6
Netherlands	47.4	45.3	58.5	60.8	59.0	61.3	66.1	67.6	67.9	67.6	65.6	65.3	64.5	63.4	62.0
New Zealand	16.4	14.6	17.0	21.8	27.1	31.9	32.4	31.0	30.4	30.3	30.7	30.0	27.5	25.5	24.0
Norway	52.3	49.2	47.3	42.0	42.4	28.9	29.9	30.3	28.1	28.1	28.1	28.1	28.1	28.1	28.1
Portugal	61.6	68.4	71.7	83.6	96.2	111.1	125.8	129.7	130.2	127.8	125.0	122.6	121.0	119.9	118.9
Singapore	85.1	84.7	95.3	99.7	97.0	101.0	105.5	102.1	98.6	98.7	95.8	92.7	89.9	91.0	92.3
Slovak Republic	30.7	29.8	28.2	36.0	40.9	43.4	52.1	54.6	53.6	53.3	53.6	53.2	52.6	51.9	51.0
Slovenia	26.0	22.7	21.6	34.4	37.9	46.1	53.4	70.5	80.8	81.8	82.7	85.7	88.5	91.2	93.7
Spain	38.9	35.5	39.4	52.7	60.1	69.2	84.4	92.1	97.7	98.6	98.8	98.3	97.5	95.9	94.2
Sweden	43.0	38.1	36.7	40.2	36.8	36.2	36.6	38.7	43.8	43.9	42.6	41.3	39.7	37.9	35.8
Switzerland	59.7	53.3	48.7	47.9	47.1	47.4	48.2	47.1	46.3	46.2	45.5	44.6	43.4	42.2	41.0
United Kingdom	42.5	43.6	51.8	65.8	76.4	81.8	85.8	87.3	89.4	88.9	88.0	86.7	84.6	81.3	77.8
United States[1]	63.6	64.0	72.8	86.0	94.7	99.0	102.5	104.8	104.8	104.9	106.0	105.8	105.3	105.5	106.2
Average	74.7	72.1	78.9	92.2	98.6	102.5	106.8	105.6	105.4	105.2	105.4	104.8	103.6	102.7	101.7
Euro Area	67.3	65.1	68.8	78.6	83.9	86.4	91.0	93.1	94.2	93.7	92.8	91.5	89.8	87.6	85.2
G7	83.2	81.1	89.3	104.1	112.0	117.0	121.3	119.5	118.6	117.4	117.5	116.9	115.8	114.9	114.1
G20 Advanced	79.6	77.4	85.2	99.5	106.2	110.5	114.5	113.0	112.4	111.7	111.9	111.3	110.2	109.2	108.4

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	13.2	15.6	17.5	18.3	18.2	17.2	16.1	14.9
Austria	. . .	. . .	. . .	. . .	. . .	. . .	49.4	49.2	47.9	48.7	47.8	46.7	45.6	44.4	43.3
Belgium	60.8	54.3	55.0	60.9	59.5	60.6	62.3	64.0	64.6	65.8	66.3	66.1	65.2	64.0	62.4
Canada[1]	27.8	24.3	24.3	29.9	32.9	34.6	36.4	37.1	36.4	37.8	38.0	37.2	36.2	35.3	34.1
Cyprus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Czech Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Denmark	1.1	–4.6	–6.7	–5.9	–3.3	1.1	6.7	3.4	3.6	6.3	8.8	10.8	12.3	13.2	13.6
Estonia	–9.7	–9.5	–6.8	–8.2	–6.9	–5.1	–1.5	–0.3	–0.2	0.5	1.0	1.4	1.8	2.1	2.4
Finland	–66.5	–69.7	–50.0	–59.6	–61.8	–48.8	–50.3	–54.0	–50.2	–46.5	–42.7	–38.9	–35.4	–32.3	–29.7
France	57.8	57.7	60.3	70.1	73.7	76.4	81.7	84.6	87.9	89.4	90.3	90.3	89.5	87.8	85.4
Germany	51.3	48.4	48.1	54.5	56.2	54.6	54.0	53.1	51.4	48.4	46.4	44.6	42.6	40.2	38.1
Greece	. . .	. . .	. . .	. . .	. . .	. . .	152.8	172.1	175.0	194.1	202.8	199.1	192.7	185.2	178.5
Hong Kong SAR	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iceland	20.4	17.6	53.3	66.3	65.7	61.7	63.9	62.6	55.8	50.8	46.3	41.9	40.7	40.1	38.7
Ireland	14.3	14.2	22.5	36.6	66.6	77.6	86.7	89.8	88.2	82.4	78.7	76.4	73.1	70.6	68.3
Israel	71.8	65.8	65.0	66.7	64.5	64.0	63.0	62.7	63.4	63.7	63.9	64.6	65.6	66.5	67.4
Italy	86.3	84.1	86.2	94.2	96.3	98.4	102.9	109.6	112.6	113.5	112.8	111.2	109.4	107.2	104.8
Japan	81.0	80.5	95.3	106.2	113.1	127.2	129.0	122.9	126.1	126.0	128.1	129.2	130.8	131.3	132.1
Korea	28.2	27.4	27.3	30.5	30.3	31.1	31.1	33.9	35.4	37.7	38.7	39.7	40.2	40.2	39.8
Latvia	7.0	4.5	11.0	21.3	28.4	30.0	29.4	32.2	34.9	34.9	34.3	34.0	32.6	31.1	29.6
Lithuania	11.0	11.0	12.6	23.0	29.2	32.9	33.6	16.2	19.2	17.8	18.8	19.3	20.1	20.8	20.9
Luxembourg	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malta	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Netherlands	20.7	17.7	16.2	20.2	23.3	26.4	27.9	31.7	33.4	34.8	35.4	35.8	35.9	35.8	35.4
New Zealand	–0.6	–0.4	–0.5	–0.8	2.3	6.1	7.7	7.7	8.2	8.8	8.6	8.1	7.4	6.3	5.2
Norway	–137.4	–143.7	–128.8	–158.3	–167.6	–162.4	–171.4	–205.4	–244.3	–261.7	–269.2	–268.6	–268.0	–269.5	–272.9
Portugal	56.7	61.4	67.2	79.3	91.6	100.7	115.4	119.0	120.3	120.6	118.0	117.3	116.9	116.3	115.5
Singapore	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovak Republic	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Slovenia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Spain	30.0	26.0	30.0	24.0	32.2	38.6	51.0	58.8	62.6	64.8	66.0	66.5	66.6	66.0	65.3
Sweden	–12.0	–16.2	–11.6	–18.2	–17.2	–14.1	–17.9	–20.2	–20.7	–18.4	–16.9	–15.8	–15.1	–14.8	–15.0
Switzerland	37.5	30.2	28.5	27.9	27.3	27.4	26.9	25.7	24.9	24.9	24.2	23.2	22.0	20.8	19.6
United Kingdom	37.9	38.3	45.7	58.8	69.1	73.4	77.1	78.7	80.9	80.3	79.5	78.1	76.0	72.7	69.3
United States[1]	44.7	44.5	50.4	62.0	69.5	76.0	79.3	80.8	80.1	79.9	80.7	80.3	79.9	80.3	81.2
Average	45.5	43.6	48.9	58.2	63.3	68.0	71.3	70.3	70.4	71.3	71.9	71.4	70.8	70.2	69.7
Euro Area	47.9	45.5	47.2	52.5	56.1	58.2	66.3	69.0	70.0	70.1	69.7	68.9	67.7	66.0	64.1
G7	53.2	52.2	58.6	69.6	75.7	81.5	84.4	83.4	83.4	82.9	83.3	82.7	82.0	81.4	81.0
G20 Advanced	50.9	49.7	55.8	66.5	71.7	77.0	79.7	78.9	79.1	79.0	79.4	78.9	78.2	77.6	77.1

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, 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	–0.4	–7.3	–13.7	–11.2	–8.5	–6.4	–5.1	–4.1
Angola	11.8	4.7	–4.5	–7.4	3.4	8.7	4.6	–0.3	–6.4	–3.5	–1.4	–2.0	–0.7	0.0	0.5
Argentina	1.8	0.3	0.8	–1.6	0.0	–1.9	–2.4	–2.0	–2.7	–4.9	–4.8	–5.3	–5.6	–5.9	–6.4
Azerbaijan	1.1	2.3	20.0	6.6	14.0	11.6	3.8	1.4	–0.4	–7.9	–4.0	–3.0	–1.8	0.3	0.2
Belarus	1.2	1.5	1.9	–0.4	–0.5	4.2	1.7	–0.9	0.2	–2.4	–2.3	–2.2	–1.7	–1.8	–1.7
Brazil	–3.6	–2.7	–1.5	–3.2	–2.7	–2.5	–2.6	–3.1	–6.2	–7.7	–7.2	–5.4	–3.9	–3.3	–3.2
Chile	7.4	7.9	4.1	–4.1	–0.4	1.4	0.7	–0.5	–1.5	–3.3	–2.3	–1.8	–1.1	–1.2	–1.2
China	–1.2	0.1	0.0	–1.8	–1.2	0.5	0.0	–1.1	–1.2	–1.9	–2.3	–2.1	–2.1	–1.9	–1.7
Colombia	–1.0	–0.8	–0.3	–2.8	–3.3	–2.0	0.1	–0.9	–1.8	–3.1	–3.0	–2.6	–2.1	–1.6	–1.2
Croatia	–3.3	–2.5	–2.7	–5.9	–6.0	–7.5	–5.3	–5.4	–5.7	–5.1	–4.4	–3.6	–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	–0.6	–3.9	–4.2	–3.6	–3.8	–3.8
Ecuador	2.9	1.8	0.5	–3.6	–1.3	0.0	–0.9	–4.6	–5.4	–5.1	–3.7	–1.9	–1.4	–0.7	–0.4
Egypt[1]	–9.2	–7.5	–8.0	–6.9	–8.3	–9.8	–10.5	–14.1	–13.6	–11.7	–9.4	–7.4	–7.2	–6.8	–6.7
Hungary	–9.4	–5.1	–3.7	–4.6	–4.5	–5.5	–2.3	–2.5	–2.6	–2.7	–2.3	–2.2	–2.0	–1.9	–1.8
India	–6.2	–4.4	–10.0	–9.8	–8.4	–8.1	–7.4	–7.6	–7.0	–7.2	–7.0	–6.7	–6.5	–6.3	–6.1
Indonesia	0.4	–0.9	0.1	–1.6	–1.2	–0.6	–1.6	–2.0	–2.1	–2.3	–2.3	–2.2	–2.0	–2.0	–1.9
Iran	2.0	6.7	0.6	0.8	2.8	0.2	–0.3	–0.9	–1.1	–2.9	–1.6	–0.7	–0.6	–0.6	–0.5
Kazakhstan	7.7	5.1	1.2	–1.3	1.5	6.0	4.5	5.0	1.8	–3.2	–0.2	0.5	0.8	0.8	0.9
Kuwait	31.9	37.4	20.2	27.2	25.9	33.0	34.7	34.0	26.3	1.3	0.1	2.5	3.9	3.8	2.7
Libya	31.8	28.6	27.5	–5.3	11.6	–15.9	27.8	–4.0	–43.5	–79.1	–63.4	–55.7	–45.7	–36.2	–24.2
Malaysia	–2.6	–2.6	–3.5	–6.5	–4.5	–3.6	–3.8	–4.3	–3.6	–3.5	–3.2	–2.8	–2.3	–1.8	–1.2
Mexico	–1.0	–1.1	–0.8	–5.0	–3.9	–3.4	–3.8	–3.7	–4.6	–4.0	–3.5	–3.0	–2.5	–2.5	–2.5
Morocco	–1.9	–0.1	0.7	–1.8	–4.3	–6.6	–7.3	–5.2	–4.9	–4.3	–3.5	–3.0	–2.9	–2.5	–2.3
Oman	14.4	12.4	17.3	–0.3	5.7	9.4	4.7	3.2	–1.5	–17.7	–20.0	–18.5	–17.6	–16.9	–18.1
Pakistan	–3.4	–5.1	–7.1	–5.0	–6.0	–6.7	–8.6	–8.4	–4.9	–5.3	–4.2	–3.3	–2.9	–2.7	–2.4
Peru	2.0	3.3	2.7	–1.4	0.1	2.0	2.1	0.8	–0.3	–1.9	–2.2	–1.9	–1.4	–1.0	–0.8
Philippines	0.0	–0.3	0.0	–2.7	–2.4	–0.4	–0.3	0.2	0.9	–0.1	–0.6	–0.8	–0.9	–1.0	–1.1
Poland	–4.0	–2.1	–3.6	–7.2	–7.6	–4.9	–3.7	–4.0	–3.2	–2.8	–2.5	–2.6	–2.3	–2.0	–2.0
Qatar	8.5	10.4	10.8	15.5	6.1	10.2	14.2	20.7	14.7	4.5	–1.5	–2.5	–1.7	–1.5	–1.9
Romania	–1.3	–3.1	–4.7	–7.1	–6.3	–4.2	–2.5	–2.5	–1.9	–1.8	–2.6	–3.0	–3.0	–3.0	–3.0
Russia	8.4	6.0	4.9	–6.3	–3.4	1.5	0.4	–1.3	–1.2	–5.7	–3.9	–2.2	–1.7	0.0	–0.3
Saudi Arabia	20.8	11.8	29.8	–5.4	3.6	11.2	12.0	5.8	–3.4	–21.6	–19.4	–17.6	–16.2	–14.8	–14.0
South Africa	0.7	1.2	–0.5	–4.7	–4.8	–3.9	–4.1	–4.1	–3.8	–4.1	–3.7	–3.4	–3.3	–3.3	–3.1
Sri Lanka	–7.0	–6.9	–7.0	–9.9	–8.0	–6.9	–6.5	–5.9	–6.0	–5.9	–6.4	–6.2	–6.0	–6.0	–5.9
Thailand	2.0	0.2	0.8	–2.2	–1.3	0.0	–0.9	0.4	–0.8	–1.2	–1.4	–1.4	–1.4	–1.3	–1.1
Turkey	–0.7	–2.0	–2.7	–6.0	–3.4	–0.6	–1.7	–1.3	–1.0	–0.8	–0.8	–0.8	–0.9	–1.1	–1.4
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	10.4	5.0	–5.5	–4.0	–1.8	0.6	2.0	2.7
Uruguay	–0.5	0.0	–1.6	–1.6	–1.4	–0.9	–2.7	–2.3	–3.5	–3.3	–3.2	–3.0	–2.8	–2.5	–2.4
Venezuela	–1.6	–2.8	–3.5	–8.7	–10.4	–11.6	–16.5	–14.5	–15.0	–24.4	–25.0	–25.6	–26.3	–26.8	–27.3
Average	1.2	1.0	0.8	–3.7	–2.4	–0.7	–0.8	–1.6	–2.5	–4.1	–3.9	–3.5	–3.1	–2.8	–2.7
Asia	–2.0	–1.1	–1.9	–3.4	–2.7	–1.2	–1.4	–2.1	–2.1	–2.7	–3.0	–2.8	–2.7	–2.6	–2.4
Europe	2.4	1.5	0.8	–5.8	–3.8	–0.1	–0.7	–1.5	–1.5	–3.6	–2.6	–1.9	–1.6	–0.9	–1.0
Latin America	–1.1	–1.1	–0.8	–3.7	–3.0	–2.7	–3.1	–3.1	–5.0	–5.9	–5.5	–4.7	–4.0	–3.8	–3.8
MENAP	13.0	10.7	12.9	–1.0	2.3	4.4	5.9	4.1	–0.9	–10.2	–9.1	–7.5	–6.4	–5.6	–5.2
G20 Emerging	0.3	0.1	0.5	–3.9	–2.6	–0.8	–1.1	–2.0	–2.7	–4.0	–3.9	–3.4	–3.2	–2.9	–2.7

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

[1] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	–0.5	–7.4	–14.5	–11.7	–8.7	–6.5	–5.0	–3.9
Angola	13.4	5.8	–2.5	–5.6	4.6	9.6	5.5	0.5	–5.3	–2.0	0.6	–0.1	1.2	2.0	2.4
Argentina	3.2	1.9	2.3	0.2	1.3	–0.4	–0.5	–0.7	–1.0	–2.5	–2.2	–2.0	–1.8	–1.6	–1.5
Azerbaijan	1.2	2.4	20.1	6.7	14.1	12.0	4.0	1.7	–0.2	–7.8	–3.7	–2.7	–1.4	0.7	0.7
Belarus	1.6	1.9	2.5	0.4	0.2	5.3	3.1	0.1	1.5	–0.2	–0.5	–0.3	0.5	0.8	1.2
Brazil	3.2	3.2	3.8	1.9	2.3	2.9	2.0	1.8	–0.6	–0.4	–0.9	0.8	2.0	2.5	2.5
Chile	7.6	7.7	3.8	–4.3	–0.3	1.5	0.8	–0.4	–1.4	–3.1	–1.6	–1.0	–0.3	–0.3	–0.3
China	–0.7	0.5	0.4	–1.4	–0.8	1.0	0.5	–0.6	–0.6	–1.4	–1.7	–1.5	–1.4	–1.3	–1.1
Colombia	1.7	1.8	1.9	–1.1	–1.6	–0.1	1.6	1.2	0.3	–0.2	0.0	0.2	0.6	1.1	1.3
Croatia	–1.8	–1.1	–1.2	–3.9	–3.8	–4.8	–2.3	–2.3	–2.7	–2.0	–1.0	–0.2	0.6	0.7	0.8
Dominican Republic	0.4	1.6	–1.7	–1.2	–0.9	–1.0	–4.2	–1.2	–0.5	2.3	–1.5	–1.5	–0.9	–1.0	–1.0
Ecuador	4.8	3.4	1.6	–3.0	–0.8	0.6	–0.2	–3.6	–4.3	–3.7	–1.6	0.4	1.0	1.9	2.3
Egypt[1]	–4.2	–3.0	–3.9	–3.7	–3.8	–4.7	–5.1	–6.6	–6.1	–4.4	–1.9	–0.1	0.3	0.7	0.9
Hungary	–5.7	–1.3	0.0	–0.6	–0.7	–1.7	1.6	1.9	1.4	0.8	0.9	1.1	1.2	1.3	1.4
India	–1.3	0.4	–5.3	–5.2	–4.2	–3.8	–3.1	–3.1	–2.5	–2.8	–2.4	–2.3	–2.2	–2.1	–2.0
Indonesia	2.5	0.9	1.7	–0.1	0.0	0.6	–0.4	–0.8	–0.8	–1.1	–0.9	–0.7	–0.5	–0.4	–0.4
Iran	2.0	6.8	0.7	0.8	2.7	0.3	–0.2	–0.9	–1.0	–2.6	–1.0	0.0	0.2	0.3	0.4
Kazakhstan	7.2	4.2	1.5	–1.4	1.8	5.8	3.9	4.5	1.4	–3.7	–0.7	0.0	0.4	0.4	0.6
Kuwait	19.2	25.5	11.1	18.1	16.9	26.5	28.0	25.8	17.3	–11.3	–12.5	–9.3	–7.1	–6.6	–7.3
Libya	31.8	28.6	27.5	–5.3	11.6	–15.9	27.8	–4.0	–43.5	–79.1	–63.4	–55.7	–45.7	–36.2	–24.2
Malaysia	–1.7	–1.9	–2.1	–5.0	–2.9	–2.0	–2.0	–2.4	–1.7	–1.8	–1.5	–0.8	–0.3	0.2	0.6
Mexico	1.8	1.5	1.7	–2.3	–1.4	–1.0	–1.2	–1.2	–1.9	–1.2	–0.5	0.2	0.8	0.9	1.0
Morocco	1.1	2.8	3.2	0.6	–2.0	–4.4	–4.8	–2.6	–2.2	–1.6	–0.8	–0.3	0.0	0.3	0.6
Oman	13.0	10.8	16.0	–1.4	4.8	9.0	3.4	2.6	–2.2	–18.8	–21.3	–19.7	–18.3	–17.1	–17.5
Pakistan	–0.5	–1.1	–2.5	–0.2	–1.7	–2.9	–4.2	–3.9	–0.3	–0.5	0.1	1.2	1.5	1.7	1.6
Peru	3.9	5.2	4.1	–0.3	1.2	3.0	3.0	1.7	0.6	–1.0	–1.2	–0.8	–0.3	0.1	0.1
Philippines	4.8	3.4	3.4	0.6	0.7	2.2	2.3	2.7	3.1	2.3	1.6	1.4	1.1	0.9	0.5
Poland	–1.4	0.2	–1.5	–4.7	–5.1	–2.4	–1.1	–1.5	–1.2	–1.0	–0.8	–1.1	–0.7	–0.4	–0.4
Qatar	9.3	11.0	11.4	16.6	7.2	11.7	15.6	21.7	15.7	5.4	–0.7	–1.7	–1.1	–1.0	–1.5
Romania	–0.7	–2.5	–4.1	–6.1	–5.0	–2.8	–0.7	–0.8	–0.4	–0.4	–1.2	–1.3	–1.1	–0.9	–0.6
Russia	8.9	6.0	5.1	–6.6	–3.3	1.8	0.7	–0.9	–0.7	–5.0	–3.0	–1.1	–0.4	1.3	1.1
Saudi Arabia	21.8	11.5	29.2	–5.2	4.0	11.3	11.9	5.4	–4.1	–22.1	–19.7	–17.6	–15.7	–13.5	–12.1
South Africa	3.5	3.7	2.0	–2.4	–2.2	–1.2	–1.3	–1.1	–0.7	–0.8	–0.3	0.0	0.2	0.5	0.7
Sri Lanka	–1.9	–1.8	–2.2	–3.4	–1.7	–1.4	–1.1	–0.7	–1.6	–1.4	–1.7	–1.7	–1.5	–1.5	–1.6
Thailand	3.3	1.1	1.6	–1.5	–0.7	0.8	–0.1	1.1	–0.1	–0.5	–0.7	–0.7	–0.7	–0.6	–0.4
Turkey	4.4	2.9	1.7	–1.4	0.3	2.1	1.1	1.4	1.3	1.3	1.4	1.3	1.4	1.5	1.6
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	10.8	5.2	–5.2	–3.8	–1.6	0.9	2.2	2.9
Uruguay	3.7	3.6	1.4	1.1	1.5	1.9	–0.2	0.4	–0.6	0.0	0.1	0.3	0.6	1.0	1.0
Venezuela	0.5	–1.2	–2.0	–7.2	–8.6	–9.4	–13.8	–11.6	–11.3	–21.3	–22.9	–23.7	–24.5	–25.0	–25.2
Average	3.3	2.9	2.5	–1.9	–0.6	1.0	0.8	0.0	–0.8	–2.4	–2.2	–1.7	–1.4	–1.0	–0.9
Asia	–0.3	0.5	–0.5	–2.0	–1.4	0.1	–0.2	–0.9	–0.8	–1.5	–1.7	–1.5	–1.4	–1.3	–1.1
Europe	4.3	3.1	2.3	–4.3	–2.3	1.2	0.6	–0.2	–0.2	–2.2	–1.1	–0.4	0.1	0.9	0.9
Latin America	2.7	2.5	2.5	–0.4	0.3	0.8	0.0	0.0	–1.4	–1.6	–1.6	–0.7	0.0	0.3	0.3
MENAP	13.1	10.7	12.9	–0.6	2.9	5.0	6.4	4.8	–0.3	–9.4	–8.1	–6.5	–5.1	–4.1	–3.5
G20 Emerging	2.8	2.3	2.4	–2.0	–0.7	1.1	0.6	–0.3	–0.9	–2.2	–2.1	–1.7	–1.4	–1.1	–0.9

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] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	–2.9	–2.5	–2.5	–3.1	–5.3	–4.8	–5.3	–5.6	–6.0	–6.6
Azerbaijan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belarus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Brazil	–3.4	–3.2	–2.3	–2.5	–3.4	–3.3	–3.1	–3.8	–6.5	–6.4	–5.4	–4.3	–3.3	–3.1	–3.2
Chile[1]	0.8	0.5	–1.5	–4.3	–2.5	–1.0	–0.1	–1.1	–1.5	–3.0	–2.0	–1.2	–0.8	–0.8	–0.9
China	–0.7	–0.1	–0.3	–1.8	–1.3	0.6	0.2	–0.7	–0.7	–1.6	–2.1	–2.0	–2.0	–1.9	–1.7
Colombia	–1.1	–1.6	–0.7	–2.4	–2.8	–2.1	0.1	–1.0	–1.9	–3.1	–2.9	–2.4	–2.1	–1.6	–1.2
Croatia	–4.4	–4.3	–4.5	–5.5	–5.2	–6.7	–4.1	–3.9	–4.3	–3.9	–3.4	–3.0	–2.6	–2.9	–2.9
Dominican Republic	–1.2	–0.1	–3.9	–2.4	–3.2	–2.6	–6.3	–2.7	–2.7	0.6	–2.4	–2.7	–2.9	–3.0	–2.9
Ecuador	4.6	2.8	–1.0	–1.0	0.3	–0.7	–1.6	–5.0	–5.2	–2.2	0.6	2.0	2.1	2.7	3.0
Egypt[2]	–9.2	–7.7	–8.3	–7.0	–8.3	–9.5	–10.0	–13.4	–13.0	–11.5	–9.2	–7.3	–7.2	–6.8	–6.7
Hungary[1]	–12.4	–7.5	–6.0	–3.1	–3.2	–15.4	–0.3	–0.6	–1.7	–2.3	–2.2	–2.2	–2.0	–1.8	–1.8
India	–6.3	–4.9	–9.6	–9.6	–8.8	–8.4	–7.3	–7.5	–6.9	–7.1	–6.9	–6.6	–6.5	–6.3	–6.1
Indonesia	0.4	–0.9	–0.1	–1.6	–1.2	–0.6	–1.6	–2.1	–2.1	–2.2	–2.1	–2.0	–2.0	–2.0	–1.9
Iran	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kazakhstan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Libya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malaysia	–2.9	–3.0	–3.3	–5.3	–4.0	–2.6	–3.4	–3.3	–3.0	–3.3	–2.7	–2.2	–1.7	–1.3	–0.7
Mexico	–1.2	–1.6	–1.2	–4.0	–3.5	–3.3	–3.9	–3.7	–4.5	–3.8	–3.4	–3.0	–2.5	–2.5	–2.5
Morocco	–2.4	–1.1	–0.4	–2.0	–4.2	–6.7	–7.5	–5.6	–5.8	–5.4	–4.4	–3.9	–3.0	–2.7	–2.5
Oman	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pakistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peru[1]	0.2	1.6	1.0	–0.1	–0.4	1.2	1.5	0.4	0.0	–1.0	–1.1	–1.3	–1.1	–0.9	–0.8
Philippines	–0.1	–0.7	–0.5	–1.8	–2.5	0.0	–0.3	0.1	0.6	–0.4	–0.9	–1.0	–1.2	–1.3	–1.4
Poland	–4.3	–2.6	–4.2	–7.1	–7.6	–5.5	–3.8	–3.3	–3.0	–2.7	–2.5	–2.6	–2.3	–2.0	–2.0
Qatar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Romania	–2.9	–5.8	–9.4	–8.0	–6.1	–3.8	–1.6	–1.9	–1.4	–1.5	–2.6	–3.1	–3.1	–3.0	–3.0
Russia	8.3	5.4	4.6	–5.4	–3.1	1.5	0.3	–1.4	0.1	–4.5	–3.6	–2.1	–1.6	0.0	–0.3
Saudi Arabia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	1.5	1.0	–0.7	–3.1	–3.6	–3.6	–3.9	–3.9	–3.5	–3.6	–3.0	–2.8	–2.8	–2.9	–2.9
Sri Lanka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thailand	1.9	–0.2	0.5	–1.4	–1.4	0.0	–0.7	0.2	–0.4	–0.7	–1.0	–1.3	–1.4	–1.3	–1.1
Turkey	–1.8	–3.2	–3.1	–3.6	–2.7	–1.4	–1.8	–1.6	–1.1	–0.7	–0.6	–0.6	–0.5	–0.6	–0.7
Ukraine	–1.9	–3.7	–3.5	–2.2	–2.7	–3.2	–4.6	–4.6	–3.3	–1.8	–2.3	–2.4	–2.3	–2.3	–2.2
United Arab Emirates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uruguay	1.2	1.1	–1.1	–1.1	–1.9	–1.6	–3.3	–3.3	–4.4	–3.9	–3.4	–3.0	–2.8	–2.5	–2.4
Venezuela	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Average	–0.9	–1.1	–1.5	–3.5	–3.0	–1.8	–1.7	–2.3	–2.4	–3.1	–3.1	–2.8	–2.6	–2.4	–2.3
Asia	–1.7	–1.3	–2.0	–3.3	–2.7	–1.1	–1.2	–1.8	–1.7	–2.4	–2.8	–2.6	–2.6	–2.5	–2.3
Europe	1.7	0.4	–0.1	–5.2	–3.8	–1.3	–1.1	–1.9	–1.0	–2.9	–2.5	–1.9	–1.6	–0.9	–1.0
Latin America	–1.6	–1.8	–1.4	–2.6	–2.8	–2.9	–2.7	–3.1	–4.7	–4.8	–4.1	–3.4	–2.9	–2.8	–2.8
MENAP	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
G20 Emerging	–0.6	–0.8	–1.1	–3.4	–2.9	–1.4	–1.6	–2.2	–2.3	–3.1	–3.1	–2.8	–2.7	–2.5	–2.4

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] The data for these countries include adjustments beyond the output cycle. For country-specific details, see Data and Conventions in text, and Table B.

[2] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	1.5	–1.3	–0.6	–1.2	–1.4	–2.8	–2.2	–1.9	–1.6	–1.4	–1.3
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	3.3	2.9	3.1	2.6	1.8	2.2	1.5	1.1	–0.8	0.7	0.6	1.7	2.5	2.7	2.5
Chile[1]	1.0	0.3	–1.9	–4.5	–2.4	–0.9	0.0	–1.0	–1.4	–2.8	–1.4	–0.5	0.0	0.1	0.0
China	–0.2	0.3	0.1	–1.4	–0.8	1.1	0.7	–0.2	–0.1	–1.1	–1.5	–1.4	–1.4	–1.3	–1.1
Colombia	1.5	1.1	1.5	–0.7	–1.1	–0.2	1.6	1.1	0.2	–0.2	0.1	0.3	0.7	1.1	1.3
Croatia	–2.8	–2.7	–2.8	–3.5	–3.0	–4.1	–1.2	–1.0	–1.4	–0.9	–0.2	0.4	0.8	0.8	0.8
Dominican Republic	0.2	1.4	–2.3	–0.6	–1.3	–0.5	–4.0	–0.4	–0.2	3.6	0.0	0.0	–0.1	–0.2	–0.2
Ecuador	6.6	4.4	0.1	–0.4	0.9	–0.1	–0.8	–4.0	–4.2	–0.8	2.5	4.3	4.5	5.2	5.6
Egypt[2]	–4.2	–3.1	–4.2	–3.8	–3.8	–4.4	–4.8	–6.2	–5.7	–4.3	–1.8	–0.1	0.3	0.7	0.9
Hungary[1]	–8.5	–3.5	–2.2	0.8	0.5	–11.7	3.4	3.5	2.1	1.1	1.0	1.2	1.2	1.4	1.5
India	–1.4	0.0	–5.0	–5.0	–4.6	–4.1	–3.0	–3.0	–2.4	–2.7	–2.3	–2.2	–2.2	–2.1	–2.0
Indonesia	2.6	0.9	1.5	0.0	0.1	0.6	–0.4	–0.9	–0.8	–1.0	–0.7	–0.5	–0.5	–0.4	–0.4
Iran	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kazakhstan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Malaysia	–1.9	–2.3	–1.9	–3.8	–2.4	–1.0	–1.7	–1.5	–1.1	–1.6	–1.1	–0.3	0.2	0.7	1.1
Mexico	1.6	1.1	1.4	–1.4	–1.0	–0.9	–1.4	–1.2	–1.8	–1.0	–0.4	0.2	0.8	0.9	1.0
Morocco	0.7	1.9	2.2	0.4	–2.0	–4.5	–5.0	–3.0	–3.0	–2.7	–1.6	–1.1	–0.2	0.1	0.4
Oman	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pakistan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Peru[1]	2.1	3.4	2.4	1.0	0.6	2.2	2.4	1.3	1.0	–0.1	–0.1	–0.2	0.0	0.2	0.2
Philippines	4.7	3.1	3.0	1.5	0.6	2.5	2.3	2.6	2.9	2.0	1.3	1.1	0.8	0.5	0.2
Poland	–1.7	–0.3	–2.1	–4.7	–5.1	–2.9	–1.1	–0.8	–1.0	–0.9	–0.8	–1.1	–0.7	–0.4	–0.4
Qatar	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Romania	–2.3	–5.2	–8.7	–7.0	–4.9	–2.3	0.1	–0.3	0.1	–0.2	–1.2	–1.4	–1.2	–0.9	–0.6
Russia	8.9	5.4	4.8	–5.8	–2.9	1.8	0.6	–1.0	0.5	–3.8	–2.7	–1.0	–0.4	1.3	1.1
Saudi Arabia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Africa	4.3	3.5	1.7	–0.8	–1.0	–0.9	–1.2	–1.0	–0.4	–0.4	0.3	0.6	0.7	0.8	0.9
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	3.2	0.7	1.3	–0.7	–0.8	0.9	0.2	1.0	0.3	–0.1	–0.3	–0.6	–0.7	–0.6	–0.4
Turkey	3.5	1.8	1.3	0.6	0.9	1.4	1.0	1.1	1.2	1.4	1.5	1.6	1.7	1.9	2.2
Ukraine	–1.3	–3.2	–3.0	–1.1	–1.2	–1.2	–2.6	–2.2	–0.1	3.2	2.7	2.2	1.8	1.6	1.6
United Arab Emirates	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Uruguay	5.2	4.6	1.7	1.6	1.1	1.3	–0.7	–0.5	–1.5	–0.5	–0.1	0.2	0.6	1.0	1.0
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	1.6	1.2	0.6	–1.6	–1.1	0.2	0.1	–0.5	–0.5	–1.1	–1.2	–0.9	–0.7	–0.5	–0.4
Asia	0.0	0.3	–0.6	–1.9	–1.4	0.2	0.0	–0.6	–0.5	–1.2	–1.5	–1.4	–1.4	–1.2	–1.1
Europe	3.8	2.1	1.5	–3.6	–2.3	0.1	0.3	–0.4	0.4	–1.3	–0.8	–0.2	0.2	1.0	1.0
Latin America	2.4	2.0	2.0	0.7	0.6	0.8	0.4	0.1	–1.1	–0.5	–0.2	0.6	1.2	1.3	1.3
MENAP	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
G20 Emerging	2.0	1.6	1.0	–1.4	–0.9	0.5	0.2	–0.5	–0.5	–1.2	–1.3	–1.0	–0.8	–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: 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] The data for these countries include adjustments beyond the output cycle. For country-specific details, see Data and Conventions in text, and Table B.

[2] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	39.5	35.8	33.2	29.6	28.9	29.7	30.4	30.6	30.7
Angola	50.2	45.8	50.9	34.6	43.5	48.8	45.9	40.5	34.6	27.4	27.6	27.9	27.9	27.6	27.2
Argentina	24.1	24.9	26.9	27.8	29.6	29.8	31.5	33.4	35.5	35.5	35.1	35.0	34.9	34.8	34.7
Azerbaijan	28.0	28.2	51.1	40.4	45.7	45.5	40.5	39.4	38.8	26.8	27.9	27.8	30.4	30.0	30.2
Belarus	49.1	49.5	50.7	45.8	41.6	38.8	40.5	41.2	40.3	41.4	40.0	39.7	39.4	39.4	39.4
Brazil	35.6	34.9	35.9	34.0	36.1	35.1	35.4	35.6	34.0	33.5	35.0	35.1	35.6	35.9	36.0
Chile	26.2	27.3	25.8	20.6	23.5	24.7	24.4	23.4	23.4	22.9	24.8	25.7	26.7	26.7	26.7
China	17.3	18.4	22.6	24.0	24.7	27.0	28.1	28.1	28.5	28.8	28.2	28.1	27.9	27.5	27.3
Colombia	27.3	27.2	26.4	26.7	26.1	26.7	28.3	28.1	27.7	26.8	26.7	26.5	26.4	26.2	26.0
Croatia	41.6	42.2	41.6	41.2	40.8	41.0	41.7	42.5	42.3	43.4	44.4	45.0	45.8	46.4	46.7
Dominican Republic	15.1	16.4	15.1	13.3	13.1	12.8	13.6	14.6	15.1	17.7	14.6	14.5	14.4	14.3	14.3
Ecuador	24.1	26.4	35.7	29.4	33.3	39.3	39.5	39.4	38.8	35.4	33.7	33.4	33.4	33.6	33.5
Egypt[1]	28.6	27.7	28.0	27.7	25.1	22.0	22.1	23.0	25.0	23.7	25.5	26.1	25.9	25.7	25.9
Hungary	42.5	45.2	45.3	46.2	45.2	44.4	46.4	47.3	47.4	46.4	44.2	44.8	45.5	46.4	47.3
India	20.3	22.0	19.7	18.5	18.8	19.1	19.7	19.8	19.6	19.9	20.1	20.3	20.4	20.5	20.6
Indonesia	18.9	17.8	19.4	15.4	15.6	17.1	17.2	17.1	16.7	14.6	15.1	15.3	15.6	15.7	15.9
Iran	25.8	26.5	22.7	21.4	21.9	19.2	14.2	14.1	14.6	13.9	15.1	16.2	16.3	16.2	16.1
Kazakhstan	27.5	28.8	28.3	22.1	23.9	27.7	26.9	25.3	24.3	20.4	23.0	22.9	22.6	22.1	21.8
Kuwait	63.8	67.5	60.6	69.4	70.7	72.1	72.1	71.8	68.7	55.6	52.3	52.6	52.2	51.2	49.8
Libya	63.0	62.3	68.4	52.9	64.9	39.1	72.3	65.7	40.9	21.3	23.2	27.0	31.3	34.4	40.0
Malaysia	23.3	23.6	23.8	24.8	22.5	23.9	25.0	24.1	23.3	22.1	21.9	21.8	22.3	22.8	22.8
Mexico	21.9	22.2	25.0	23.3	22.8	23.7	23.9	24.3	23.5	24.1	23.6	23.8	24.0	24.1	24.3
Morocco	26.2	28.5	31.3	28.7	26.8	27.2	28.0	27.7	28.0	25.8	26.5	26.9	26.8	26.9	27.1
Oman	49.8	48.8	47.4	39.3	40.6	48.9	49.5	49.1	47.3	40.5	39.6	39.9	38.9	38.3	36.2
Pakistan	13.6	14.4	14.4	14.2	14.3	12.6	13.0	13.5	15.3	14.6	15.4	16.3	16.7	17.4	17.7
Peru	21.1	21.9	22.2	20.1	21.1	21.8	22.4	22.4	22.3	20.7	20.6	20.4	20.6	20.7	20.7
Philippines	19.0	18.7	18.7	17.4	16.8	17.6	18.6	18.8	19.3	19.6	19.7	19.7	19.7	19.8	19.7
Poland	41.2	41.1	40.8	37.9	38.2	39.0	39.2	38.2	38.6	39.1	38.9	38.6	38.7	38.9	39.0
Qatar	36.6	37.2	35.6	47.7	35.0	38.7	45.1	52.2	47.4	40.2	34.0	30.9	30.0	29.1	28.1
Romania	32.1	32.1	31.6	30.6	31.6	32.1	32.4	31.4	32.1	32.0	30.1	28.9	28.8	28.7	28.6
Russia	39.5	40.2	39.2	35.0	34.6	37.3	37.7	36.9	37.5	33.9	34.5	35.5	35.6	35.3	35.0
Saudi Arabia	48.1	41.2	56.5	31.7	37.5	44.5	45.3	41.4	37.3	28.9	27.3	27.7	27.7	26.9	25.9
South Africa	27.8	28.4	28.2	27.0	26.7	27.0	27.2	27.6	28.2	29.1	29.5	29.5	29.6	29.8	29.9
Sri Lanka	17.3	16.6	15.6	15.0	14.9	14.5	13.2	12.4	11.7	12.8	12.7	13.0	13.3	13.5	13.7
Thailand	20.8	20.2	20.0	19.5	20.7	21.1	21.3	22.3	21.3	21.5	21.5	21.5	21.5	21.6	21.6
Turkey	32.8	31.6	31.8	32.6	33.3	34.6	35.0	37.2	36.3	35.6	35.6	35.7	35.8	35.8	35.7
Ukraine	41.6	40.2	42.4	40.8	43.4	42.9	44.7	43.3	40.8	40.8	39.7	40.0	40.0	40.0	39.9
United Arab Emirates	40.9	39.5	42.0	30.7	34.7	37.8	40.1	41.0	37.8	31.3	29.9	30.1	30.7	30.6	29.8
Uruguay	28.6	28.9	27.1	28.1	29.0	28.3	27.7	29.5	28.7	28.9	29.0	29.1	29.3	29.5	29.5
Venezuela	37.7	33.1	31.4	24.6	21.2	27.9	23.5	23.4	28.4	18.1	16.2	15.4	14.6	14.1	13.9
Average	27.9	27.9	29.8	27.1	27.7	29.1	29.8	29.8	29.2	27.9	27.6	27.6	27.6	27.4	27.2
Asia	18.5	19.3	21.6	22.1	22.5	24.4	25.5	25.7	26.0	26.2	25.8	25.8	25.6	25.4	25.3
Europe	37.8	38.0	38.0	35.3	35.4	37.0	37.3	37.0	37.0	35.0	35.2	35.5	35.6	35.5	35.3
Latin America	28.5	28.6	30.2	28.4	29.7	30.2	30.2	30.5	29.9	29.2	29.4	29.4	29.6	29.6	29.6
MENAP	38.7	36.7	40.9	31.6	33.1	34.3	35.6	36.2	33.3	27.0	26.3	26.7	26.8	26.6	26.2
G20 Emerging	26.0	26.2	28.5	26.2	27.1	28.8	29.5	29.4	29.0	28.2	27.8	27.8	27.8	27.6	27.4

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] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	43.5	36.2	40.6	43.3	40.1	38.3	36.8	35.7	34.8
Angola	38.4	41.2	55.4	41.9	40.0	40.2	41.3	40.8	41.1	30.9	29.0	29.8	28.6	27.5	26.7
Argentina	22.4	24.6	26.1	29.4	29.6	31.7	33.9	35.4	38.1	40.3	40.0	40.3	40.5	40.8	41.1
Azerbaijan	26.9	25.9	31.1	33.8	31.7	34.0	36.7	38.0	39.2	34.7	31.9	30.8	32.2	29.7	29.9
Belarus	47.9	47.9	48.8	46.2	42.1	34.5	38.9	42.1	40.1	43.8	42.3	41.9	41.1	41.1	41.1
Brazil	39.2	37.7	37.4	37.2	38.8	37.6	38.0	38.6	40.2	41.2	42.1	40.5	39.5	39.2	39.2
Chile	18.7	19.4	21.7	24.7	23.9	23.3	23.7	23.9	24.9	26.2	27.1	27.5	27.8	27.9	27.8
China	18.5	18.3	22.6	25.8	25.9	26.5	28.1	29.2	29.7	30.8	30.5	30.2	29.9	29.5	29.0
Colombia	28.3	28.0	26.6	29.5	29.4	28.6	28.3	29.0	29.5	29.9	29.7	29.0	28.5	27.8	27.2
Croatia	44.9	44.7	44.3	47.2	46.8	48.5	47.0	47.8	48.1	48.5	48.7	48.7	48.6	49.3	49.6
Dominican Republic	16.1	16.3	18.3	16.3	15.8	15.9	20.2	18.1	18.1	18.3	18.5	18.7	18.0	18.1	18.1
Ecuador	21.2	24.6	35.2	33.0	34.7	39.3	40.4	44.0	44.2	40.6	37.4	35.3	34.9	34.3	33.9
Egypt[1]	37.8	35.3	36.0	34.6	33.4	31.8	32.7	37.1	38.6	35.4	34.9	33.5	33.1	32.6	32.5
Hungary	51.9	50.2	48.9	50.8	49.8	49.9	48.7	49.8	50.0	49.1	46.5	47.1	47.6	48.3	49.1
India	26.5	26.4	29.7	28.3	27.2	27.2	27.2	27.4	26.6	27.2	27.1	27.0	26.9	26.8	26.7
Indonesia	18.5	18.7	19.4	17.0	16.9	17.7	18.8	19.1	18.8	17.0	17.4	17.5	17.6	17.7	17.7
Iran	23.8	19.7	22.1	20.6	19.1	18.9	14.5	15.0	15.7	16.8	16.7	16.9	16.9	16.8	16.7
Kazakhstan	19.8	23.7	27.1	23.5	22.5	21.8	22.4	20.2	22.5	23.6	23.2	22.5	21.8	21.4	20.8
Kuwait	31.9	30.1	40.4	42.2	44.8	39.1	37.4	37.8	42.4	54.3	52.3	50.1	48.4	47.4	47.1
Libya	31.2	33.7	40.8	58.2	53.4	55.0	44.5	69.8	84.4	100.4	86.6	82.7	77.0	70.6	64.1
Malaysia	25.9	26.3	27.3	31.3	27.0	27.5	28.8	28.4	26.9	25.6	25.1	24.6	24.6	24.6	24.1
Mexico	22.9	23.4	25.8	28.2	26.7	27.1	27.7	28.0	28.1	28.1	27.1	26.8	26.5	26.6	26.8
Morocco	28.1	28.6	30.6	30.4	31.1	33.8	35.3	32.9	33.0	30.0	30.0	30.0	29.7	29.5	29.4
Oman	35.4	36.4	30.1	39.6	35.0	39.5	44.8	45.9	48.8	58.2	59.6	58.4	56.5	55.2	54.3
Pakistan	17.1	19.5	21.4	19.3	20.3	19.3	21.7	21.8	20.2	19.8	19.6	19.6	19.6	20.1	20.1
Peru	19.1	18.6	19.6	21.4	21.0	19.8	20.3	21.6	22.5	22.6	22.8	22.4	21.9	21.6	21.5
Philippines	19.1	19.0	18.6	20.1	19.2	18.0	18.9	18.6	18.4	19.7	20.3	20.5	20.6	20.8	20.9
Poland	45.2	43.3	44.3	45.1	45.9	43.9	42.9	42.2	41.8	41.8	41.4	41.2	41.0	40.9	41.0
Qatar	28.1	26.7	24.8	32.2	29.0	28.5	30.9	31.6	32.7	35.7	35.6	33.4	31.7	30.6	30.0
Romania	33.4	35.2	36.3	37.8	37.9	36.3	34.8	33.8	34.0	33.8	32.7	32.0	31.9	31.8	31.7
Russia	31.1	34.2	34.3	41.4	38.0	35.7	37.3	38.2	38.7	39.6	38.4	37.7	37.3	35.4	35.3
Saudi Arabia	27.3	29.5	26.7	37.1	34.0	33.4	33.3	35.6	40.8	50.4	46.7	45.2	43.9	41.6	39.9
South Africa	27.1	27.2	28.7	31.7	31.5	30.9	31.3	31.7	32.0	33.2	33.2	33.0	33.0	33.0	33.0
Sri Lanka	24.3	23.5	22.6	24.9	22.8	21.4	19.7	18.3	17.7	18.7	19.1	19.2	19.3	19.5	19.6
Thailand	18.7	20.0	19.2	21.7	22.0	21.1	22.2	21.9	22.2	22.6	22.8	22.9	23.0	22.9	22.7
Turkey	33.5	33.6	34.5	38.6	36.7	35.2	36.6	38.4	37.3	36.5	36.4	36.5	36.6	36.8	37.1
Ukraine	42.9	42.1	45.4	46.8	49.2	45.7	49.0	48.1	45.4	45.0	43.4	43.1	42.6	42.4	42.0
United Arab Emirates	15.6	17.7	21.9	35.0	32.7	31.5	29.2	30.6	32.8	36.8	33.9	31.8	30.0	28.5	27.1
Uruguay	29.1	28.9	28.7	29.7	30.5	29.2	30.4	31.8	32.2	32.1	32.2	32.1	32.1	32.0	31.9
Venezuela	39.3	35.9	34.9	33.3	31.6	39.5	40.0	37.9	43.4	42.5	41.2	40.9	40.9	41.0	41.1
Average	26.7	27.0	29.0	30.8	30.1	29.8	30.5	31.3	31.7	32.1	31.5	31.1	30.7	30.3	29.9
Asia	20.5	20.4	23.5	25.5	25.2	25.5	26.9	27.8	28.0	28.9	28.8	28.5	28.3	28.0	27.6
Europe	35.4	36.5	37.1	41.2	39.1	37.1	38.0	38.5	38.5	38.5	37.8	37.4	37.2	36.3	36.3
Latin America	29.7	29.7	31.0	32.2	32.7	32.9	33.3	33.6	34.9	35.1	34.9	34.1	33.6	33.4	33.4
MENAP	25.7	26.0	28.0	32.6	30.7	29.9	29.7	32.1	34.2	37.3	35.4	34.2	33.2	32.2	31.3
G20 Emerging	25.7	26.0	28.0	30.2	29.8	29.6	30.5	31.4	31.7	32.2	31.7	31.3	31.0	30.5	30.1

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] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	9.9	8.3	8.8	10.2	13.6	19.6	23.4	26.0	27.6
Angola	18.7	16.4	16.6	49.9	38.8	31.4	28.7	36.2	42.2	57.4	53.0	50.0	46.1	42.3	38.4
Argentina	61.8	53.2	47.0	47.6	39.2	35.8	37.3	40.2	45.3	52.1	55.1	56.5	59.5	62.0	65.0
Azerbaijan	10.2	8.6	7.3	11.8	11.1	10.1	11.6	13.8	15.9	20.6	22.7	22.7	24.4	24.3	26.1
Belarus	11.1	18.3	21.5	34.7	39.5	45.9	39.0	38.1	40.5	40.4	44.6	44.4	43.5	42.4	41.7
Brazil[1]	65.8	63.8	61.9	65.0	63.0	61.2	63.5	62.2	65.2	69.9	74.5	75.8	76.5	76.7	76.1
Chile	5.0	3.9	4.9	5.8	8.6	11.2	12.0	12.8	15.1	18.1	20.0	21.5	22.3	22.8	23.2
China	32.2	34.6	31.6	36.1	36.0	35.6	37.1	39.4	41.1	43.2	46.0	48.3	50.0	51.0	51.4
Colombia	35.8	32.5	32.1	35.2	36.4	35.6	34.1	37.8	44.3	50.9	48.9	47.6	45.9	43.8	41.5
Croatia	36.1	34.4	36.0	44.5	52.8	63.7	69.2	80.8	85.1	89.3	91.8	92.5	91.8	91.1	90.4
Dominican Republic	19.4	17.5	19.6	22.7	23.8	25.7	30.5	34.6	35.0	33.3	34.6	36.2	37.1	38.1	39.0
Ecuador	28.8	27.2	22.2	17.7	19.7	19.4	21.7	26.0	31.3	37.4	40.4	41.2	41.2	40.5	39.6
Egypt[2]	90.3	80.2	70.2	73.0	73.2	76.6	78.9	89.0	90.5	90.0	89.3	84.8	81.7	79.3	77.0
Hungary	64.9	65.8	71.9	78.1	80.9	81.0	78.5	77.3	77.0	75.3	74.2	73.1	72.0	70.7	69.7
India	77.1	74.0	74.5	72.5	67.5	68.1	67.5	65.8	66.1	65.3	63.9	62.8	61.7	60.5	59.3
Indonesia	35.8	32.3	30.3	26.5	24.5	23.1	23.0	24.9	25.0	26.5	26.7	26.9	26.7	26.4	26.1
Iran	12.5	12.0	9.3	10.4	12.2	8.9	16.8	15.4	15.8	16.4	15.3	14.8	14.7	14.3	13.9
Kazakhstan	6.7	5.9	6.8	10.2	10.7	10.4	12.4	12.9	14.9	18.3	18.8	19.3	20.5	22.0	23.4
Kuwait	10.6	11.8	9.6	11.0	11.3	8.5	6.8	6.4	6.9	9.9	9.8	9.2	8.6	8.2	7.9
Libya	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Malaysia	40.2	39.9	39.9	51.1	51.9	52.6	54.6	55.9	55.2	55.6	53.6	51.8	49.7	47.3	44.5
Mexico	37.8	37.5	42.8	43.9	42.2	43.2	43.2	46.4	49.8	52.0	52.1	52.0	51.5	50.8	50.0
Morocco	56.8	52.0	45.4	46.1	49.0	52.5	58.3	61.5	63.4	63.9	63.9	63.2	62.2	60.6	58.7
Oman	8.9	7.1	4.8	6.9	5.9	5.2	4.9	5.1	5.1	9.3	12.2	14.1	20.4	27.1	34.4
Pakistan	54.4	52.6	57.9	59.1	61.5	59.5	64.0	64.8	64.9	64.7	64.4	62.8	61.2	60.4	59.2
Peru	34.8	31.9	28.0	28.4	25.4	23.0	21.2	20.3	20.7	22.4	24.6	24.8	24.5	24.1	24.3
Philippines	51.6	44.6	44.2	44.3	43.5	41.4	40.6	39.2	36.4	35.9	33.9	32.0	30.3	28.8	27.3
Poland	47.5	44.6	47.0	50.3	53.6	54.8	54.4	55.7	50.1	51.1	51.0	51.1	50.7	49.7	48.8
Qatar	12.5	8.0	11.5	33.6	38.4	34.5	36.0	32.3	31.7	29.9	27.8	23.6	18.5	15.2	12.8
Romania	12.5	12.7	13.4	23.3	30.5	33.9	37.5	38.8	40.6	40.9	41.5	42.2	42.8	43.5	44.1
Russia	10.5	8.6	8.0	10.6	11.3	11.6	12.7	14.0	17.8	20.4	21.0	21.9	22.8	23.0	23.0
Saudi Arabia	25.8	17.1	12.1	14.0	8.4	5.4	3.6	2.2	1.6	6.7	17.3	25.8	32.8	38.8	44.3
South Africa	29.8	27.1	25.9	30.3	34.4	37.6	40.5	43.3	46.0	48.4	49.8	50.8	52.5	53.8	54.3
Sri Lanka	87.9	85.0	81.4	86.1	81.9	78.5	79.2	78.3	75.5	76.7	76.3	75.5	74.3	73.1	72.3
Thailand	39.2	36.0	34.9	42.4	39.9	39.1	41.9	42.2	43.5	43.5	42.6	42.2	42.0	42.0	41.5
Turkey	46.5	39.9	40.0	46.1	42.3	39.1	36.2	36.1	33.6	32.1	32.6	34.5	35.6	37.5	40.7
Ukraine	14.3	11.8	19.7	34.1	40.6	36.9	37.5	40.7	71.2	94.4	92.1	87.8	82.4	76.9	70.8
United Arab Emirates	6.8	7.9	12.5	24.1	22.2	17.6	17.0	15.9	15.7	18.9	18.3	17.4	16.5	15.8	15.0
Uruguay	75.7	68.0	67.8	63.1	59.4	58.1	57.9	60.2	61.3	64.1	65.3	66.8	67.4	67.7	67.7
Venezuela	34.5	29.1	23.1	27.7	34.6	43.8	44.3	52.1	51.8	53.0	44.1	41.4	41.5	42.4	44.4
Average	38.6	37.0	35.1	39.8	39.1	38.1	38.4	39.8	41.9	44.6	46.3	47.5	48.3	48.7	48.7
Asia	43.2	43.5	39.9	42.9	41.8	40.9	41.4	42.8	44.2	45.7	47.5	49.0	50.1	50.5	50.5
Europe	27.0	23.7	23.8	29.6	29.4	28.1	27.3	28.5	31.2	34.2	35.4	35.8	36.0	36.0	36.2
Latin America	47.9	46.4	46.5	49.2	48.3	48.0	48.3	49.2	52.6	55.6	57.2	57.8	58.1	58.1	57.8
MENAP	26.5	22.1	19.7	25.6	24.6	22.1	23.4	24.3	25.6	30.5	33.1	34.8	36.0	37.1	38.0
G20 Emerging	41.2	40.0	37.6	41.5	40.2	39.0	39.2	40.3	42.5	45.1	47.3	48.9	50.2	50.8	51.1

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] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	–23.3	–25.1	–16.8	–6.4	3.7	10.6	15.2	18.5	20.6
Angola	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Argentina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Azerbaijan	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Belarus	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Brazil	46.5	44.2	37.1	40.4	38.0	34.5	32.9	31.5	34.1	38.0	42.1	43.5	44.4	44.8	44.5
Chile	–6.6	–13.0	–19.3	–10.6	–7.0	–8.6	–6.8	–5.7	–4.4	–2.1	0.3	2.1	3.2	4.1	5.1
China	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Colombia	25.3	22.5	22.3	26.1	28.4	27.1	24.9	27.0	33.8	41.5	40.0	39.2	38.0	36.5	34.7
Croatia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Dominican Republic	19.4	17.5	19.6	22.7	23.8	25.7	30.5	34.6	35.0	33.3	34.6	36.2	37.1	38.1	39.0
Ecuador	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Egypt[1]	71.4	64.5	55.6	58.7	60.0	64.5	67.9	78.1	81.9	82.6	82.8	79.1	76.7	74.9	73.1
Hungary	62.4	63.4	63.8	72.4	75.5	74.7	72.3	71.7	71.7	70.3	69.5	68.6	67.7	66.6	66.7
India	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Indonesia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iran	–0.9	–2.7	–2.8	2.5	2.0	–2.7	5.8	–1.7	–2.0	1.5	1.2	0.1	–0.8	–1.7	–2.6
Kazakhstan	–10.9	–13.8	–13.9	–11.0	–10.2	–13.0	–16.3	–18.0	–19.8	–28.4	–25.5	–23.1	–21.4	–20.0	–19.1
Kuwait	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Libya	–77.8	–77.6	–70.2	–93.6	–86.9	–170.5	–83.6	–92.9	–99.7	–53.1	14.8	68.8	106.3	130.5	137.6
Malaysia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mexico	29.8	29.1	33.2	36.2	36.2	37.5	37.7	40.4	43.4	45.6	45.7	45.6	45.1	44.4	43.6
Morocco	54.4	50.5	44.7	45.5	48.5	52.1	57.8	61.0	62.9	63.3	63.4	62.7	61.7	60.1	58.2
Oman	–33.3	–37.3	–30.2	–40.1	–36.0	–35.0	–34.5	–49.9	–50.6	–51.7	–34.4	–16.2	–14.7	–4.2	6.9
Pakistan	49.2	47.1	53.4	55.1	57.4	56.5	59.9	61.1	59.4	59.6	59.7	58.5	57.2	56.8	55.8
Peru	24.0	16.7	13.0	12.2	10.3	7.2	4.5	3.5	3.6	5.3	7.3	8.7	9.4	9.8	10.1
Philippines	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Poland	14.9	10.1	9.9	14.7	19.7	26.7	24.8	28.7	24.2	26.1	27.1	28.2	28.7	28.7	28.8
Qatar	–17.2	–22.2	–33.0	–32.0	–29.5	–41.8	–60.3	–84.4	–105.8	–118.5	–114.7	–103.3	–96.3	–90.7	–86.6
Romania	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Russia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Saudi Arabia	1.8	–16.1	–42.2	–43.4	–41.8	–41.9	–51.5	–56.7	–54.2	–41.4	–20.2	–0.2	16.8	31.3	44.1
South Africa	25.9	22.8	21.7	25.4	28.5	31.3	34.7	37.6	41.0	43.9	45.6	47.0	48.6	50.3	51.1
Sri Lanka	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Thailand	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Turkey	39.0	32.7	32.5	37.5	34.7	31.3	27.8	27.3	25.1	24.1	25.0	26.6	28.5	31.0	34.0
Ukraine	11.3	9.7	17.5	30.8	38.5	34.5	35.3	38.4	69.7	88.8	88.9	85.0	79.9	74.6	68.7
United Arab Emirates	–222.4	–215.1	–203.0	–247.1	–228.0	–201.6	–209.0	–216.1	–223.2	–267.3	–260.1	–249.6	–241.2	–235.7	–230.2
Uruguay	47.4	37.8	31.6	30.7	30.6	28.3	25.3	24.2	22.5	23.0	24.3	25.8	26.4	26.7	27.0
Venezuela	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Average	16.4	13.0	9.3	12.6	14.1	12.9	9.8	9.0	10.0	11.6	14.9	17.8	20.0	21.8	23.1
Asia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Europe	28.2	23.3	23.3	29.1	29.8	29.0	25.8	26.4	26.2	25.4	27.3	28.2	28.8	29.4	30.2
Latin America	34.3	32.7	30.7	34.0	33.1	31.2	29.9	30.1	33.1	36.2	38.2	39.0	39.3	39.3	38.7
MENAP	–26.5	–32.3	–39.2	–37.8	–34.5	–33.8	–35.8	–43.7	–43.3	–38.2	–29.4	–21.1	–14.8	–9.4	–5.1
G20 Emerging	33.4	29.8	24.8	28.6	27.8	25.4	22.1	21.6	23.5	27.3	31.8	35.3	38.3	. . .	. . .

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] Based on nominal GDP series prior to the recent revision. Therefore, figures are not comparable to the authorities' numbers because of a different denominator.

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	–3.1	–3.2	–3.8	–3.6	–3.7	–3.7	–3.5
Benin	–0.2	0.3	–0.1	–3.3	–0.4	–1.4	–0.3	–2.1	–2.5	–2.6	–3.5	–3.5	–3.4	–1.9	–1.5
Bolivia	4.5	1.7	3.6	0.0	1.7	0.8	1.8	0.7	–3.4	–5.3	–5.7	–5.6	–5.2	–4.7	–4.3
Burkina Faso	16.1	–5.6	–4.1	–4.7	–3.0	–1.4	–3.1	–3.9	–1.9	–2.5	–3.0	–3.7	–4.1	–4.0	–4.0
Cambodia	–0.2	–0.5	0.5	–4.1	–2.8	–4.1	–3.8	–2.1	–1.3	–2.0	–2.6	–2.9	–3.2	–3.1	–2.9
Cameroon	32.8	4.7	2.2	0.0	–1.1	–2.6	–1.6	–4.0	–5.2	–5.1	–5.6	–5.0	–4.3	–4.0	–3.6
Chad	2.2	2.5	3.6	–9.2	–4.2	2.4	0.5	–2.1	–4.2	–1.1	–0.9	–0.3	2.7	2.1	1.7
Democratic Republic of the Congo	1.9	–0.2	–1.1	1.3	2.4	–0.5	1.8	3.0	1.3	1.9	1.2	1.2	1.4	1.1	1.0
Republic of Congo	16.6	9.4	23.4	4.8	16.1	16.5	6.4	–1.8	–7.7	–9.4	–2.6	3.0	8.2	8.3	6.6
Côte d'Ivoire	–1.5	–0.5	–0.4	–1.4	–1.8	–5.4	–3.1	–2.2	–2.3	–3.2	–3.2	–3.1	–3.0	–2.9	–1.5
Ethiopia	–3.8	–3.6	–2.9	–0.9	–1.3	–1.6	–1.2	–1.9	–2.6	–2.8	–2.8	–2.6	–2.7	–2.6	–2.5
Ghana	–4.7	–5.4	–8.4	–7.0	–9.4	–7.3	–12.2	–11.1	–10.9	–5.9	–4.3	–2.4	–1.7	–1.7	–1.5
Guinea	–3.1	1.9	0.6	–7.1	–14.0	–1.3	–3.3	–5.2	–4.1	–6.7	–3.3	–2.0	–1.5	–1.6	–0.8
Haiti	–1.7	0.2	–2.8	–4.6	1.1	–3.6	–4.8	–7.2	–6.3	–2.7	–2.0	–2.4	–2.2	–2.2	–2.3
Honduras	–2.7	–1.6	–1.7	–4.5	–2.8	–2.8	–4.2	–7.6	–4.3	–2.5	–2.0	–1.9	–1.5	–1.0	–0.9
Kenya	–2.1	–2.4	–3.4	–4.3	–4.4	–4.1	–5.0	–5.7	–7.2	–8.1	–7.3	–6.1	–5.2	–4.6	–3.9
Kyrgyz Republic	–2.7	–0.6	1.0	–1.1	–5.8	–4.6	–5.7	–3.7	0.1	–2.5	–3.7	–2.8	–2.6	–1.1	–1.1
Lao P.D.R.	–2.9	–2.7	–1.4	–4.1	–3.2	–1.7	–0.5	–5.6	–3.8	–5.3	–6.0	–6.4	–6.6	–7.1	–6.6
Madagascar	–0.5	–2.7	–2.0	–2.5	–0.9	–2.4	–2.6	–4.0	–2.3	–4.4	–2.8	–2.9	–2.7	–2.7	–2.6
Mali	31.3	–3.2	–2.2	–4.2	–2.9	–4.2	–1.1	–2.8	–3.5	–3.2	–4.0	–3.5	–3.0	–3.0	–3.0
Moldova	–0.3	0.3	–0.9	–6.3	–2.5	–2.4	–2.2	–1.8	–1.7	–3.9	–3.7	–3.3	–3.2	–3.2	–3.0
Mongolia	6.4	2.1	–3.1	–4.0	0.4	–4.0	–9.1	–8.9	–10.9	–9.7	–8.0	–6.7	–5.3	–4.3	–4.3
Mozambique	–3.5	–2.6	–2.2	–5.0	–3.9	–4.8	–3.9	–2.7	–10.3	–6.5	–5.1	–5.5	–5.7	–4.5	–3.7
Myanmar	–3.6	–3.3	–2.4	–4.9	–5.4	–4.6	–1.7	–1.8	–2.9	–4.8	–4.7	–4.6	–4.4	–4.4	–4.3
Nepal	0.3	–0.8	–0.4	–2.6	–0.8	–1.0	–0.6	2.1	2.2	1.4	–2.2	–2.0	–1.4	0.0	–0.1
Nicaragua	1.1	1.5	–0.2	–1.5	0.1	0.1	–0.1	–0.6	–1.2	–1.0	–1.3	–0.8	–0.9	–1.0	–1.2
Niger	40.3	–1.0	1.5	–5.3	–2.4	–1.5	–1.1	–2.6	–8.3	–8.0	–5.3	–3.5	–2.5	–1.9	–1.3
Nigeria	8.9	–1.1	5.8	–6.0	–4.2	0.4	0.3	–2.3	–2.0	–3.9	–3.2	–3.3	–3.4	–3.6	–3.8
Papua New Guinea	6.5	9.0	2.5	–9.6	3.1	1.7	–3.2	–8.0	–7.2	–5.8	–1.1	–0.6	0.5	1.3	2.0
Rwanda	0.2	–1.7	0.9	0.3	0.4	–1.8	–1.6	–2.6	–3.6	–3.2	–3.1	–2.9	–2.9	–1.3	–1.2
Senegal	–5.4	–3.8	–4.7	–4.9	–5.2	–6.1	–5.2	–5.5	–4.9	–4.7	–4.2	–3.6	–3.0	–2.8	–2.6
Sudan	–1.4	–3.5	0.6	–5.1	0.3	0.1	–3.3	–2.3	–1.1	–1.8	–1.3	–1.1	–0.9	–0.7	–0.6
Tajikistan	1.7	–5.5	–5.1	–5.2	–3.0	–2.1	0.6	–0.8	0.0	–1.9	–2.6	–2.6	–2.9	–3.2	–3.5
Tanzania	–3.4	–1.5	–1.9	–4.5	–4.8	–3.6	–4.1	–3.9	–3.2	–4.0	–3.9	–3.3	–3.3	–3.2	–3.0
Uganda	–0.7	–0.9	–2.5	–2.1	–5.7	–2.7	–3.0	–4.0	–3.5	–3.6	–4.2	–4.3	–5.0	–4.9	–3.1
Uzbekistan	3.7	4.6	7.7	2.5	3.6	7.8	7.8	2.4	2.2	0.1	0.8	0.8	0.8	0.8	0.9
Vietnam	0.3	–2.0	–0.5	–6.0	–2.8	–1.1	–6.8	–7.4	–6.1	–6.9	–6.7	–5.9	–5.2	–5.0	–4.8
Yemen	1.2	–7.2	–4.5	–10.2	–4.1	–4.5	–6.3	–6.9	–4.1	–8.5	–9.2	–8.5	–8.5	–8.5	–8.7
Zambia	16.9	–1.0	–0.7	–2.1	–2.4	–1.8	–2.9	–6.5	–6.1	–7.8	–6.5	–5.6	–5.2	–3.9	–3.3
Zimbabwe	–2.5	–3.0	–2.0	–2.1	0.7	–1.3	–0.6	–1.9	–1.5	–1.3	–0.5	–1.0	–0.4	0.5	0.5
Average	3.8	–1.4	1.0	–4.3	–2.8	–1.1	–2.0	–3.4	–3.2	–4.1	–3.8	–3.5	–3.3	–3.2	–3.1
Oil Producers	7.4	–1.0	3.8	–5.3	–3.1	–0.1	–1.5	–3.4	–3.0	–4.5	–4.1	–3.9	–3.7	–3.7	–3.7
Asia	–0.9	–1.7	–1.9	–4.7	–2.8	–2.5	–4.3	–4.8	–4.3	–4.8	–4.9	–4.5	–4.2	–4.0	–3.8
Latin America	0.6	0.4	0.4	–2.3	–0.1	–0.9	–1.1	–2.7	–3.6	–3.5	–3.6	–3.5	–3.3	–2.9	–2.8
Sub-Saharan Africa	6.6	–1.2	2.4	–4.3	–3.5	–1.0	–1.4	–3.1	–3.2	–4.1	–3.5	–3.2	–3.1	–3.0	–2.9
Others	0.4	–2.3	0.8	–4.0	–0.2	0.9	–0.5	–1.8	–0.7	–2.4	–2.4	–2.2	–2.1	–2.0	–2.0

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 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	–1.0	–1.2	–1.8	–1.5	–1.5	–1.6	–1.3
Benin	0.0	1.9	0.3	–2.8	0.1	–1.0	0.3	–1.6	–2.1	–1.7	–3.0	–2.9	–2.8	–1.2	–0.8
Bolivia	7.0	4.3	5.5	1.7	3.1	2.1	2.8	1.6	–2.4	–4.3	–4.6	–4.4	–4.0	–3.4	–3.0
Burkina Faso	16.7	–5.2	–3.7	–4.3	–2.6	–0.8	–2.4	–3.3	–1.2	–1.9	–2.4	–3.1	–3.5	–3.3	–3.3
Cambodia	0.0	–0.3	0.7	–3.8	–2.5	–3.8	–3.3	–1.4	–1.0	–1.6	–2.2	–2.5	–2.9	–2.8	–2.6
Cameroon	33.8	5.2	2.6	0.2	–0.8	–2.2	–1.2	–3.6	–4.8	–4.6	–4.8	–4.1	–3.3	–2.9	–2.4
Chad	2.6	2.8	3.8	–8.8	–3.6	3.0	0.9	–1.5	–3.6	–0.5	–0.1	0.5	3.2	2.6	2.1
Democratic Republic of the Congo	3.1	0.9	–0.1	2.7	3.9	1.3	3.3	4.2	2.3	2.8	2.0	2.1	2.2	1.8	1.7
Republic of Congo	21.1	11.9	25.8	6.1	17.0	16.5	6.5	–1.5	–7.5	–9.3	–2.4	3.2	8.4	8.5	6.8
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	–2.2	–2.1	–1.9	–1.9	–1.8	–1.7
Ghana	–2.6	–3.5	–6.2	–4.2	–6.2	–4.6	–8.7	–6.3	–4.6	1.1	1.6	2.8	3.2	2.6	2.3
Guinea	0.4	4.3	3.2	–5.0	–12.0	0.7	–1.6	–4.1	–2.9	–5.6	–2.0	–0.9	–0.5	–0.6	0.0
Haiti	–1.2	1.3	–2.1	–3.8	1.7	–3.2	–4.4	–6.7	–5.9	–2.3	–1.3	–1.7	–1.5	–1.4	–1.7
Honduras	–3.1	–2.2	–2.7	–5.4	–3.4	–3.0	–4.3	–7.1	–3.8	–1.3	–0.4	–0.4	–0.1	0.3	0.3
Kenya	–0.5	–0.8	–1.8	–2.7	–2.5	–2.2	–2.9	–3.3	–4.8	–5.7	–4.9	–3.8	–3.1	–2.6	–2.0
Kyrgyz Republic	–1.8	0.0	1.7	–0.3	–5.0	–3.6	–4.7	–2.9	1.0	–1.5	–2.9	–1.9	–1.8	–0.2	–0.4
Lao P.D.R.	–2.2	–2.2	–0.8	–3.8	–2.8	–1.2	0.2	–4.5	–3.0	–4.1	–4.9	–4.5	–4.2	–4.0	–3.5
Madagascar	2.0	–1.5	–1.2	–1.8	–0.1	–1.5	–1.9	–3.3	–1.7	–3.4	–1.6	–1.8	–1.6	–1.6	–1.5
Mali	31.8	–2.8	–1.9	–3.9	–2.5	–3.5	–0.5	–2.2	–2.8	–2.4	–3.3	–2.7	–2.3	–2.3	–2.2
Moldova	0.7	1.5	0.2	–4.9	–1.7	–1.6	–1.4	–1.2	–1.2	–2.3	–2.1	–1.6	–1.4	–1.2	–1.1
Mongolia	6.7	2.4	–2.9	–3.6	0.9	–3.7	–8.3	–7.5	–8.6	–7.2	–4.8	–3.7	–0.7	–0.2	–0.4
Mozambique	–2.9	–2.0	–1.8	–4.5	–3.2	–3.9	–2.9	–1.8	–9.2	–5.1	–3.8	–4.2	–4.4	–3.2	–2.3
Myanmar	–3.0	–2.7	–1.9	–4.2	–4.5	–3.5	–0.4	–0.2	–1.3	–3.3	–3.1	–3.1	–2.9	–2.9	–2.8
Nepal	0.9	–0.1	0.3	–1.9	0.0	–0.1	0.2	2.8	2.8	2.4	–1.8	–1.6	–0.9	0.6	0.4
Nicaragua	2.1	1.9	–0.1	–1.2	0.3	0.5	0.5	–0.2	–0.7	–0.6	–0.8	–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	–7.9	–7.2	–4.1	–2.2	–1.2	–0.8	–0.3
Nigeria	9.6	–0.5	6.5	–5.2	–3.6	1.3	1.2	–1.3	–1.0	–2.8	–2.0	–2.0	–2.0	–1.9	–2.0
Papua New Guinea	8.3	10.9	4.3	–7.6	4.4	3.0	–1.8	–6.6	–4.9	–3.7	1.0	1.5	2.8	3.4	3.8
Rwanda	1.0	–1.2	1.4	0.6	0.9	–1.4	–1.1	–1.8	–2.8	–2.5	–2.3	–2.0	–2.0	–0.5	–0.4
Senegal	–4.5	–3.2	–4.0	–4.2	–4.3	–4.6	–3.7	–4.0	–3.2	–2.9	–2.4	–1.9	–1.3	–1.3	–1.1
Sudan	–0.2	–2.5	1.5	–4.1	1.4	1.3	–2.2	–1.8	–0.3	–1.2	–0.7	–0.6	–0.4	–0.3	–0.2
Tajikistan	2.2	–5.1	–4.8	–4.7	–2.5	–1.6	1.1	0.1	0.4	–1.2	–1.9	–2.0	–2.3	–2.6	–3.0
Tanzania	–2.5	–0.6	–1.2	–3.8	–4.1	–2.8	–3.1	–2.7	–1.8	–2.4	–2.2	–1.4	–1.2	–1.1	–1.0
Uganda	0.4	0.1	–1.4	–1.1	–4.8	–1.7	–1.7	–2.7	–1.9	–1.7	–2.2	–2.1	–2.6	–2.2	0.0
Uzbekistan	3.8	4.7	7.8	2.5	3.6	7.8	7.8	2.4	2.2	0.1	0.8	0.8	0.8	0.9	0.9
Vietnam	1.0	–1.0	0.5	–4.9	–1.6	0.0	–5.6	–5.9	–4.5	–5.0	–4.9	–3.9	–3.1	–2.9	–2.7
Yemen	3.5	–4.9	–2.1	–7.7	–1.7	–0.2	–0.9	–1.5	1.5	–2.5	–3.4	–2.1	–1.5	–1.2	–1.0
Zambia	18.5	0.3	0.7	–0.7	–1.0	–0.8	–1.5	–4.9	–3.8	–5.1	–3.2	–2.0	–1.3	0.1	0.7
Zimbabwe	0.0	–1.2	0.3	0.4	1.9	–0.2	0.4	–1.0	–0.4	0.1	0.9	0.4	1.0	1.9	1.9
Average	4.8	–0.4	2.0	–3.2	–1.8	0.0	–0.8	–2.1	–1.8	–2.6	–2.3	–1.9	–1.6	–1.5	–1.3
Oil Producers	8.3	–0.1	4.7	–4.3	–2.2	1.0	–0.3	–2.1	–1.7	–3.1	–2.7	–2.2	–1.9	–1.8	–1.7
Asia	0.1	–0.5	–0.6	–3.3	–1.5	–1.3	–2.9	–3.2	–2.5	–3.0	–3.2	–2.6	–2.2	–2.1	–1.9
Latin America	1.7	1.3	0.9	–1.8	0.4	–0.4	–0.5	–2.0	–2.9	–2.6	–2.5	–2.4	–2.1	–1.7	–1.6
Sub-Saharan Africa	7.6	–0.2	3.3	–3.4	–2.6	0.1	–0.2	–1.9	–1.9	–2.7	–2.0	–1.7	–1.5	–1.3	–1.2
Others	1.6	–1.3	1.9	–3.0	0.9	2.4	1.1	–0.4	0.9	–1.0	–0.9	–0.6	–0.4	–0.2	–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	11.0	11.3	12.3	12.8	13.2	13.4
Benin	19.2	23.8	21.3	21.7	20.0	20.1	20.7	20.4	19.2	21.2	21.2	21.3	21.3	21.4	21.7
Bolivia	34.3	34.4	38.9	35.8	33.2	36.2	37.8	39.1	39.9	35.1	32.6	32.8	32.9	33.1	33.0
Burkina Faso	40.8	20.0	16.8	19.5	19.8	20.7	22.4	23.9	21.4	22.3	22.6	23.0	23.0	23.0	23.0
Cambodia	12.8	13.7	15.9	15.8	17.1	15.6	16.9	18.4	19.8	19.4	19.4	19.6	19.6	19.8	19.9
Cameroon	47.4	20.3	21.2	17.4	16.6	17.9	17.9	18.0	18.3	17.3	16.6	16.7	16.9	16.9	16.9
Chad	16.2	19.7	22.5	15.0	20.2	24.8	24.4	20.8	17.9	16.5	17.4	17.9	23.8	25.2	25.3
Democratic Republic of the Congo	11.8	10.4	11.5	15.2	20.2	15.2	17.2	15.3	14.6	16.1	16.8	16.6	16.9	17.2	17.5
Republic of Congo	44.4	39.3	47.0	29.5	37.5	42.5	42.6	46.9	42.3	41.2	42.9	40.7	40.9	40.5	39.4
Côte d'Ivoire	18.6	19.2	19.9	18.5	18.1	19.2	18.9	19.8	20.9	19.5	19.8	20.1	20.3	20.5	21.6
Ethiopia	18.3	17.0	15.9	16.2	17.2	16.6	15.5	15.9	15.1	16.1	15.6	16.0	16.2	16.5	16.6
Ghana	17.1	17.5	15.9	16.4	16.7	19.1	18.5	16.7	18.4	19.7	20.5	20.6	21.3	21.1	20.6
Guinea	15.9	15.1	16.1	16.5	15.7	20.2	22.9	19.8	21.9	23.3	23.4	23.8	24.1	24.0	22.0
Haiti	13.5	15.8	15.1	17.8	23.9	21.9	23.4	20.9	19.0	19.9	19.8	19.8	19.6	19.5	19.9
Honduras	23.3	24.5	26.4	24.4	24.1	23.1	22.5	22.9	24.4	25.8	26.0	26.3	26.5	26.7	27.0
Kenya	19.3	19.7	19.4	18.8	19.8	19.5	19.1	19.8	19.7	20.4	21.4	21.6	21.8	22.0	22.2
Kyrgyz Republic	27.4	31.2	30.3	33.3	31.3	32.8	34.9	34.4	35.9	35.8	34.7	34.8	34.7	34.6	34.6
Lao P.D.R.	14.5	15.6	15.9	17.1	22.6	22.4	24.1	23.9	24.2	22.8	22.2	22.1	22.2	22.2	22.6
Madagascar	21.0	16.0	15.9	11.5	13.2	11.7	10.8	10.9	12.4	12.3	12.6	13.1	13.6	14.0	14.3
Mali	56.2	21.3	19.0	21.7	20.1	20.8	17.4	20.7	20.3	23.3	22.0	22.5	22.9	23.2	23.5
Moldova	39.9	42.9	40.6	38.9	38.3	36.6	37.9	36.7	38.0	36.0	34.6	34.3	34.1	33.8	33.8
Mongolia	28.3	29.9	23.0	23.2	32.0	33.9	29.8	31.2	27.9	24.2	24.2	24.3	24.7	24.8	25.1
Mozambique	19.9	22.0	22.7	24.4	26.1	27.1	27.5	32.2	32.9	30.4	29.1	28.7	28.4	28.1	27.6
Myanmar	12.8	12.3	11.6	10.7	11.4	12.1	23.4	23.3	26.4	20.8	20.6	20.8	21.5	22.0	22.3
Nepal	13.0	14.2	14.9	16.8	18.0	17.7	18.7	19.3	20.8	20.8	21.8	21.9	22.2	22.3	22.4
Nicaragua	22.3	22.7	21.5	21.1	22.5	23.5	24.1	24.0	23.6	24.1	24.4	24.4	24.3	24.4	24.4
Niger	60.1	22.2	24.1	18.6	18.2	17.9	21.2	25.2	23.6	23.6	23.6	24.2	24.4	24.4	24.9
Nigeria	21.6	17.6	20.6	11.2	12.4	17.7	14.3	11.0	10.5	7.5	7.6	8.0	8.1	7.9	7.9
Papua New Guinea	37.2	37.3	32.6	27.3	31.3	30.4	29.2	28.2	27.3	23.8	24.7	24.7	24.6	24.8	24.9
Rwanda	21.9	21.2	25.2	24.1	26.3	24.6	24.2	25.1	24.1	22.6	21.0	22.2	22.1	22.4	22.4
Senegal	21.2	23.6	21.6	21.6	21.9	22.7	23.3	22.5	24.2	23.7	24.2	24.0	24.0	24.1	23.9
Sudan	22.4	21.9	24.0	15.5	19.3	18.1	9.9	10.8	11.5	9.8	10.3	10.1	10.0	9.4	9.5
Tajikistan	23.6	22.5	22.1	23.4	23.2	24.9	25.1	26.9	28.4	26.3	26.7	26.5	26.4	26.3	26.2
Tanzania	14.4	16.6	16.6	15.7	15.5	15.6	15.7	15.5	14.9	15.1	15.9	15.9	15.9	16.0	16.2
Uganda	14.9	14.3	13.5	13.2	13.2	14.5	13.5	12.8	13.6	15.2	15.3	15.4	15.7	16.1	16.9
Uzbekistan	34.4	35.6	40.7	36.7	37.0	40.2	41.5	36.3	35.5	35.3	35.1	35.1	35.0	35.0	35.0
Vietnam	26.3	26.1	26.6	25.6	27.3	25.9	22.6	23.1	21.9	20.9	20.8	21.3	21.3	21.4	21.2
Yemen	38.6	33.2	36.7	25.0	26.1	25.3	29.9	23.9	23.6	11.3	13.8	15.8	16.6	16.6	17.1
Zambia	36.6	18.9	18.8	15.7	15.6	17.5	19.1	18.4	19.3	17.9	16.8	17.1	17.6	18.1	18.1
Zimbabwe	7.3	2.9	2.2	12.0	23.3	26.7	28.0	27.7	27.3	28.1	27.0	26.7	26.6	26.6	26.6
Average	22.3	19.5	21.0	17.1	18.0	20.0	19.0	17.8	17.5	16.1	16.4	16.8	17.1	17.2	17.3
Oil Producers	24.4	20.3	22.8	16.2	17.2	20.3	17.8	15.5	14.8	12.4	12.9	13.5	13.8	13.8	13.9
Asia	17.6	17.5	17.8	16.9	18.2	18.3	19.2	19.2	18.9	17.5	17.7	18.2	18.5	18.7	18.8
Latin America	25.5	26.2	28.5	27.1	27.3	28.4	29.4	30.1	30.7	29.0	28.0	28.2	28.4	28.6	28.7
Sub-Saharan Africa	22.7	18.1	19.7	14.7	15.5	18.6	16.8	15.0	14.6	13.4	13.8	14.2	14.6	14.6	14.8
Others	29.7	28.6	31.5	25.0	26.5	27.2	26.4	24.1	24.1	20.5	21.0	21.1	21.1	20.8	20.9

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

Note: For country-specific details, see Data and Conventions in text, and Table 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	14.0	14.2	15.1	15.9	16.5	16.9	16.9
Benin	19.4	23.4	21.4	25.0	20.4	21.6	21.0	22.4	21.8	23.8	24.8	24.8	24.7	23.2	23.1
Bolivia	29.8	32.7	35.3	35.8	31.5	35.4	36.0	38.4	43.3	40.4	38.3	38.4	38.1	37.7	37.3
Burkina Faso	24.6	25.7	20.9	24.2	22.8	22.1	25.5	27.8	23.3	24.8	25.6	26.7	27.1	27.0	27.0
Cambodia	13.0	14.3	15.4	19.9	19.9	19.7	20.7	20.5	21.2	21.4	22.0	22.5	22.8	22.8	22.8
Cameroon	14.6	15.6	19.0	17.5	17.7	20.5	19.5	21.9	23.5	22.4	22.1	21.7	21.1	20.8	20.5
Chad	14.0	17.1	18.9	24.2	24.4	22.4	23.9	22.9	22.1	17.6	18.3	18.1	21.2	23.1	23.6
Democratic Republic of the Congo	9.9	10.6	12.6	13.9	17.7	15.7	15.4	12.2	13.3	14.2	15.5	15.4	15.5	16.1	16.4
Republic of Congo	27.8	29.9	23.6	24.7	21.4	26.1	36.2	48.7	50.1	50.6	45.5	37.6	32.7	32.1	32.7
Côte d'Ivoire	20.1	19.7	20.3	19.9	20.0	24.6	22.1	22.1	23.2	22.7	22.9	23.2	23.3	23.4	23.2
Ethiopia	22.1	20.5	18.8	17.1	18.5	18.2	16.6	17.8	17.7	18.8	18.4	18.6	18.9	19.1	19.1
Ghana	21.8	22.9	24.4	23.5	26.1	26.5	30.7	27.8	29.3	25.6	24.9	23.0	23.0	22.8	22.1
Guinea	19.0	13.2	15.6	23.7	29.7	21.5	26.1	25.1	26.1	30.0	26.7	25.9	25.6	25.6	22.8
Haiti	15.2	15.6	17.9	22.4	22.8	25.5	28.2	28.1	25.4	22.7	21.9	22.1	21.8	21.7	22.2
Honduras	26.0	26.1	28.1	28.9	27.0	25.9	26.7	30.6	28.7	28.3	28.1	28.2	28.0	27.7	27.9
Kenya	21.5	22.1	22.8	23.1	24.2	23.6	24.2	25.5	27.0	28.5	28.7	27.7	27.0	26.6	26.1
Kyrgyz Republic	30.1	31.8	29.3	34.4	37.1	37.4	40.6	38.1	35.9	38.2	38.5	37.5	37.3	35.7	35.7
Lao P.D.R.	17.4	18.3	17.3	21.3	25.9	24.1	24.6	29.6	28.1	28.1	28.2	28.5	28.8	29.3	29.2
Madagascar	21.4	18.7	17.9	14.1	14.0	14.1	13.4	14.9	14.7	16.7	15.4	16.1	16.3	16.7	16.9
Mali	24.9	24.5	21.2	25.9	23.0	25.0	18.5	23.5	23.8	26.5	26.0	25.9	25.9	26.2	26.5
Moldova	40.2	42.6	41.6	45.3	40.8	39.0	40.1	38.5	39.7	39.9	38.3	37.6	37.3	37.0	36.8
Mongolia	21.9	27.8	26.1	27.2	31.6	37.9	38.9	40.1	38.8	33.8	32.2	31.0	30.0	29.0	29.3
Mozambique	23.5	24.6	24.9	29.4	30.0	31.9	31.4	34.9	43.2	36.9	34.3	34.2	34.1	32.6	31.3
Myanmar	16.4	15.5	14.0	15.6	16.9	16.7	25.1	25.1	29.3	25.6	25.2	25.3	25.9	26.4	26.6
Nepal	12.7	15.0	15.4	19.4	18.8	18.7	19.3	17.2	18.6	19.5	23.9	23.9	23.5	22.3	22.6
Nicaragua	21.2	21.2	21.7	22.6	22.4	23.4	24.2	24.7	24.8	25.1	25.7	25.2	25.2	25.4	25.6
Niger	19.7	23.2	22.6	23.9	20.6	19.4	22.3	27.8	31.9	31.6	29.0	27.7	26.8	26.3	26.2
Nigeria	12.7	18.7	14.7	17.2	16.7	17.3	14.0	13.4	12.5	11.3	10.7	11.3	11.5	11.4	11.6
Papua New Guinea	30.7	28.3	30.1	36.9	28.2	28.7	32.4	36.1	34.5	29.6	25.8	25.3	24.1	23.4	22.9
Rwanda	21.7	22.9	24.3	23.9	25.9	26.5	25.9	27.6	27.7	25.7	24.0	25.1	24.9	23.7	23.6
Senegal	26.6	27.5	26.3	26.5	27.1	28.8	28.5	27.9	29.2	28.4	28.4	27.6	27.0	26.8	26.5
Sudan	23.8	25.4	23.5	20.6	19.0	18.0	13.3	13.1	12.7	11.6	11.6	11.2	10.9	10.1	10.1
Tajikistan	21.9	28.0	27.2	28.6	26.1	27.0	24.6	27.7	28.4	28.2	29.2	29.1	29.3	29.5	29.7
Tanzania	17.9	18.1	18.5	20.2	20.2	19.1	19.8	19.4	18.0	19.1	19.9	19.3	19.2	19.2	19.2
Uganda	15.6	15.2	16.0	15.3	18.8	17.2	16.5	16.8	17.1	18.7	19.5	19.7	20.8	21.0	19.9
Uzbekistan	30.7	31.0	33.0	34.3	33.4	32.4	33.7	33.9	33.4	35.2	34.3	34.3	34.2	34.2	34.1
Vietnam	26.1	28.1	27.1	31.6	30.0	26.9	29.4	30.5	28.0	27.8	27.5	27.1	26.5	26.3	26.0
Yemen	37.4	40.3	41.2	35.2	30.2	29.8	36.2	30.8	27.8	19.8	23.0	24.3	25.1	25.2	25.8
Zambia	19.7	19.9	19.5	17.8	18.1	19.3	22.0	24.9	25.4	25.7	23.3	22.7	22.8	22.0	21.4
Zimbabwe	9.7	5.9	4.3	14.0	22.6	27.9	28.6	29.7	28.7	29.3	27.5	27.7	27.0	26.1	26.1
Average	18.5	20.9	20.0	21.4	20.8	21.1	21.1	21.1	20.7	20.2	20.2	20.3	20.4	20.4	20.4
Oil Producers	17.0	21.3	18.9	21.5	20.3	20.4	19.3	18.9	17.8	17.0	17.1	17.4	17.5	17.5	17.6
Asia	18.5	19.2	19.8	21.6	21.0	20.8	23.5	24.0	23.2	22.4	22.6	22.7	22.7	22.7	22.6
Latin America	24.8	25.8	28.1	29.4	27.4	29.3	30.4	32.9	34.3	32.5	31.6	31.7	31.6	31.5	31.5
Sub-Saharan Africa	16.1	19.3	17.4	19.0	19.0	19.6	18.2	18.1	17.8	17.4	17.3	17.5	17.6	17.6	17.7
Others	29.3	30.9	30.7	29.0	26.7	26.3	26.9	25.9	24.8	22.9	23.3	23.3	23.2	22.8	22.9

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

Note: For country-specific details, see Data and Conventions in text, and Table 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	34.5	33.9	33.2	33.0	32.4	31.9	31.7	31.1
Benin	12.5	21.2	26.9	27.3	30.2	31.9	29.2	29.8	34.0	35.2	36.1	36.6	36.9	36.0	34.7
Bolivia	55.2	40.5	37.2	40.0	38.5	34.7	33.3	32.5	33.0	38.0	41.9	44.3	46.0	47.1	47.8
Burkina Faso	22.6	25.3	25.2	28.5	29.3	29.8	28.3	28.7	28.5	33.2	32.2	33.4	34.4	35.9	36.8
Cambodia	32.9	30.5	27.8	29.1	29.4	30.3	32.1	33.0	33.9	34.3	33.9	33.3	32.4	31.5	30.3
Cameroon	15.9	12.0	9.7	10.1	11.5	13.2	15.4	18.7	25.4	32.2	35.1	37.2	38.5	39.3	39.8
Chad	26.2	22.2	20.0	31.7	20.7	20.7	17.9	18.7	24.6	25.2	23.8	20.6	19.6	18.4	16.2
Democratic Republic of the Congo	100.0	83.4	87.0	89.8	27.0	22.3	19.9	18.3	19.0	20.5	21.5	23.8	25.9	26.9	27.4
Republic of Congo	98.8	98.0	68.1	61.6	22.9	33.1	34.1	38.2	41.8	57.5	54.1	44.8	42.1	41.9	42.0
Côte d'Ivoire	79.4	74.0	70.8	64.2	63.0	93.3	44.8	39.9	36.6	34.7	33.4	32.1	30.9	29.8	27.5
Ethiopia	38.7	36.6	30.2	24.9	27.4	25.7	20.9	21.6	22.3	22.6	23.5	24.0	24.5	24.9	25.1
Ghana	26.2	31.0	33.6	36.1	46.3	42.6	49.1	56.2	69.0	72.8	70.5	66.3	61.4	57.8	55.1
Guinea	137.1	92.4	90.2	89.3	99.6	77.8	35.4	39.5	41.1	40.9	36.3	31.7	27.7	24.8	19.6
Haiti	39.0	34.6	38.0	27.8	17.3	11.8	16.5	21.4	26.6	26.5	26.5	26.5	26.9	27.0	26.9
Honduras	40.3	24.7	23.0	27.5	30.7	32.0	34.7	45.3	45.7	48.4	50.1	51.1	51.4	50.9	50.0
Kenya	44.0	38.4	41.5	41.1	44.4	43.0	41.7	44.2	52.6	56.2	55.9	55.4	53.9	52.0	50.9
Kyrgyz Republic	72.5	56.8	48.5	58.1	59.7	49.4	49.0	46.1	53.0	60.0	62.0	62.3	59.2	56.3	55.3
Lao P.D.R.	71.9	64.2	60.3	63.2	62.1	56.9	62.2	60.1	62.5	63.4	66.5	68.8	69.6	71.8	73.3
Madagascar	37.3	32.8	31.8	33.4	31.9	32.4	33.7	34.0	34.7	35.4	43.6	43.6	43.8	44.3	45.0
Mali	19.4	20.0	24.3	23.9	28.8	30.5	29.8	30.6	36.7	42.5	41.7	42.0	42.3	42.7	43.3
Moldova	30.9	24.6	19.3	29.1	26.9	24.1	24.5	23.8	31.5	44.8	44.9	45.0	46.0	47.4	48.4
Mongolia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mozambique	46.6	36.6	37.8	42.5	43.1	37.6	40.8	52.2	57.5	61.0	59.6	58.3	57.4	55.5	49.1
Myanmar	90.3	62.3	53.0	55.0	49.5	49.3	43.1	34.8	31.6	33.4	33.4	33.6	34.1	34.7	35.1
Nepal	49.5	43.2	41.9	39.3	35.4	33.2	34.5	31.9	27.7	23.4	24.5	25.5	25.9	25.3	24.9
Nicaragua	54.7	31.6	26.5	29.4	30.9	29.3	28.6	29.8	29.5	30.6	31.5	32.0	32.6	33.0	33.7
Niger	27.1	25.1	21.1	27.7	24.3	27.7	26.5	27.9	32.2	43.7	45.9	45.2	43.1	41.1	38.5
Nigeria	7.9	8.4	7.4	9.6	9.6	10.2	10.4	10.5	10.5	11.9	13.7	15.4	17.0	18.7	20.6
Papua New Guinea	39.6	33.7	31.7	31.4	25.6	23.0	26.7	34.0	35.6	33.6	32.4	31.2	28.9	26.3	23.3
Rwanda	26.6	26.7	20.9	22.4	22.6	23.1	20.1	27.6	30.2	32.7	34.8	37.9	38.6	37.5	36.5
Senegal	21.8	23.5	23.9	34.0	35.5	40.7	42.8	46.6	53.1	55.0	61.9	60.7	57.4	53.6	51.8
Sudan	75.0	70.7	68.8	72.1	73.1	70.6	94.8	89.9	74.0	71.5	74.0	64.4	61.0	57.9	55.3
Tajikistan	35.3	34.6	30.0	36.2	36.3	35.4	32.4	29.2	28.3	32.9	34.6	36.4	36.0	36.4	35.8
Tanzania	32.8	21.6	21.5	24.4	27.3	27.8	29.2	30.9	35.2	40.2	41.8	42.1	42.0	42.0	42.1
Uganda	31.7	19.6	19.3	19.2	22.9	23.6	24.2	27.6	31.4	35.0	37.9	41.1	44.0	45.6	46.2
Uzbekistan	21.3	15.8	12.7	11.0	10.0	9.1	8.6	8.3	8.5	11.6	16.0	14.8	13.5	12.0	11.9
Vietnam	38.4	40.9	39.4	45.2	48.1	46.5	48.6	52.6	57.2	61.2	63.7	66.1	67.1	67.9	68.1
Yemen	40.8	40.4	36.4	49.8	42.4	45.7	47.3	48.2	48.7	67.0	60.6	59.7	61.8	65.1	68.4
Zambia	25.0	21.9	19.2	20.5	18.9	20.6	25.5	28.6	35.2	41.9	44.9	46.5	47.7	47.2	46.2
Zimbabwe	44.7	50.1	68.9	68.3	63.2	51.8	56.7	54.2	53.4	69.3	57.5	58.3	59.4	59.5	55.0
Average	34.5	31.6	29.7	32.8	30.5	30.0	30.0	30.6	31.3	34.8	36.5	36.9	37.3	37.6	37.8
Oil Producers	24.8	24.0	22.1	26.5	21.7	22.6	22.2	22.9	24.0	28.3	30.8	32.6	34.1	35.5	36.8
Asia	45.8	43.6	41.5	43.5	42.5	41.3	41.2	42.0	43.0	44.3	45.2	45.8	45.9	46.0	45.7
Latin America	48.1	32.9	31.0	32.5	32.0	30.1	30.9	34.1	35.1	38.2	40.5	41.9	43.0	43.4	43.7
Sub-Saharan Africa	25.6	23.4	22.0	24.6	21.5	21.8	20.9	21.9	23.3	26.6	28.4	29.4	30.2	30.8	31.3
Others	52.3	48.4	44.5	47.8	47.1	44.6	51.5	48.9	44.2	48.9	50.4	46.6	45.3	44.3	43.9

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

Note: For country-specific details, see Data and Conventions in text, and Table 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	10.1	13.2	20.6	27.4	32.8	37.2	40.6	47.8
Burkina Faso	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cambodia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cameroon	15.9	12.0	9.7	10.1	11.5	13.2	15.4	18.7	25.4	32.2	35.1	37.2	38.5	39.3	39.8
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	15.8	16.0	17.7	17.6	19.2	20.4	21.4	22.2	22.8
Ghana	21.9	23.3	30.1	32.6	43.0	38.8	47.0	52.9	66.1	70.4	68.0	64.0	58.5	54.4	51.2
Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Haiti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Honduras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kenya	39.9	34.4	37.1	36.9	40.2	39.1	38.0	40.3	48.9	53.5	53.8	53.3	51.9	50.1	48.9
Kyrgyz Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lao P.D.R.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madagascar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mali	13.9	13.9	17.9	13.0	19.3	22.2	24.8	23.6	28.0	34.6	36.2	37.0	37.3	37.5	38.0
Moldova	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mongolia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mozambique	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Myanmar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nepal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nicaragua	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Niger	–37.1	1.5	1.9	0.9	4.3	2.6	1.9	3.0	3.6	4.8	3.3	2.9	2.9	2.9	2.3
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rwanda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Senegal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tajikistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanzania	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uganda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uzbekistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vietnam	38.4	40.9	39.4	45.2	48.1	46.5	48.6	52.6	57.2	61.2	63.7	66.1	67.1	67.9	68.1
Yemen	33.0	35.2	31.4	43.6	38.3	42.3	45.3	46.7	47.8	65.9	59.7	59.0	61.2	64.5	67.9
Zambia	21.6	17.6	16.3	16.5	15.9	16.2	20.0	25.1	29.5	37.7	42.0	44.0	45.3	45.0	44.1
Zimbabwe	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Average	30.6	30.4	29.9	32.7	35.3	34.4	36.0	38.9	43.6	48.9	50.4	51.6	52.0	52.2	52.6
Oil Producers	33.5	34.9	33.3	39.4	41.1	41.3	44.0	47.4	51.8	58.7	60.1	61.9	63.1	64.2	64.9
Asia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Latin America	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sub-Saharan Africa	23.8	23.2	24.2	23.5	27.9	26.6	28.1	31.1	36.3	40.0	41.0	41.0	40.3	39.5	38.7
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.

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
Now Is the Time: Fiscal Policies for Sustainable Growth	April 2015

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 2015, Box 1.2
The Fiscal Impact of Lower Oil Prices	April 2015, Chapter 1
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	April 2015, Chapter 1
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

An Active, Supportive Role for Fiscal Policy	April 2015, Chapter 1
Can Fiscal Policy Stabilize Output?	April 2015, Chapter 2
How Fiscal Policy Influences Economic Activity	April 2015, Chapter 2
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

Topic	Issue
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

Topic	Issue
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

Topic	Issue
Past, Present, and Future Patterns in Revenues	April 2015, Box 1.1
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

Topic	Issue
The Pressure of Age-Related Spending on Public Debt in Advanced Economies	April 2015, Box 1.3
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. Stabilization

Can Fiscal Policy Stabilize Output? April 2015, Chapter 2
How Fiscal Policy Influences Economic Activity April 2015,Chapter 2
What Shapes Fiscal Stabilization? April 2015, Chapter 2
Potential Payoffs from Fiscal Stabilization April 2015, Chapter 2
Fiscal Stabilization under Alternative Estimates of the Output Gap April 2015, Box 2.1
Boosting the Effectiveness of Automatic Stabilizers April 2015, Box 2.2

XVIII. 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

XIX. Subsidies

Reforming Energy Subsidies April 2015, Box 1.2
Reforming Energy Subsidies April 2013, Appendix 1
Reforming Petroleum Subsidies April 2010, Appendix 5

XX. 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

XXI. 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 OF THE OUTLOOK, SEPTEMBER 2015

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 September 21, 2015.*

Executive Directors broadly shared the assessment of global economic prospects and risks. They noted that global growth remains modest and uneven across countries and regions, while financial market volatility has increased in recent months. Downside risks to the global outlook have risen, with emerging market and developing economies particularly exposed to the declining commodity prices and tighter global financial conditions. Directors observed that persistent weak growth in advanced economies and the fifth consecutive year of growth declines in emerging market economies reflect both country-specific developments and common forces of a medium- and long-term nature. Forceful policy action on all fronts, as well as enhanced international cooperation, has become more crucial than ever to reverse this trend and promote stronger, more balanced global growth.

Directors broadly concurred that, in advanced economies, the foundations for a modest recovery in 2015–16 are still intact, while financial stability has generally improved. They noted that a sustained recovery in the euro area, a return to positive growth in Japan, and continued robust activity in the United States are positive forces, although increased market volatility may pose financial stability challenges in the near term. Medium-term prospects remain subdued, reflecting unfavorable demographics, weak productivity growth, and high unemployment, as well as legacy issues from the crisis—including high indebtedness, low investment, and financial sector weakness. A key risk is a further decline of already-low growth that could turn into near stagnation, especially if slower growth in emerging market economies dampens global demand. In this context, persistent below-target inflation could become more entrenched.

Directors noted that the overall outlook for emerging market and developing economies is generally weakening, reflecting tighter global financial conditions, China's transition toward consumption-driven sustainable growth, a weaker commodity market outlook, and geopolitical tensions. However, growth prospects differ considerably across countries. Emerging market economies are vulnerable to shifts in exchange rates and a reversal of capital flows. Meanwhile, further declines in commodity prices could weaken the outlook for commodity exporters. While China's transition and the ensuing slowdown have long been anticipated, a sharper-than-expected growth decline, if it materialized, could generate considerable spillovers and risks for other countries.

Directors acknowledged that the global financial outlook is clouded by increased emerging market vulnerabilities, legacy issues from the crisis in advanced economies, and concerns about weak market liquidity. They noted in particular high corporate leverage and foreign-currency exposures in emerging market economies, headwinds from balance sheet weaknesses in advanced economies, and remaining gaps in the euro area financial architecture. In the context of rising policy rates, the global financial system may see adjustment as financial conditions tighten and risk premiums rise from historically low levels. Directors recognized that interest rate normalization in the United States driven by robust activity will benefit the world economy and also reduce uncertainty—and hence should take place in a timely, data-dependent manner.

Directors underscored that raising both actual and potential output continues to be a policy priority, requiring mutually reinforcing measures for demand support and structural reforms. They concurred that the main policy recommendations are appropriate, although the right balance of policy mix will vary from country to country. A collective effort is needed to boost trade growth, avoid trade protectionist measures, refrain from competitive devaluations, and reduce the persistent global imbalances.

Directors agreed with the policy priorities for full employment and stable inflation in advanced

economies. Accommodative monetary policy remains essential, particularly in Japan and the euro area, while efforts should continue, where needed, to enhance policy transmission and address financial system risks through continued balance sheet repair and macro-prudential policies. Fiscal policy should remain prudent, yet flexible and growth friendly, anchored in sound medium-term strategies. Countries with fiscal space and sizable output gaps or significant current account surpluses should ease their fiscal stance in the near term, especially by increasing investment in high-quality, high-return infrastructure projects. Structural reforms should aim to strengthen labor force participation and trend employment, facilitate labor market adjustment, tackle legacy debt overhang, and lower barriers to entry in product markets, especially in services.

Directors recognized that emerging market and developing economies in general are now better prepared for the current, less favorable environment—with stronger fundamentals, buffers, and policy frameworks. Nevertheless, they face a difficult trade-off between supporting demand and reducing vulnerabilities. The scope for further easing macroeconomic policies varies considerably across countries, depending on the extent of economic slack and inflationary pressures and fiscal space, as well as external, financial, and fiscal vulnerabilities. Directors agreed that exchange rate flexibility, where feasible, in the context of a well-specified policy framework, can help absorb external shocks. They stressed that, in many countries, structural reforms are urgently needed to raise productivity and remove bottlenecks to production.

Directors concurred that, in a more difficult external environment, developments in low-income countries should be given particular attention. Many of these countries are commodity exporters whose initial conditions have already been strained, fiscal and external balances are deteriorating, and absorptive capacity is limited. Appropriate policy advice and adequate financial assistance from development partners, including the Fund, will be essential to support low-income countries in their adjustment efforts and advancement toward the Sustainable Development Goals. Their priorities generally include economic diversification, domestic revenue mobilization, and financial sector deepening.

Directors highlighted the importance of preserving financial stability, safeguarding against market illiquidity, and maintaining confidence in policymaking. For advanced economies, priorities should include continued clear and effective communication of monetary policy intentions, and a comprehensive strategy to tackle nonperforming loans and complete the financial architecture in the euro area. Liquidity conditions, especially for nonbanks, should be closely monitored, and market structure solutions to liquidity shortages should be explored. Completing the global financial regulatory reform agenda requires further progress on implementation, finalization of outstanding reforms, and addressing emerging risks.

Directors emphasized the need to address both cyclical and structural challenges in emerging market economies. They agreed that policymakers should rely on micro- and macro-prudential tools to discourage the buildup of excessive leverage, strengthen provisioning by banks, and improve regulations on credit quality classification. Foreign-currency exposures warrant special attention and the reform of corporate insolvency regimes should continue. Rebalancing and deleveraging in China will require a careful pacing and sequencing of market-based reforms, a further strengthening of the financial system, and strong implementation of the reform agenda.

Directors noted that lower oil prices present both opportunities and challenges. In many oil-importing countries, lower oil prices have eased the burden on monetary policy and created some fiscal policy space. Exporters of oil and other commodities with worsening terms of trade will need to adjust public spending in the face of lower commodity-related revenue. These countries should also continue to upgrade their fiscal policy frameworks and provide a longer-term anchor to guide policy decisions. Reforms of energy subsidies and taxation remain an important priority for many countries.

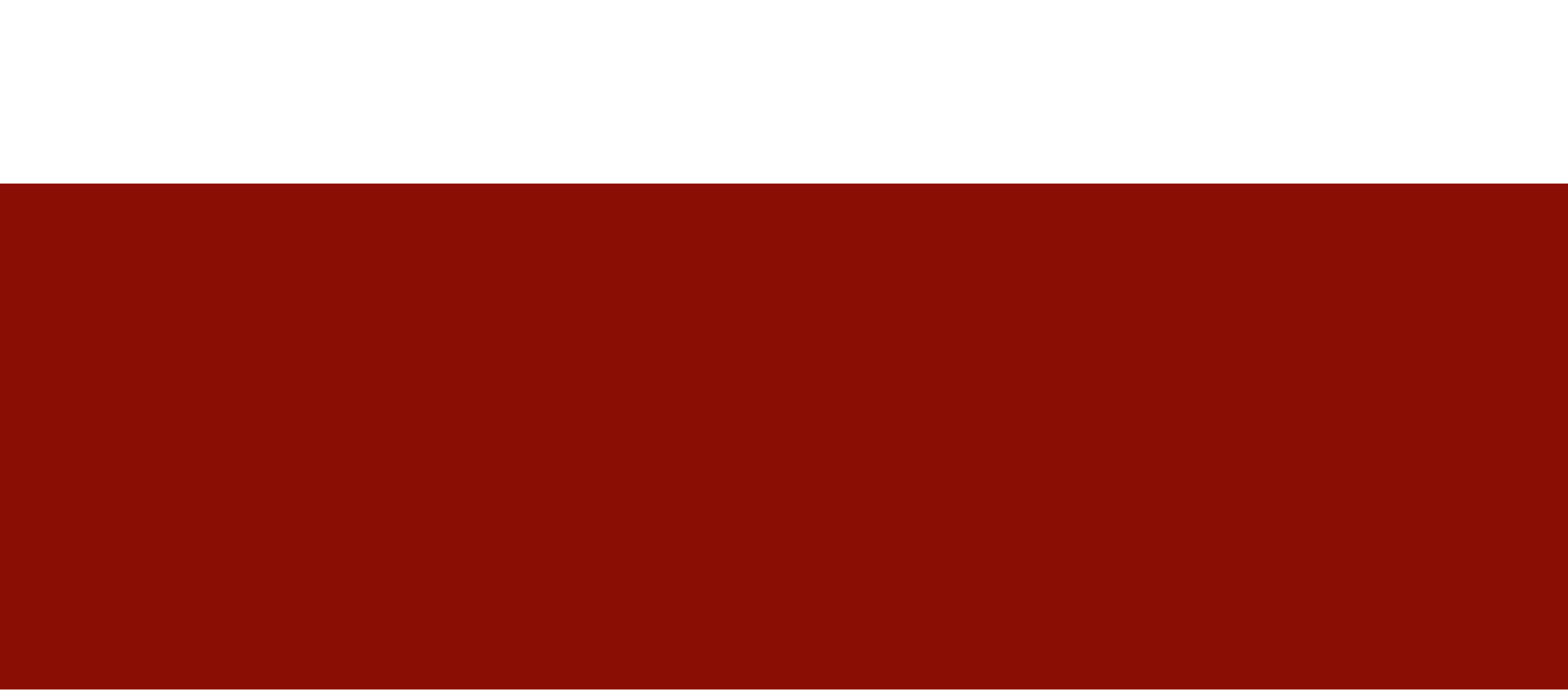
IMF Publications

- **Leading edge research meets innovative publishing**
- **Reaching a diverse community of millions worldwide**
- **Keeping readers in touch with global economic and financial issues**

For the latest analysis on global economy, regional assessment, inequality and more...

Visit imfbookstore.org/fm105

INTERNATIONAL MONETARY FUND



ISBN: 978-1-51357-070-9
9 781513 570709