The global financial crisis of 2008–09 was the worst the world has seen since the 1930s in both intensity and global reach. Emerging market countries were not immune: at the height of the crisis, the Emerging Markets Bond Index Global (EMBIG) saw an increase in spread of more than 700 basis points from its low point in June 2007, and international capital markets were effectively closed to issuers for several months. Yet despite the severity of the global crisis, it did not result in an emerging market sovereign debt crisis of the type seen in the 1990s and early 2000s.

This chapter reviews the reasons why the impact of the global crisis on emerging markets was so much milder than it was in earlier episodes and examines the responses of debt management officials in emerging markets to the rapidly changing market environment they faced. The first section outlines the outcomes of macroeconomic policy and changes in the composition of public debt over the decade beginning in 2000. It shows that a virtuous circle of improved macroeconomic fundamentals, reduced public debt levels, and more effective management of risk in public debt portfolios provided most countries with the resilience to ride out the crisis and adjust borrowing plans to cope with adverse market conditions. The second section reviews the impact on access to finance during the peak of market dislocation. The third section, based on the results of a survey conducted by the authors, examines how debt managers in emerging markets
responded to the crisis. The last section draws some lessons from the crisis for future macroeconomic policy and public debt management strategies.

Crisis Preparedness in Emerging Markets

Emerging markets enjoyed an unprecedented period during which both strong macroeconomic fundamentals and a benign global economic environment increased the scope for implementation of debt strategies that could reduce their risk to shocks. As a result, debt managers in most emerging market economies were able to improve their debt portfolios.

Historically, an unfortunate combination of weak macroeconomic fundamentals and debt management practices had exacerbated the impact of previous economic crises and downturns. This time was different.

In order to gauge the sea change in the macroeconomic scenario and how it influenced debt management practices, we start by illustrating the significant shift observed in four macroeconomic dimensions: fiscal accounts, monetary policy, growth, and external accounts. The contrast between the first years of the new century and the three years that preceded the crisis (2005–07) is striking.

Fiscal accounts improved remarkably in emerging markets, with Latin America showing the sharpest changes. As a percentage of GDP, governments’ primary balances were overwhelmingly positive or becoming positive during this period, and overall budget balances, as a percentage of GDP, improved steadily across all regions (figure 16.1). These improvements were crucial in boosting investor confidence that emerging markets could be better positioned to adopt countercyclical policies should conditions change—although few would imagine the sweeping global recession that was about to come.

Monetary policy in emerging markets experienced a period of increased credibility, given that inflation remained relatively stable at historically low levels, despite occasional pressures from commodity prices. Greater price stability and positive expectations in emerging markets helped boost confidence in longer-term bonds, including government bonds. In many countries, especially those that had historically been plagued by volatile and high inflation levels, this scenario paved the way for interest rate cuts, the development of local currency yield curves, and the lengthening of the average time to maturity of domestic government debt (as discussed below).

Most emerging markets enjoyed a long period during which fiscal indicators, interest rates, and GDP growth—the key determinants of debt to GDP ratios—improved, leading to a robust downward trend in debt to GDP ratios in virtually all regions (figures 16.2). Between 2000 and 2008, reductions in the debt to GDP ratios were particularly sharp in Sub-Saharan Africa and Central and Eastern Europe. Between 2005 and
Figure 16.1 Primary and Overall Balance as a Percentage of GDP, by Region, 2000–09

a. Primary balance as a percentage of GDP

b. Overall budget balance as a percentage of GDP

Source: World Bank Live Database.
2008, Latin America experienced the largest percentage decrease in the average debt to GDP ratio. Out of our sample of 24 emerging markets, 6 countries showed reductions of about 5 percent in the debt to GDP ratio, 11 experienced reductions greater than 20 percent, and only 7 had higher ratios by the end of 2008 than in 2000.

Improvements in emerging markets’ external accounts reflected these countries’ falling debt levels and diminishing vulnerability to shocks and reversals in capital flows (figure 16.3). External account improvements were driven by cyclical factors that led to extremely high international liquidity conditions, but proactive policies to reduce debt vulnerabilities (for example, buybacks of external debt and a shift to funding in local markets) were highly instrumental in the rapid pace of change in external debt vulnerability indicators. This marked reduction in vulnerability represented a structural change in some economies to break out of a negative shock cycle experienced several times in the past, when pressures on the currency and increased risk aversion had a strong first-order impact on fiscal and debt sustainability indicators.

The 24 countries that are the focus of this chapter experienced generally positive trends; some other middle-income countries did not take advantage of the “good times” to strengthen their macroeconomic aggregates
and reduce the vulnerabilities to external shocks. In the Eastern Caribbean, for example, primary fiscal deficits combined with natural disasters and slow growth resulted in a continued buildup of public debt, reaching limits that raise sustainability concerns. In Eastern Europe, Ukraine failed to correct external and fiscal imbalances, which, combined with the fragility of its banking sector, increased the exposure of the private sector to reversals of capital flows. The performance of these countries underscores the need to take advantage of the benign phase of the cycle to address debt problems, as once a crisis hits the options for action quickly narrow.

On the back of healthier macroeconomic fundamentals and a benign external environment, debt managers engineered a significant transformation of government debt portfolios. They reduced exposures to changes in exchange and interest rates by focusing on domestic debt financing, including a reduction in floating-rate bonds. The sustained increase in the share of domestic debt helped mitigate the dependence from external funding sources and the exposure to currency risk. More important, the structure of domestic debt itself experienced a significant transformation, as government authorities embarked on market development programs that allowed debt managers to extend the average life of domestic debt, partly by issuing long-term fixed-rate instruments.

Figure 16.3 External Debt as a Percentage of Exports of Goods and Services, by Region, 2000–07

Source: World Development Indicators database.
progress attained in the past decade partly freed debt managers in emerging markets from choosing between long-term fixed-rate instruments denominated in foreign currency and short-term instruments in local currency. This traditional trade-off represents a choice between currency risk and interest rate risk.

**Exposure to Foreign Currency Borrowing**

The 34 countries that defaulted or rescheduled their external debt between 1980 and 2000 illustrate that excessive foreign currency borrowing weakens a country’s financial stability by exposing it to sudden stops of capital flows or drastic declines in the value of the local currency (Reinhart and Rogoff 2009). In several emerging markets, dependence on the international capital markets resulted in liquidity crises when these markets closed and governments were unable to roll over their foreign currency obligations. Emerging markets also experienced episodes of massive devaluations; when combined with high debt levels, these devaluations caused debt-servicing costs to represent such large shares of revenues that governments were unwilling to meet their obligations with external creditors. To some extent, the strengthening of the government debt portfolios could be interpreted as a debt manager’s policy response to the external debt crises experienced in the 1980s and 1990s.

Most emerging market governments made significant progress in reducing the exposure of government finances to foreign borrowing—some to the point of becoming net foreign currency creditors. This can be seen in the evolution of the net foreign currency debt, calculated as the gross government foreign currency debt minus international reserves. Two of the four most indebted countries in 2001, Brazil and the Russian Federation, had become net creditors by 2009 (figure 16.4). Mexico and Turkey had reduced their combined net foreign exchange debt from $123 billion in 2001 to $45 billion in 2009. Most impressive is the case of China, which experienced a fivefold increase in its international reserves, from about $200 billion in 2001 to more than $2 trillion in 2009 while contracting its foreign exchange debt from $49 billion to $35 billion.

Although international reserves may also be compromised by a high level of private external debt, there is no question that their accumulation dramatically reduced the overall exposure of the emerging markets group studied here. In our sample of emerging markets, the weighted average of the ratio of total external debt to international reserves dropped from 3.5 in 2001 to 1.2 in 2009 (figure 16.5). The steadily declining trend over the decade was only slightly reversed by the global financial crisis in 2008.

The accumulation of international reserves played a major role in reducing the overall short foreign currency position in emerging markets. A significant shift in the currency composition of government debt portfolios was also an important contributor. The reduction in foreign currency
Figure 16.4 Gross External Debt and International Reserves of Selected Countries, 2001 and 2009

Note: Figures exclude China.
debt was achieved thanks to a parallel increase in domestic debt. The (weighted) average ratio of external to domestic debt for selected emerging markets dropped steadily, from 0.75 times in 2000 to 0.22 times in 2009 (figure 16.6). The share of external debt declined across all regions; it was most impressive in Europe and Latin America. In Europe the external to domestic debt ratio plummeted monotonically, from 2.58 in 2000 to 0.58 in 2009. In Latin America, the ratio increased in 2001 and 2002 because of the financial turmoil in Brazil, and increased foreign borrowing combined with a devaluation in Colombia, but the weighted average fell from more than 1.0 in 2002 to 0.2 in 2009. Changes were also significant in Asia, where the (weighted) ratio fell from 0.5 to 0.15.

The relatively swift adjustment in the structure of the debt stock was possible thanks to the implementation of a series of liability management operations that altered the structure of the existing debt stock. In all regions, debt managers prepaid international bonds, multilateral and bilateral debt, or both, through buybacks or exchanges. In addition, for the first time ever, Brazil, Colombia, the Arab Republic of Egypt, and Uruguay issued global bonds denominated in local currencies in the international capital markets. Even if the contribution of these securities to the transformation of the composition of the government debt portfolios was marginal (except for Uruguay), these issuances led to a questioning of the “original sin hypothesis” and opened a new financing channel to
debt managers (Eichengreen and Hausmann 1999). For Brazil this channel allowed the government to issue fixed-rate securities in reais at longer maturities than those placed in local markets, creating a valuable reference for the gradual extension of the curve domestically (as discussed in more detail in the next section).

The reduction of foreign exchange exposure is also confirmed by the structure of outstanding securities issued by emerging markets reported in the quarterly statistics of the Bank for International Settlements (BIS). According to the BIS, international outstanding bonds and notes issued by emerging market governments as a proportion of their total issuance dropped from more than 30 percent in 1998 to about 10 percent in 2009 (figure 16.7). This ratio varied widely across regions. In Asia securities issued in foreign markets traditionally accounted for less than 7 percent of the total; in Latin America, until 2002 more than half of the outstanding securities were issued in the international capital markets. The declining trend in the ratio for emerging markets was offset by Asia, whose stock of domestic securities in 2009 was five times that of Latin America and 2.5 times that of Europe. Indeed, the relatively low and stable share of international securities in Asia (1–3 percent) is in startling contrast to
Figure 16.7 Ratio of International to Domestic Securities, by Region, 1996–2009

Source: BIS 2009.
Note: Excludes money market instruments.
Latin America, where the ratio dropped from more than 60 percent in 2002 to 17 percent in 2009. In Europe international securities, which represented 37 percent of the total in 1996, represented almost 70 percent by September 2000, driven by Russian foreign borrowing, before plummeting to 30 percent in 2009.

**Transformation of the Domestic Debt Portfolio**

Domestic debt portfolios in emerging markets went through major shifts in composition and maturity in the years that preceded the crisis, reducing the exposure of these countries to shifts in the economic cycle and market sentiment. These shifts occurred under several constraints that have affected many emerging markets for several years. More stable and sounder macroeconomic policies, together with reforms in the pension and insurance industries, changed the investor base, which had consisted almost exclusively of commercial banks. Holdings of domestic institutional investors grew steadily. Pension funds became the second-largest group of investors in emerging markets, with a strong presence in Chile, Colombia, Malaysia, and Uruguay. Insurance companies also became increasingly important, holding significant shares of debt in Hungary, India, and Poland. Foreign investors played a major role in Brazil and Mexico, where they showed significant appetite for local currency long-term fixed-rate instruments. These changes loosened the constraints that had forced debt managers to focus on short-term or index-linked instruments.

The most noticeable shift was the decline in the (weighted) ratio of floating and short-term to fixed-rate debt, which fell from 2.0 in 2000 to 0.70 in 2009 (figure 16.8). The drop represented a substantial reduction in the exposure to interest rate risk. The spike in 2002 was caused by the setback in Brazil, where debt managers were forced to resort to floating or short-term securities as speculation on unfriendly market policies of the potential new government caused turmoil in the financial markets. When Brazil is taken out of the sample, the ratio shows a steady and significant decline, from 1.31 to 0.13. Brazil and Mexico, the two most indebted countries in the region, improved substantially after 2003. Progress was also impressive in Europe, where the ratio plummeted from almost 2.0 to 0.5. The indicator is less meaningful in Asia, because only Indonesia issued floating or short-term paper in significant volumes. It reduced its ratio of floating to fixed-rate debt from 1.7 in 2002 to 0.3 in 2009.

This shift in the composition of nominal debt brought about a significant increase in the average life of the portfolio, which reduced government exposure to refinancing risk. The average life of domestic debt portfolios rose steadily between 2000 and 2007, partly because of the success many emerging markets had in issuing longer-term instruments. For the first time, several countries were able to auction fixed-rate local...
currency instruments at maturities of 10 years or longer. The most impressive progress was achieved in Latin America, where average life more than tripled, from 1.3 years in 2000 to 4.0 years in 2009. Asia gained almost three years, increasing the average life of its debt from 6.7 to 9.4 years. Europe gained eight months, increasing the average life of its debt from 2.4 to 3.1 years (figure 16.9).

Another trend in the structure of domestic debt over the past decade is the increasing importance of inflation-linked debt (figure 16.10). Although

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**Figure 16.8 Ratio of Floating Debt to Fixed-Rate Debt, by Region, 2000–09**

- **a. Including Brazil**
- **b. Excluding Brazil**

Figure 16.9 Average Life of Public Debt in Selected Markets, 2000–09

![Graph showing the average life of public debt in selected markets, 2000–09.](image)


Figure 16.10 Percentage of Total Debt Linked to Inflation

![Graph showing the percentage of total debt linked to inflation.](image)

these instruments are not used, or have low weights, in most emerging market portfolios, a number of countries introduced them as an alternative to nominal fixed-rate instruments to extend maturities and reduce currency and rollover risk. Some countries also issue inflation-linked debt to reach an optimal debt portfolio, combining these instruments with fixed-rate securities. In South Africa, for instance, inflation-linked securities, which did not exist in 2000, represented 16 percent of the portfolio in 2009. Brazil increased its share of inflation-linked debt from 6 percent to 22 percent over the same period. In Turkey, which started using these instruments in 2006, they accounted for 10 percent of the portfolio by 2009. Inflation linkers have found strong demand from pension funds and nonresidents. This is good news, as the literature on government debt provides support for some use of inflation-indexed debt, because much of the government’s revenues (which service the debt) are real in nature (Barrow 1997; Campbell and Shiller 1996).

Between 2000 and 2009, only four countries in the sample (Brazil, Chile, Colombia, and Turkey) issued domestic debt linked to foreign exchange. Brazil, which in 2000 had 22.5 percent of its portfolio in dollar-linked instruments, stopped issuing such instruments in 2002. In Chile and Colombia, foreign exchange–linked debt was eliminated from the portfolio by 2009, after reaching significant levels at the beginning of the decade. Turkey brought down its share of foreign exchange–linked debt from 35 percent in 2001 to 6 percent in 2009. These shifts were important in improving the composition of the debt portfolio in these countries. Most emerging markets in the sample, however, did not use this type of instrument during the period of analysis.

In sum, emerging markets arrived at the global financial crisis with government debt portfolios that were more resilient to shifts in the economic cycle and market sentiment than they had been. The increase in the share of domestic debt reduced the exposure to exchange-rate shocks and the vulnerability to sudden stops in capital flows. The lengthening of maturities in local currency instruments opened new alternatives for debt managers, who no longer had to choose between foreign currency and interest rate risk. Possibly the most important achievement in this area was the diversification of funding sources. Governments significantly reduced their dependence on bank financing. The evolution of the financial system, pension and insurance reforms, the growth of the mutual funds industry, and the increasing presence of foreign investors changed the investor map, creating new demand for long-term fixed-rate securities.

Development of the financial sector cannot be achieved quickly; it is the result of concerted and deliberate policy actions over a period of years. At the same time, decisions to borrow more in local currency at longer maturities usually require the acceptance of higher interest costs in the short run, in order to reduce risk. These realities underscore the strength of policy making in most emerging markets over the past decade.
The Crisis: What Happened in Emerging Markets?

Despite the improvement in macroeconomic and debt indicators in the years preceding the crisis, serious doubts remained concerning emerging markets’ capacity to withstand shocks. These economies had not yet been tested by an environment of increased risk aversion and reduced appetite for their assets, which could be provoked by turbulence in the financial markets and prospects of an economic downturn. Strong skepticism persisted on how resilient emerging market economies really were to shifts in market sentiment.

Previous crises had been traumatic: poor debt structures exacerbated the impact of economic shocks. During these events, the world got used to seeing economic shocks leading to a vicious cycle of increased risk aversion to emerging market assets, strong capital outflows, abrupt currency depreciation, and a major negative impact on debt ratios and fiscal indicators—all reinforcing risk aversion and concerns about debt sustainability.

What most observers did not expect was the magnitude of the test that was about to come, in the form of the greatest financial-economic crisis since the Great Depression. Initially, the impact on emerging markets was mild, but it intensified significantly in the aftermath of the Lehman Brothers bankruptcy on September 15, 2008. The negligible effect of the crisis on emerging markets before Lehman’s insolvency brought to the spotlight the debate over whether these economies had “decoupled” from events in the economies of the advanced countries. A few months later, the answer was unequivocal: a widespread financial crisis had led to massive deleveraging and capital outflows across the world.

Debt managers saw funding conditions in international capital markets deteriorate suddenly, with generalized spikes in the spreads on five-year emerging market credit default swaps and on the Emerging Markets Bond Index Global (EMBIG) sovereigns (figure 16.11). These spreads peaked in October 2008. Sri Lanka’s EMBIG spread reached 1,471 basis points, and Indonesia’s five-year credit default swap spread reached 900 basis points, the sharpest increases that month among the 24 countries sampled. Since then these spreads have been falling almost homogeneously, to reach pre-crisis levels by the end of 2009.16

Emerging market external debt issuance stalled for months, as a consequence of increased risk aversion and higher borrowing costs (figure 16.12). International capital markets reopened only after Mexico’s $2 billion issuance of a 10-year global bond in December 2008. That issuance was followed by placements by Brazil, Colombia, Turkey, and the Philippines in January 2009, as well as other issuances that eventually brought emerging market issuance back to reasonable levels.

Significant capital outflows from most emerging markets increased the challenge to debt managers, especially in countries still dependent
**Figure 16.11 Credit Default Swap and Sovereign Spreads, 2008–09**

**a. Average five-year credit default swap spread, by region**

**b. EMBIG sovereign spread, by region**

**Sources:** Bloomberg LP; Datastream.

**Note:** Figures show spreads for Global Emerging Market Local Currency Bond (GEMLOC) countries for which data were available. Sub-Saharan Africa excludes Kenya and Nigeria. Latin America excludes Costa Rica and Uruguay.
on external funding (figure 16.13). The strong and positive capital flows observed in 2007 fell drastically in 2008, influenced by the abrupt reversal in flows in the last months of that year. Europe and Sub-Saharan Africa witnessed some of the sharpest reversals in portfolio flows in the fourth quarter of 2008. Closed international capital markets and stronger imbalances on external accounts forced many countries to beef up borrowing from multilaterals.

The impact on emerging market local currency bond yields was also significant, but it moved yields in contrasting directions across countries in the first few months after September 15, 2008. In most cases, yields either increased or fell sharply (figure 16.14). Flight to quality, prospects for reduced economic activity, and consequent monetary policy easing were among the main factors driving yields down. These trends prevailed in emerging Asia, with the exceptions of Indonesia and Sri Lanka, where domestic bond rates declined right from the start of the crises, albeit much less than in mature markets. Deleveraging and increased uncertainty and risk aversion (as reflected in credit default swaps and EMBIG spreads)
caused sell-offs in many markets, pushing yields up. These factors may dominate, especially shortly after a significant shock, when uncertainty is more acute and some groups of investors, such as emerging market bond funds, abruptly change their portfolios (figure 16.15). This was the case in most countries in Latin America and Europe, where yields increased until October or November, when they started declining in close correlation with the EMBI.

The longer-term effect on local yields was more homogeneous: a generalized reduction consistent with monetary policy response and the economic downturn. Although some countries reacted more swiftly than others, central banks across the globe reduced policy rates over time, especially in 2009. With deleveraging losing its steam and emerging markets regaining the confidence of investors, yields declined in most
Figure 16.14 Index of Generic 10-Year Government Bond Yields in Selected Countries, 2008–09

Sources: Bloomberg LP; Datastream.
Note: September 1, 2010 = 100.

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Figure 16.15 Net Bond Flows, by Region, 2008–09

Source: Emerging Portfolio Funds Research.
Note: Regional data exclude Kenya, Morocco, and Sri Lanka.
countries to levels below those observed before the Lehman collapse in September 2008.

Unlike the impact on market rates and capital flows, the impact of the crisis on fiscal accounts was gradual and hit most emerging market economies mainly in 2009. The global financial crisis transmitted to emerging markets mainly through the contraction of capital inflows and exports. As most high-income countries plunged into the worst financial-economic crisis since the Great Depression, growth in emerging markets slowed from 7.8 percent in 2007 to 5.1 percent in 2008 and 0.8 percent in 2009, and government revenues contracted sharply. A countercyclical policy aimed at soothing the impact of the crisis left a fiscal gap that widened in 2009. The size of the gap varied greatly in the emerging markets surveyed. As expected, because of the greater dependency on inflows and economic activity in the European Union, the fiscal gap was larger in Central and Eastern Europe and smaller in Asia and Latin America.

Borrowing requirements in the surveyed emerging markets expanded, but this time emerging markets were better prepared to handle the shock. In Romania and Turkey, where the crisis impact was stronger, borrowing requirements tripled in 2009. In most Latin American and Asian countries, debt managers had to fund no more than 1.5 times the sums raised in 2008. The task was nonetheless challenging, given that during the third and fourth quarters of 2008 the international capital markets were effectively closed and domestic market conditions in most emerging market countries had deteriorated. The apparent success with which debt managers were able to meet the additional borrowing demands may reflect the facts that debt portfolios were less dependent on foreign borrowing and the increase in the primary deficit was limited. In addition the external markets, which were closed for nearly five months, reopened with foreign interest rates at historic lows, as monetary policy in the G-7 was aggressively expansionary.

This situation contrasts sharply with that of industrial countries, where deep deficits developed and debt to GDP ratios rose rapidly. The implementation of large bailout packages to keep the financial system afloat and the recession that followed the virtual paralysis of domestic credit and the burst of the real estate bubble brought about a dramatic increase in fiscal deficits and the borrowing requirements of these governments.

Response to the Crisis by Debt Managers in Emerging Markets

The global financial crisis extended the role played by debt managers beyond meeting the unexpected borrowing requirements; their actions affected the effectiveness of the policy response to the crisis. In several
countries, debt managers were asked to raise additional funding for the implementation of vital fiscal stimulus packages in an environment of investor retrenchment. Moreover, they had to do so in a manner that contributed to the stability of the domestic financial market, which had been shaken by the flight of foreign investors and strong risk aversion. In this delicate environment, decision makers needed to carefully weigh the potential impact on interest rates, the fiscal space taken by debt-servicing costs, investors’ response, and the overall effect on the financial markets.

Debt managers’ response to the crisis varied from country to country, depending on the instruments available and their experience working in a new adverse environment. The global financial crisis tested debt managers’ flexibility to adapt their borrowing strategies after macroeconomic and market fundamentals shifted dramatically.21

Debt managers in the sample of selected emerging markets responded in three main ways: by reducing pressure on the market by filling part of the funding gap through other mechanisms, by adapting the funding program to shifts in the demand for government paper, and by implementing liability management operations to support the market. Each of these types of responses is examined below.

Reducing Pressure on the Market by Using Other Financing Mechanisms

Actions aimed at reducing pressure on the market by raising part of the funding needs by other means included three mechanisms: channeling the excess liquidity available within the public sector; using nonmarket funding sources, such as multilaterals; and expanding the investor base by using new debt instruments and distribution channels. Most countries reduced or delayed borrowing from the private sector by using liquid resources within the public sector. The use of cash reserves allowed the authorities in Peru to stay out of the market and effectively borrow less than originally planned (Peru does not have an official target for cash reserves). In Uruguay the authorities avoided borrowing from market sources by taking on loans from multilaterals to close the financing gap and reconstitute the liquidity cushion. In 2005 it adopted a prefunding policy that established that at any point in time, cash reserves should cover the financing needs of the next 12 months (Ministry of Finance 2009). Colombia borrowed $1.8 billion in 2008 and $3.8 billion in 2009 to build up its liquidity position. Central banks in Egypt, Hungary, Indonesia, and Mexico were permitted to buy government bonds, which buffered the fall in bond prices. In some countries with less developed local markets, the central bank extended credit lines to the government.

Emerging market debt managers also stepped up their borrowing from multilaterals. Hungary received substantial resources from the International Monetary Fund (IMF) to deal with the stabilization of the
financial sector. Indonesia used contingent funding from multilateral and bilateral entities to backstop its borrowing needs. Peru used contingent credit lines contracted with the World Bank. Romania met a substantial part of its borrowing program with resources from the IMF, the European Commission, and the World Bank. The substantial increase in the demand for multilateral loans put significant pressure on the capacity of these multilateral institutions to expand their lending programs. The World Bank responded by increasing its 2009 lending volume to almost three times the volume projected before the crisis.\(^{22}\)

Some emerging markets started or expanded retail debt programs or tried new debt instruments in an effort to diversify funding sources and tap segments of investors not explored before. Although this route was marginal compared with the first two mechanisms, it was worth exploring in some countries. Hungary introduced a new three-year instrument linked to the consumer price index (CPI) for the retail market. Indonesia aggressively expanded its retail program, introduced Sharia-compliant sukuk market instruments, and launched a Samurai bond. Turkey introduced new revenue-indexed bonds and CPI linkers for the wholesale market.

**Revising Funding Programs in Response to Shifts in Demand for Government Paper**

The loss of appetite for emerging market government bonds forced debt managers to modify funding strategies while dealing with the ongoing interest rate and refinancing shocks. In response to the outflow of funds by foreign—and in some cases even local institutional—investors out of emerging market governments, debt managers suspended issuance in the international capital markets and concentrated the bulk of the issuance program in the shortest tenors and floaters, for which demand from commercial banks was greater.

Emerging market issuance in the international capital markets came to a virtual stop in the third and fourth quarters of 2008. Activity recovered strongly in 2009, following the aggressive expansionary monetary policies of the G-7.

Market conditions also deteriorated in most local markets, and most countries suspended or reduced the auctions of local currency medium-term fixed-rate securities. The impact of the crisis in this regard was worst in Hungary, Turkey, Poland, and Romania, in all of which the local currency debt market for medium- and long-term paper came to a virtual halt. Peru postponed its auctions of local currency securities and relied on large cash reserves. Brazil and Mexico dramatically reduced the issuance of fixed-rate paper during the crisis. Indonesia and Morocco reacted in the same way, although the impact there was less severe. In South Africa and Central and Eastern Europe, the impact of the foreign investor sell-off was probably more important than elsewhere, because nonresidents
traditionally hold a significant share of local currency government securities and capital mobility is higher than in Latin America or Asia.

In some countries the sell-off of local currency medium-term fixed-rate securities by foreign investors was compensated for in part by institutional investors. In Brazil, Colombia, and Peru, pension funds absorbed part of the excess supply of medium- to long-term paper, making the switch to floating/short-term securities less pronounced. In contrast, in Central and Eastern Europe, even institutional investors shifted their preference to foreign currency or short-duration local currency assets, leaving banks to absorb most of the excess supply of government securities.

To offset the decline in demand for medium-term paper, some countries switched to Treasury Bills. The most notable case was probably Hungary, whose funding plans relied almost exclusively on T-bills during the eight months surrounding the crisis. Over the same period, Poland doubled its T-bill share, from 6 percent to 12 percent; Romania significantly increased its T-bill volume and introduced one- and three-month securities; and South Africa tripled its issuance of T-bills.

Other emerging markets switched funding from fixed-rate instruments to floating-rate ones. Brazil reduced its target of fixed-rate paper after the crisis hit and increased the target for floating-rate paper. Turkey increased the issuance of both shorter-term and floating-rate paper.

As a result of these changes in funding policy, most countries reduced the average time to maturity. However, given the relatively short duration of the intense phase of the financial crisis and the fact that emerging markets regained normal access by mid-2009, most of the reductions in average maturity were small, short-lived, or both. Brazil, Mexico, and Poland experienced small reductions in the average life of their portfolios. Hungary reduced the average time to maturity by 0.6 year, going from 2.7 years in September 2008 to 2.1 years in July 2009. Turkey reduced the average maturity of its portfolio from 34 months in 2007 to 32 months in 2008 but recovered in 2009 to 35 months.

Implementing Liability Management Operations to Support the Market

Liability management techniques such as buybacks and exchanges proved to be powerful tools to help stabilize markets. Many debt managers found that these transactions reduced market pressure and played a catalytic role in adjusting the debt structure to the changing characteristics of the demand profile.

Hungary, Indonesia, and Mexico used buybacks to alleviate sell-off pressures, enhance liquidity, and improve the pricing of liquid instruments. As securities were bought back for cash, these operations provided much-needed liquidity relief to investors and helped contain sell-off
pressures, especially on illiquid securities. In Hungary, for example, a large-scale bond buyback program of about $2.5 billion was launched in the second quarter of 2009 because of the significant sell-off by foreign investors and weak demand for local bonds. The program was successful, enabling Hungary’s debt agency to restart regular bond auctions in April 2009. Indonesia helped stabilize prices by conducting buybacks and switches of short-term instruments, providing good price references when market liquidity was weak. Mexico implemented buyback auctions of selected medium- and long-term securities to enhance their liquidity. Poland used switches to stabilize the market by redeeming illiquid bonds in exchange for more liquid securities. During the crisis, Poland replaced illiquid long-term CPI–indexed bonds and floating-rate notes with more liquid instruments in order to stabilize the market.

An innovative approach that seems to be working well is the simultaneous buy and sell auctions used by Brazil. At the peak of the crisis, the Brazilian Treasury conducted this type of auction for some long-term securities. These auctions provide reliable buy and sell price parameters at a time when references in the secondary markets are weak or nonexistent. Price discovery usually requires a sequence of two to three auctions for each instrument. Brazil had already tested simultaneous auctions during recent periods of turbulence and found that they did a better job of stabilizing markets than did pure buyback auctions.

Countries implemented debt managers’ responses to the crisis in different ways. Some were forced to revisit and adjust their debt management strategies; others, which had looser or more directional guidelines, could operate within the prevailing policy framework.

Countries with strategies expressed as formal targets for managing risk were forced to review their strategies during the crisis. Brazil, which has annual targets for the composition of the debt portfolio, reviewed its targets, opening up more space for floating-rate paper and reducing the target for fixed-rate debt. The Brazilian debt management office saw this adjustment as a temporary setback and reversed it after the situation normalized. Hungary and Poland reviewed their strategies to include a higher share for foreign currency debt in the years to come, at least until some of their multilateral loans mature.

In contrast, countries in which debt management strategies are expressed as broad directional targets for certain risk indicators did not need to undertake formal reviews of their strategies. Although most countries formally acknowledged the increase in funding requirements, not all revised their policy frameworks, with debt managers continuing to operate under the prevailing one. Poland’s broad bands for local currency risk indicators did not require revision during the crisis. The directional targets in Mexico and Turkey did not need to be reviewed, although both countries slowed their progress in reducing risk in their debt portfolios.
Concluding Remarks

The impact of the global financial crisis on the 24 countries considered in this chapter, as well as the responses by their public debt managers, provides a number of positive lessons for policymakers and international financial institutions. First, sound and well-coordinated macroeconomic policy during the years before the crisis, which led to much-improved fundamentals, served as a buffer and positioned emerging markets for quicker recovery. Although the improvement in macroeconomic fundamentals could in part be attributed to a very benign (cyclical) environment, driven by ample global liquidity and a strong risk appetite by investors, explicit policy choices by emerging market decision makers enabled them to capitalize on this environment and reduce their vulnerability. Some of the main measures implemented were improved fiscal policy, accumulation of foreign reserves, controlled inflation, and consequent reduction in public debt to GDP ratios.

Prudent public debt management with a focus on containing risks in debt portfolios also strengthened resilience to the crisis. Policies that reduced foreign exchange exposure, extended the maturity of domestic debt, reduced reliance on floating-rate instruments, and diversified funding sources were particularly important. In contrast to many previous events, the impact of the events of 2008 and 2009 on government budgets was muted by the reduced level of foreign exchange exposure (and in some cases attainment of a net foreign exchange asset position).

Both sound and well-coordinated macroeconomic policy and prudent debt management before the crisis provided public debt managers with room to maneuver when the crisis hit. Governments were able to delay borrowing, use nonmarket sources of funding, and introduce a range of measures to continue borrowing in their domestic securities markets. In this way, when markets were suffering severe risk aversion to the point of dysfunction, governments had the capacity to absorb some risk and contribute to the stabilization and recovery of local markets.

The availability and quick disbursement of multilateral funding were critical in cases where international capital markets were closed and investors in domestic government securities withdrew from the market. Contingent credit lines proved extremely useful, and debt managers learned how valuable these options became. The massive increase in demand for multilateral loans revealed the limited capacity that multilateral institutions have to offset a significant reversal of private capital flows, however.

Countries with larger and more developed domestic bond markets tended to be less affected by the crisis. In some of these countries, even during the worst of the crisis, capital flew to government securities, mirroring the market movements experienced in the United States, Europe, and Japan. Although some time elapsed before interest rates came back
to precrisis levels, most other countries were able to satisfy their funding needs in the domestic market.

The crisis highlighted the degree to which the capacity of public debt managers in the surveyed countries has improved in the past decade. In a number of countries, debt managers were able to quickly employ a range of measures (liability management techniques, the use of cash reserves, quick adjustment of debt strategies, and so forth) that helped governments weather the turbulence in financial markets and implement appropriate countercyclical fiscal policies. This outcome underscores the need for governments to ensure that finance ministries and debt offices are appropriately resourced and staffed.

The 24 countries considered in this chapter account for the majority of people living in emerging markets (and about 60 percent of the world’s population). In a number of other countries, the financial crisis has had a greater negative impact on market access and funding costs. Most of these countries went into the crisis with poor fiscal positions, debt sustainability concerns, unresolved debt renegotiations, or some form of political deadlock that affected their ability to effectively manage macroeconomic policy. Their predicament underscores the need to take advantage of the benign phase of the cycle to address debt problems, as once a crisis hits, the options for action quickly shrink.

Notwithstanding the positive developments that most emerging markets enjoyed between June 2009 and March 2010, the period ahead presents more risks than usual, for several reasons. First, high-income countries have huge borrowing requirements (in 2009 their net marketable securities issuance was estimated at more than seven times that of 2007 [OECD 2009]), which will create strong competition for capital and potential market instability. Second, by its very nature, the process of phasing out extraordinarily supportive monetary policy increases risk. Moves in this direction are likely to result in increased market volatility as “carry trades,” put in place to profit from very low short-term interest rates, are unwound. Monetary tightening must be carefully timed, in order to avoid increasing inflationary expectations on the one hand or cutting off the economic recovery and financial sector recuperation on the other. Opinions on the strength and durability of the global recovery differ; there remains a sizable risk that a faltering recovery would put pressure on the borrowing needs of most governments.

Given this outlook, it is important that policy makers in emerging markets maintain the prudent approach to macroeconomic management that has served them well over the past decade. The specific policy measures will depend on individual country circumstances. For countries with weaker fiscal positions, the recovery of growth presents an opportunity to reduce debt to GDP ratios by reversing the fiscal accommodation implemented to mitigate the impact of the global crisis. For countries with greater fiscal buffers and significant external surpluses, the emphasis should be on
stimulating domestic demand and allowing exchange rates to adjust while maintaining vigilance over inflationary expectations. At the same time, debt managers in emerging market countries are well advised to maintain preparedness for market dislocations and to continue to seek opportunities to contain risk in public debt portfolios at levels that will ensure that fiscal policy is not jeopardized if disaster strikes again.

Notes

1. This chapter does not examine the impact of the financial crisis on low-income countries, because the focus is on the first-round financial impact during September 2008–April 2009, when their lack of integration into global financial markets to a large extent buffered them from impact. Transmission occurred later, through the real sector, as trade and remittances declined.

2. Surveys were sent to 24 countries: Brazil, Chile, China, Colombia, Costa Rica, the Arab Republic of Egypt, Hungary, India, Indonesia, Kenya, Malaysia, Mexico, Morocco, Nigeria, Peru, the Philippines, Poland, Romania, the Russian Federation, South Africa, Sri Lanka, Thailand, Turkey, and Uruguay. Fourteen of these countries—Brazil, Colombia, Egypt, Hungary, Indonesia, Kenya, Mexico, Morocco, Peru, Poland, Romania, South Africa, Turkey, and Uruguay—responded. Debt managers from the 24 countries were surveyed about the main impacts of the crisis on their funding needs and their access to the domestic and international capital markets. The survey also asked about changes in debt management strategies and operational responses to deal with the crisis, such as the use of cash reserves, alternative funding mechanisms, and liability management techniques.

3. Changes in fiscal and monetary policies, external accounts, and economic growth are highly interrelated. Disentangling exogenous and endogenous drivers of such variations is beyond the scope of our analysis.

4. The average debt to GDP ratio of the eight most indebted Caribbean Community (CARICOM) countries passed the 100 percent threshold in 2009.

5. These countries were the exceptions; the ones covered in the sample contain the majority of the world’s population.

6. A common denominator of the transformation of the domestic debt markets in emerging markets was the expansion and growth of the local investor base, especially nonbank financial institutions, most notably pension funds, but also insurance companies and mutual funds. Foreign investors also played a major role in countries such as Brazil and Mexico, where they showed a significant appetite for local-currency long-term fixed-rate instruments.

7. The number of defaults was 15 in Latin America, 11 in Africa, 4 in Asia, and 4 in Europe. In Latin America, four countries defaulted or rescheduled three times during that period.

8. Full analysis of the exposure of the government financial position to foreign currency borrowing requires complete information on government stocks and flows. Because of data limitations, this chapter ignores cash flows and assumes that the main government stocks are government debt and the international reserves of the central bank.

9. The implementation of more flexible foreign exchange regimes in many emerging markets also contributed to reducing their exposure to shocks and facilitated adjustments in the external accounts.

10. The unweighted ratio fell steadily, from 1.44 to 0.77, over the same period.
11. The turmoil was created by a strong market reaction against the increasing probability of the left-wing candidate winning the presidential elections in 2002.

12. Unweighted averages are not used for the regions because in small samples, countries with low debt stocks and high ratios (for example, Chile) distort the mean. The trends in unweighted averages indicate the same structural changes.

13. The sample included in figure 16.7 tracks the same countries tracked by BIS for domestic and international securities (see http://www.bis.org/statistics/secstats.htm). The ratio of international to domestic securities slightly overestimates the ratio of foreign to local currency because of the issuance of local currency bonds in the international capital markets.

14. The IMF Global Financial Stability Report of April 2006 documented the structural changes in the domestic base of investors in emerging markets, identifying the increased relevance of institutional investors as one of the key factors behind the improvements in the profile of emerging market government debt.

15. Uruguay, for instance, has indicated that it has relied on inflation-linked instruments to shift from foreign exchange to local currency debt.

16. Hungary and Poland are exceptions, reaching their peak five-year credit default swap spreads for 2008–09 in late February and early March 2009. The extent of the problems of the financial system in both countries extended the period of relatively wide and widening spreads.

17. Emerging Portfolio Funds Research (EPFR) tracks net capital flows to a country through bond funds. Net capital flows from bond funds are computed by determining the change in bond fund assets over a period, weighted by the percentage of the fund allocated to a particular country during that period.

18. Growth in the G-7 economies (France, Canada, Germany, Italy, Japan, the United Kingdom, and the United States) fell from 2.5 percent in 2007 to 0.1 percent in 2008 and –3.5 percent in 2009, triggering the slowdown in emerging market country growth.

19. In Hungary the agreements with the IMF and the European Union forced a fiscal adjustment which kept the government deficit within relatively narrow bands.

20. Financial rescue programs in industrial countries are estimated to have cost 13.2 percent of GDP (Cecchetti, Mohanty, and Zampolli 2009).

21. Romania is the most striking example. At the beginning of 2009, projections forecast GDP growth of 2.9 percent and a deficit of 2.0 percent of GDP. By the end of the year, GDP had contracted by 7.0 percent, and the deficit had risen to 7.2 percent of GDP.

22. The increase in lending was one of the reasons why the World Bank sought an increase in capital from its shareholders.

23. Most countries financed buybacks with cash reserves or short-term funding or through their regular auctions of more liquid instruments.

24. Switches are most frequently used to reduce debt fragmentation, consolidate large-size benchmarks, and manage refinancing risk. Brazil and South Africa have also used them for these purposes.

References


public debt management in emerging market economies


