Do Middle-Income Countries Still Have the Ability to Deal with the Global Financial Crisis?

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At the eve of the 2008 global financial crisis, most middle-income countries had been facing favorable market conditions and had improved their debt management capacity, reduced inflation, improved fiscal and current account balances, and accumulated foreign exchange reserves, in part because of sustained implementation of prudent macroeconomic policies between 2002 and 2007 and appropriate structural reforms. The crisis revealed differences across these countries. Many middle-income countries were better able to cope with the impact of the global crisis than they had been in the late 1990s to the early 2000s. Others were weaker, because of internal and external imbalances that emerged, and were thus hit harder, reducing their ability to respond in 2008 and 2009 and perhaps in the medium term if the global recovery is weak.

This chapter highlights these differences in a sample of 20 middle-income countries in order to stimulate debate about the way forward in dealing with the global financial crisis (table 7.1). All 20 countries in the sample except Hungary are middle-income countries (Hungary, which graduated from middle-income status in 2008, was included because the impact of the global financial crisis and aftermath there warrants a similar type of analysis). The sample includes both manufactured goods and commodity exporters to ensure that the different initial conditions and
transmission channels of the commodity boom and bust cycle and the
global financial crisis are captured.

The sample covers countries with very different population sizes
and GDPs. At the same time, the countries share important similarities.
Nearly all have tapped international capital markets, all have attracted
large volumes of short-term external financing, and all are eligible for
funding from the nonconcessional window of the World Bank (the Inter-
national Bank for Reconstruction and Development) and other multilat-
eral institutions. Most of the sample countries are linked to high-income
countries through both trade and financial market channels. The global
financial crisis thus affected them both directly, through capital flow
reversals, exchange rate pressures, and increased borrowing spreads in
international credit markets, and indirectly, through commodity prices,
exports, portfolio and foreign direct investment (FDI) flows, and work-
ers’ remittances.2

The chapter is organized as follows. The first section describes the
main global and country-specific developments from 2002 to 2007. The
following section describes the direct impact of the global financial crisis
on middle-income countries. The third section examines the initial fiscal
response up to 2009. The fourth section assesses medium-term fiscal chal-
 lenges and fiscal adjustment strategies under a number of scenarios. The
last section provides some concluding remarks.

Global and Country-Specific Developments, 2002–07

Thanks to favorable international market conditions during 2002–07
and prudent domestic macroeconomic management, most countries in
the sample were successful in reducing inflation, improving their fiscal and current account balances, and building up foreign exchange reserves. Some countries switched to inflation targeting; others implemented well-designed fiscal responsibility frameworks.³

Many countries were able to issue bonds in both foreign and domestic currency, thanks to record low spreads on their bond issuances over comparable U.S. Treasuries, as investors were looking for profitable opportunities. For some countries, this relatively loose financing environment led to a large buildup of public and private external debt, leading to internal and external imbalances and vulnerabilities down the road.

This period also witnessed commodity price hikes, which disproportionately benefited commodity-exporting countries. As food and fuel prices reached record highs between late 2007 and mid-2008, a significant gap in the external and fiscal positions of commodity exporters and other countries began to appear. Commodity-producing countries were therefore in a better position to weather the crisis when it struck in 2008.

These favorable market conditions and policy improvements contributed to the precrisis improvements in domestic indicators in most of these countries. The average rate of inflation came down in most countries, particularly in Argentina, the Russian Federation, Turkey, and Ukraine. In several countries, financial sector development increased residents’ access to credit. The increase in credit as a share of GDP was especially large in Hungary and Ukraine. Many countries, including Chile, Nigeria, and Russia, increased their average fiscal and primary balances. Turkey improved its fiscal balance. This period also saw a decline in these countries’ gross public indebtedness (as a share of GDP), partly because of rapid GDP growth (figure 7.1).⁴

In most of these countries, the current account deficits of 1995–2001 turned into surpluses in 2002–07. Total external debt relative to GDP decreased in most countries between 2002 and 2007 (figure 7.2). In Argentina, Indonesia, Nigeria, and the Philippines, external debt as a percentage of GDP fell the most relative to the 2002 level. In contrast, in Hungary, Poland, and Ukraine, external debt grew relative to 2002.⁵

In countries in which external debt decreased between 2002 and 2007, the decline mainly reflected rapid nominal GDP growth; exchange rate appreciation, which reduces the domestic currency value of external debt, played only a minor role.⁶ In countries that saw large increases in external debt, the change primarily reflected increased borrowing, which allowed debt stocks to grow at a faster rate than nominal GDP.

Given the favorable developments many countries experienced during the precrisis period (2002–07), the macroeconomic space improved for many countries.⁷ In order to compare countries in this regard, we computed an index of macroeconomic space for each country for each year (box 7.1).
The index of macroeconomic space indicates that the space of most countries in the sample increased between 2002 and 2007. China enjoyed the largest macroeconomic space in the sample, thanks to strong external subindicators and favorable fiscal and domestic subindicators. Nigeria’s macroeconomic space largely reflected its favorable external subindicators, such as current account surpluses, high reserves, and low debt, which offset the rapid growth in credit to the private sector relative to GDP, which could eventually lead to higher inflationary pressure. Chile’s macroeconomic space almost entirely reflected its prudent fiscal policy. Hungary had the least macroeconomic space, mainly because of its relatively weak external and fiscal subindicators. In Ukraine high inflation and weak external subindicators were more important, despite a fiscal subindicator that was actually more positive than a few higher-ranked countries.
Hungary and Ukraine are followed by Turkey and Argentina, both of which had mainly weak external subindicators (figure 7.3).

Direct Impact of the Global Financial Crisis

When the financial crisis became global, in September 2008, the immediate market reaction hit middle-income countries through multiple channels. Data for the quarter that followed showed that markets become more discriminating in their risk assessments, as demonstrated by spreads, exchange rates, and foreign exchange reserves. GDP growth also suffered in most of these countries, and their external debt burdens increased because of unfavorable exchange rate movements.
Box 7.1 The Index of Macroeconomic Space

Our index of macroeconomic space summarizes the variables that have the greatest influence on a country’s ability to implement a countercyclical fiscal policy or a fiscal stimulus program. In order for a country to be able to implement a countercyclical fiscal policy or a fiscal stimulus, it is neither necessary nor sufficient to have low fiscal deficits and low public debt. External and domestic conditions can support or constrain fiscal policy. For example, if a country has high inflation, a current account deficit, low reserves, high external debt, or rapid growth in credit to the private sector, a fiscal expansion might destabilize the economy. In contrast, even if a country has been running fiscal deficits and has a high level of public debt, it might still be able to run a fiscal expansion as long as markets are confident that the country’s debt level will remain on a sustainable path and that macroeconomic stability will not be jeopardized. The nonfiscal components of the index represent some of the variables markets regularly monitor.

In countries with low public and external debt, large foreign exchange reserves, low inflation, moderate credit growth, and a positive or only moderately negative current account and fiscal balances, this fiscal expansion will probably have positive macroeconomic benefits (supporting growth while maintaining internal and external balances). Such countries are said to have macroeconomic space.

In a country with rapid credit growth to the private sector, the increase in domestic demand may accelerate inflation; rapid credit growth may also be a leading indicator for future calls on fiscal resources because of the building up of contingent liabilities in the financial sector. The increase in external demand will lead to deterioration in the balance of payments and may put the exchange rate under pressure. Under a fixed exchange rate, the country would lose foreign exchange reserves. Countries facing these conditions are said to have limited macroeconomic space.

In most countries there will be a mix of these positive and negative indicators. A country could have a fiscal surplus but still be constrained by high inflation, low foreign exchange reserves, or a current account deficit. A prudent country with low inflation and current account surpluses might be able to (temporarily) sustain higher fiscal deficits and enjoy confidence from the markets.

The index of macroeconomic space consists of the unweighted sum of the seven standardized variables displayed in the box table. These variables have been normalized with the sample mean and standard deviation for each year, so that the distribution of each variable across the sample in 2007 and 2009 is centered on zero with a unit standard deviation.
standardization prevents variables with typically high numerical values from dominating the index.) The exchange rate and the domestic interest rate are not included explicitly as variables in this index, in order to account for any endogeneity that may exist between these variables and the seven standardized variables in the index. This index of macroeconomic space thus tracks a country’s ability to conduct countercyclical fiscal policy or even launch a fiscal stimulus program relative to the sample in any given year. The fiscal space in 2007, for instance, is normalized by the 2007 sample average and standard deviation, allowing countries to be ranked by their fiscal space at any point in time.

### Table B1.1 Components of the Index of Macroeconomic Space

<table>
<thead>
<tr>
<th>Sector</th>
<th>Subindicator</th>
<th>Negative impact on space if</th>
<th>Positive impact on space if</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>Credit to private sector (percent of GDP, percent year-on-year change)</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>CPI inflation (percent change)</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>External</td>
<td>Current account (percent of GDP)</td>
<td>Deficit</td>
<td>Surplus</td>
</tr>
<tr>
<td></td>
<td>External debt (percent of GDP)</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Log foreign exchange reserves to short-term debt ratio</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Fiscal</td>
<td>Fiscal balance (percent of GDP)</td>
<td>Deficit</td>
<td>Surplus</td>
</tr>
<tr>
<td></td>
<td>Gross public debt (percent of GDP)</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Authors.

Note: CPI = consumer price index.
Spreads on sovereign bonds over comparable U.S. Treasuries shot up immediately across this sample of middle-income countries in September 2008, especially in Argentina, Hungary, Russia, and Ukraine (figure 7.4).\(^8\) 
At the same time, with portfolio capital flows reversing, the balance of payments came under pressure in many countries. Some countries, such as Brazil, Chile, Colombia, the Philippines, and South Africa, immediately let their exchange rates adjust while preserving foreign exchange reserves. Other countries tried in vain to resist depreciation pressure while losing foreign exchange reserves.

As the initial wave of panic subsided, markets became more discerning and started to look at countries’ fundamentals. Spreads started to decrease for most countries (they continued to widen in Argentina, Hungary, and Ukraine), although by March 2009 they had not yet returned to their precrisis levels. Meanwhile, exchange rates had become more stable, and some countries’ foreign exchange reserves had increased again. A comparison of precrisis average peak-to-trough GDP growth (real year-on-year growth between third quarter 2008 and third quarter 2009) reveals that all countries in the sample were hit by a slowdown (figure 7.5). This was especially so for commodity exporters such as Chile and Russia as well as

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**Figure 7.3 Index of Macroeconomic Space for Selected Countries, End-2007**

Source: Authors’ calculations, based on data from IMF 2010c, 2010d.
Note: All values were normalized by 2007 sample averages and standard deviations.
countries such as Hungary, Mexico, Turkey, and Ukraine. For developing countries as a whole, the economic downturn has been deeper and more broadly based than during previous recessions (World Bank 2010).

**Initial Fiscal Response up to 2009**

Faced with the impact of the global financial crisis, countries responded with a range of policy measures, including countercyclical fiscal policy, monetary policy, bank credit expansion, and international liquidity support facilities. The cyclically adjusted primary balances between 2007 and 2009 deteriorated in all countries, except Hungary, where an IMF-supported fiscal consolidation program was quickly put in place after the crisis hit (figure 7.6) (IMF 2010b).  

**Figure 7.4** Changes in Gross Reserves, Exchange Rates, and Spreads over U.S. Treasury Bills between January–August 2008 (Precrisis) and September–December 2008 (during Crisis)


Note: For left axis, percentage change in maximum of January–August 2008 to minimum of September–December 2008. For right axis, percentage change in minimum of January–August 2008 to maximum of September–December 2008.

a. No spread data were available for India, Nigeria, or Thailand.
Countries with relatively large macroeconomic space at the end of 2007 typically increased their noninterest expenditure in 2008–09 the most, both as a share of GDP and in real terms.\textsuperscript{11} Chile and Russia, which had healthy fiscal subindicators, showed the largest increase in noninterest expenditure as a share of GDP. China showed strong external subindicators but a large increase in real noninterest expenditure.\textsuperscript{12} Although the increases in fiscal expenditure helped counteract the drop in other components of aggregate demand, in most cases they were unable to prevent a downturn. The new borrowing in response to the crisis, combined with the slowdown in growth and the depreciation of the exchange rate, reversed some of the earlier gains from a reduction of external and public debt (as a share of GDP) that these countries experienced in previous years. As a percentage of GDP, external debt increased in 11 countries in the sample between 2007 and 2009; between 2002 and 2007, it increased only in Hungary, Poland, and Ukraine.

The fiscal policy response in 2008 and 2009, and the external support packages put together for these countries, led to higher public (figure 7.7) and external debt in several countries. Some countries, such as Hungary, which had built up external debt relative to domestic debt, face increased
Figure 7.6 Cyclically Adjusted Primary (Noninterest) Balances, 2007 and 2009

Source: IMF 2010a.

Figure 7.7 Contributions to Changes in Public Debt to GDP Ratio, 2007–09

Source: Authors’ compilation, based on data from IMF 2010d.
Note: See figure 7.1 for explanation of method.
exchange rate risk. Others, such as Brazil, the Arab Republic of Egypt, and India, which had built up domestic debt relative to external debt, reduced their exchange rate risks. This evidence suggests that countries would do well to monitor the financial structure and composition of their debt portfolios.

Countries that had macroeconomic space at the onset of the crisis in late 2008 were able to rapidly respond by increasing their fiscal spending. The macroeconomic space at end-2007 and the change in the primary balance observed between 2007 and 2009 appear to be negatively correlated. However, at end-2009 most countries ended up with less macroeconomic space after the initial impact of the global financial crisis. The ranking of countries along the macroeconomic space index also changed, reflecting the relative space that had been “used up” as a result of the crisis (figure 7.8). Countries such as Argentina and Hungary improved their relative ranking but still had very narrow macroeconomic space.

By the end of 2009, Nigeria, Thailand, Chile, and China had the greatest room to respond to a more prolonged crisis. In Nigeria the large fiscal space reflected the country’s strong external subindicator; in the other countries it reflected a more balanced mix of indicators. Hungary and Ukraine had the least amount of fiscal space in the sample, reflecting both weak starting points and the strong negative impacts of the crisis.

Medium-Term Fiscal Challenges and Fiscal Adjustment Strategies under Various Scenarios

Given these elevated levels of debt after the initial crisis response, the attention of policy makers and capital market participants should shift to the medium term. The World Bank’s Global Economic Prospects 2010 concludes that the 2008 global crisis will have a lasting impact on financial markets, raising borrowing costs and lowering levels of credit and international capital flows. It projects that as countries adjust to tighter global financial conditions, growth of output in developing countries may be reduced by 0.2–0.7 percentage point a year until 2015–17. Given the depth of the recession and the weakness of the expected recovery, significant spare capacity, high unemployment, and weak inflationary pressures may emerge in both high-income and developing countries for some time (World Bank 2010).

What will happen to public debt if there is no adjustment to the primary balance in the medium term? What kind of fiscal adjustment will countries need to make to reduce or stabilize their public debt stocks? If the adjustment is too large to be politically credible, what will be the effect of a more gradual adjustment? This section addresses some of these questions by reporting on the results of illustrative scenarios.
The baseline scenario fixes the primary balance at its historical value and takes the growth rate projections from the IMF’s World Economic Outlook database (April 2010). This database assumes that after the crisis growth rates are permanently lower than before the crisis.

Scenario 1 calculates the required primary balance if countries try to reach a debt target. These debt targets are to reduce debt to 40 percent of GDP by 2020 if the debt stock is above 40 percent of GDP at end-2009 or to permanently stabilize the debt to GDP ratio if the debt is below 40 percent of GDP at end-2009. Comparing the required primary balances going forward with the country’s historical values shows the extent to which a

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**Figure 7.8 Macroeconomic Space Index, End-2007 and End-2009**

*Sources: Authors’ calculations, based on data from IMF 2009a, 2010b, 2010c, 2010d; Credit Suisse 2010.*

*Note: Variables were normalized by the sample average and standard deviation in each year. Countries above the dashed line moved up in the ranking of macroeconomic space between 2007 and 2009.*
country needs to adjust its primary balance to reach its desired debt target.

- Scenario 2 is similar to scenario 1, but it assumes that the crisis will last longer and that countries will need to continue to implement expansionary policies as they did in 2007–09, forcing them to accumulate additional debt. It then estimates the required primary balance if a country still aims to achieve the same debt target as under scenario 1, this time by 2020.

- Scenario 3 examines a more gradual approach to adjusting the primary balances in each country in order to reach the debt target (as specified in scenario 1). Such an approach may be necessary for some countries if the required fiscal adjustment under the first two scenarios is very large, politically infeasible, or both, or if such an adjustment might fuel further instability and perhaps a new downturn because of insufficient aggregate demand without a stimulus program.

**The Baseline Scenario**

Under the baseline scenario, in which the primary balance is set at the historical average, public debt in 2020 is expected to increase for a number of countries, in particular the countries with the highest public debt at end-2009 (Egypt, Hungary, and India). For Chile and Nigeria, public debt declines and becomes negative during the projection period. This indicates that both countries will accumulate fiscal assets (note that the simulation for these two countries used the average primary balance of 1996–2001; had the more favorable average primary balance of 2002–07 been used, public debt would have become even more negative in 2020).

Colombia, Peru, and Turkey, which are not among the major commodity exporters, had much higher average primary surpluses during 2002–07 than they did between 1996 and 2001. Although this increase may signal fiscal policy improvements, a key question will be whether these countries will be able to maintain such fiscal surpluses in a postcrisis world if commodity prices and global growth decline. For the baseline scenario for those countries, the historical primary fiscal balance is therefore assumed to be represented by their 1996–2001 average primary fiscal balance.

**Scenario 1: 2020 Debt Target**

Under scenario 1, countries set a specific public debt target for 2020. They may want to do so to account for the effect of the political cycle on debt, to commit future governments to maintain debt sustainability, or to benefit from the “announcement effect” with a view to assuring capital
markets that their debt is sustainable and that the crisis response programs are indeed temporary. Under this scenario countries are assumed to adopt one of two debt targets: to reduce debt to 40 percent of GDP by 2020 if the end-2009 debt exceeds 40 percent of GDP or to stabilize debt at the end-2009 level if end-2009 debt is below 40 percent of GDP. Under this scenario Chile, China, Colombia, Indonesia, Malaysia, Nigeria, Peru, Russia, South Africa, and Ukraine will adopt the stabilization target. The remaining countries will adopt the debt reduction target.

Under the baseline growth projection, the primary fiscal balance required to achieve the target is lower than the historical primary balance for Chile, Indonesia, Mexico, Nigeria, Peru, the Philippines, South Africa, and Turkey. No unusual fiscal adjustment would thus be needed in those countries. China would have to achieve a higher primary balance than its historical balance, but given its low level of public debt at end-2009, its debt would still be below 40 percent of GDP if it continued to achieve its historical primary balance. Large adjustments of the primary balance would be needed in Argentina, Egypt, Hungary, India, and Poland.

Although a permanently lower GDP growth rate and higher world interest rates would increase the required adjustment, their effect on the required adjustment is smaller than the debt target itself. However, these shocks would mean that countries like Mexico, Peru, the Philippines, and Turkey would have to adjust their primary fiscal balances to achieve the debt target (figure 7.9).

How would this fiscal adjustment take place? Countries could cut public spending, increase government revenue, or both. Much will depend on the pace of recovery of fiscal revenues in each country, which in turn will depend on GDP growth, international interest rates and exchange rates, pressure that ongoing higher social safety net expenditures are already putting on government budgets, and the political feasibility of cutting key recurrent spending items in the budget. The extent to which private sector consumption and investment demand respond to the fiscal and monetary stimulus efforts and the inventory cycle also introduce uncertainties. If the response is weaker than envisaged or efforts are prematurely halted, the recovery could stall (World Bank 2010).

Scenario 2: Prolonged Fiscal Expansion to 2012

Under scenario 2, the fiscal stimulus spending of 2008 and 2009 is continued for an additional two years, and countries are assumed to respond to it endogenously in the same way as they responded immediately after the crisis. After 2011, when this additional fiscal spending stops, countries are assumed to continue to aim toward the debt targets in 2020 under scenario 1, with the same baseline GDP growth and interest rate assumptions. Under
scenario 2, if a country’s public debt as a share of GDP increased in 2008 and 2009, it will continue to increase by the same share of GDP in 2010 and 2011. If public debt as a share of GDP decreased in 2008 and 2009, it will be kept constant as a share of GDP in 2010 and 2011 (this is the case for Argentina, Egypt, Indonesia, Peru, and Russia).

Given the additional debt accumulation in some countries and the lack of decline in debt levels in others, it will become more difficult for most countries to achieve their 2020 targets under this scenario. The debt target for Malaysia and Ukraine, where public debt was less than 40 percent of GDP at end-2009, would switch from public debt stabilization under scenario 1 to debt reduction under scenario 2. Mexico, the Philippines, and Turkey would need to adjust their primary balances further relative to their historical efforts (under scenario 1 no adjustment was needed) (figure 7.10).
Scenario 3: Gradual Fiscal Adjustment

In some countries, policy makers may deem the difference between the historical primary balance and the primary balance required to reach the debt target too large to be politically acceptable (or credible). Fears that further fiscal contraction in an already fragile macroeconomic and growth environment may fuel a new economic downturn could also postpone these efforts. Under scenario 3, countries are assumed to take a more gradual approach to adjusting their primary balances in order to reach the same target in 2020 as under scenario 1 (figure 7.11). Specifically, the annual fiscal adjustment is limited to 2 percentage points of GDP.

For most of the countries in the sample, the required adjustment in the primary balance under scenario 1 is less than 2 percent of GDP. These countries can adjust their primary balance entirely in 2010, putting debt on a downward trajectory or stabilizing it immediately. Where the required adjustment is larger than 2 percent of GDP, it would be made more gradually (five years in Hungary, four years in India and Egypt, and two years in Argentina and Poland). In Egypt, Hungary, and Poland (where the historical primary deficit is very large), debt would first increase during the adjustment, peaking in 2010 or 2011 before declining. For a number of years these countries will have to borrow heavily to finance their deficits. Debt and fiscal sustainability will therefore need to be carefully monitored. How much and at what terms these market-access countries will be able

Figure 7.10 Primary Balance Adjustment Required Relative to Historical Primary Balance under Scenarios 1 and 2

Source: Authors’ calculations, based on data from IMF 2010d.
to obtain financing will depend on the conditions of the financial markets for middle-income countries, the credibility of their adjustment strategy, and the effective communication of the strategy to market participants in a timely and credible manner.

**Concluding Remarks**

Our sample of 20 mostly middle-income countries entered the 2008 global financial crisis with different initial conditions. To show how these conditions affected their ability to implement countercyclical fiscal policy or a fiscal stimulus at any point in time, we create an “index of macroeconomic space.” Favorable global conditions and policy improvements up to 2007 strengthened the macroeconomic space of a large number of middle-income countries, especially commodity exporters, by allowing them to accumulate foreign exchange reserves, reduce external and public debt, and achieve low inflation and low fiscal deficits. Other countries had already been weakened by high debt, high inflation, or persistent deficits by 2007. In large part, these initial conditions determined the extent of the countries’ fiscal response to the global financial crisis. Since 2008 many countries have implemented expansionary fiscal policies that have used up their available macroeconomic space. Most countries have had

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*Source: Authors’ calculations, based on data from IMF 2010d.*
middle-income countries and the global financial crisis

The most acute phase of the crisis may have passed, but if the fiscal interventions undertaken in the aftermath of the crisis are to continue, middle-income countries need to pay careful attention to the sustainability and composition of their debt levels (domestic and external). Debt levels will remain high and the recovery will be slow in high-income countries. For new borrowings from developing countries, world interest rates may rise and maturities shorten. Continuously monitoring and managing the interest rate, currency, and commodity price risks associated with their debt portfolios will be crucial. Middle-income countries also need to maintain credible debt management and financing strategies to support their fiscal spending and postcrisis fiscal adjustments.

Unless they embark on severe, unprecedented fiscal adjustments or are given more time to adjust than current projections seem to suggest, some countries will have limited room to maneuver. Although traditional external debt sustainability analyses will continue to be an important ingredient in the analytical toolkit, they need to be supplemented by a closer examination of public debt (domestic and external) and medium-term fiscal sustainability by the appropriate authorities on an ongoing basis. Attention should also be given to monitoring and managing the fiscal risks posed by the array of contingent liabilities incurred by some governments in the context of their responses to the global financial crisis. This will be necessary in order to minimize the risks of unforeseen calls on fiscal resources that may arise from such contingent liabilities from a source that may be “too big to fail.”

Notes

The authors thank the anonymous reviewers for their insightful comments and suggestions on an earlier draft of this chapter as well as participants at the World Bank–AfDB Sovereign Debt and Financial Crisis conference in Tunis in March 2010 for their comments.

1. The World Bank classifies countries according to gross national income (GNI) per capita using the Atlas method. GNI per capita is $975 or less in low-income countries, $976–$3,855 in lower-middle-income countries, $3,856–$11,905 in upper-middle-income countries, and $11,906 in high-income countries (see http://go.worldbank.org/K2CKM78CC0).

2. Low-income countries have been typically hit only through indirect channels, such as commodity prices, exports, FDI flows, and remittances, as only a few have access to international capital markets. Given the larger share of income typically spent on food in low-income countries relative to middle-income countries, the food and fuel price boom that occurred just before the global financial crisis had a larger and broader impact on low-income countries than middle-income countries, weakening their position. Some countries have benefited from debt relief; they rely largely on long-term concessional funding and grants from multilateral and official bilateral creditors.
3. Between 1999 and 2006, 11 countries in the sample had moved to inflation targeting. They included Brazil, Chile, and Poland (1999); Colombia, South Africa, and Thailand (2000); Hungary and Mexico (2001); Peru and the Philippines (2002); Indonesia (2005); and Turkey (2006) (Rose 2006). Since 2000, 11 countries in the sample (Argentina, Brazil, Chile, Hungary, India, Indonesia, Mexico, Nigeria, Pakistan, Peru, and Poland) have implemented fiscal rules, in the form of debt limits, balanced budget rules, and expenditure and revenue rules (IMF 2009b). These rules vary by level of government, enforcement, and the degree of flexibility accorded by the center to subnational entities.

4. Most countries reduced their gross public debt. Argentina decreased its debt from 170 percent of GDP in 2002 (as a result of the devaluation that year) to 70 percent of GDP in 2007, thanks to fast nominal growth; the stock of debt hardly changed. In October 2005, Nigeria reached an agreement with Paris Club creditors to cancel or repay almost all of the outstanding claims against it (IMF 2006).

5. Total debt in Hungary rose from 55 percent of GDP in 2002 to 103 percent of GDP in 2007, but the figure includes a large increase in banking and intercompany loans (IMF 2010b).

6. In the Arab Republic of Egypt and Mexico, exchange rate depreciation was offset by rapid GDP growth. Nigeria benefited from a large reduction in external debt in 2005.

7. The concept of macroeconomic space is similar to that of Heller (2005), who defines fiscal space as the space for the government to implement a countercyclical fiscal policy or even a fiscal stimulus program without jeopardizing the sustainability of its financial position or the stability of the economy.

8. Data are from the J.P. Morgan Emerging Markets Bond Index Global (EMBI Global), which tracks total returns for U.S. dollar–denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities.

9. In October 2008 the Federal Reserve arranged dollar liquidity swaps with the central banks of Brazil and Mexico (http://www.federalreserve.gov/newsevents/press/monetary/20081029b.htm). In April 2009 Colombia, Mexico, and Poland requested flexible credit lines with the IMF. The Association of Southeast Asian Nations (ASEAN) countries, together with China, Japan, and the Republic of Korea, expanded the Chiang Mai Initiative’s swap lines.

10. See appendix 1 of the IMF document for updated information on crisis-related discretionary fiscal stimulus programs in the G-20 countries based on a survey of IMF country desks.

11. The correlation between the overall macroeconomic index (fiscal, external, and domestic subindicators) at end-2007 and the change in real noninterest expenditure between 2007 and 2009 is 46 percent. The correlation between the fiscal subindicator alone and the change in real noninterest expenditure between 2007 and 2009 is much lower (20 percent), suggesting that nonfiscal variables play an important role in determining macroeconomic space.

12. Only a small portion of China’s fiscal stimulus package is visible in the budget data, as most is reflected in bank lending (Vincelette and others 2010): domestic credit to the private sector surged, from 108 percent of GDP in 2008 to 134 percent of GDP in 2009. The change—the largest increase and the highest level of private credit in the sample—potentially reduces China’s fiscal space to act down the road.

13. The indicators included a combination of fiscal and external indicators for China, domestic and external indicators for Thailand, and fiscal and domestic indicators for Chile.

14. All four simulations use projections from the IMF’s World Economic Outlook database (April 2010). The nominal medium-term growth rate is the average projected growth rate for 2010–14. The historical primary balance is the average primary balance for 2002–07. For commodity exporters the average primary balance
middle-income countries and the global financial crisis was very high, thanks to the commodity price boom; they may not be able to achieve these surpluses in the medium term. A similar argument applies to Colombia, Peru, and Turkey. Therefore, for these countries the (lower) average from 1996 to 2001 is used. The nominal interest rate growth rate differential \((r - g)\) is set at 1 percentage point for all countries. Using market data–based country-specific values for \((r - g)\) taken from Topalova and Nyberg (2010) does not make a significant difference.

15. The 40 percent of GDP target corresponds to the sample median of the 2004–07 average public debt level of middle-income countries (see IMF 2010a).

16. The lower growth rate case is three-quarters of the baseline growth rate, keeping the interest rate unchanged. The higher interest rate case is 2 percentage points higher than the baseline, leading to an interest rate–growth rate differential of 3 percentage points.

References


