2

Private Capital Flows in a Time of Global Financial Turmoil

THE GLOBAL FINANCIAL CRISIS THAT followed the September 2008 collapse of several major financial institutions, including Lehman Brothers, severely constrained developing countries' access to international financial markets, as investors deserted developing-country markets for what they perceived to be safer securities. In October, developing countries' access to external finance further deteriorated, as sovereign bond spreads reached a seven-year high of 874 basis points—levels not seen in six years. No developing-country government or firm issued a single bond on international markets in October or November. A principal index of emerging stock market prices (MSCI) plummeted 42 percent between Lehman's collapse and mid-December, as panicked investors sold off holdings on a large scale and currencies came under heavy downward pressure. Spreads on trade credit for several major borrowers rose to three to five times their record low 2007 level.

The effects on capital flows to developing countries were dramatic. Despite strong performance in the first half of 2008, net private capital inflows dropped to $707 billion (4.4 percent of developing-country GDP) by the end of the year, reversing an upward trend that had begun in 2003 and that peaked at $1.2 trillion in 2007. As inflows sagged, net capital outflows increased. Net equity outflows reached $244 billion (1.5 percent of GDP) in 2008, up from $190 billion (1.4 percent of GDP) in 2007. Emerging Europe and Central Asia bore the brunt of the financial crisis, accounting for 50 percent of the decline in capital flows. But the downturn touched all regions, with the exception of the Middle East and North Africa, where flows increased slightly.

The growing integration of developing-country economies into the global economy, and the increasing importance of their firms and households in international finance over the past decade, have brought enormous economic and financial benefits (World Bank 2007). But the same developments have also widened the scope for economic turmoil when global conditions deteriorate. Indeed, the broad reach of the current crisis can be traced through the dense web of trade and financial linkages among countries. Developing countries are much more dependent on private capital flows today than during the 1990s. Almost one-quarter of their total domestic capital formation was funded, in the years immediately preceding the crisis, by foreign capital. For the past three years, more than one-third of developing countries received private capital flows in excess of 6 percent of their GDP. In several countries of Eastern Europe—notably Bulgaria, Kazakhstan, Latvia, Romania, and Ukraine—the levels were 20 percent or more. The downside of that greater dependence is that a withdrawal of capital flows has a broader and deeper impact.

The composition of private debt flows has changed as well. Once dominated by bank lending to sovereign governments, capital now flows through a variety of transactions between private entities—and those flows respond rapidly to financial disruptions. The growing share of countries with open capital accounts has greatly magnified the potential for rapid changes in capital outflows in response to changes in economic conditions. Thus, even though most developing countries maintain better policies and have stronger institutions than they did at the onset of previous crises, more countries are nevertheless vulnerable to

external disruptions. The situation is particularly dire for the many countries that face the possibility of a downgrade in their credit rating, because lower ratings will make it more difficult for borrowers—corporate and sovereign—to manage their external liabilities and fund investment projects by accessing international bond markets.

This chapter first reviews financial flows to and from developing countries in 2008, describing how the crisis has affected emerging markets since the collapse of Lehman Brothers. It then discusses the prospects for capital flows and workers' remittances in the medium term.

The key messages are highlighted below:

- The tendency of risky assets to underperform in a cyclical financial downturn notwithstanding, the dramatic plunge in emerging local equity markets, coupled with the widening of spreads on dollar-denominated bonds and downward pressure on borrowers' currencies, bespeak a degree of large-scale capital repatriation not seen in recent years. As global portfolio managers came under increasing liquidity pressures, they sold off emerging market assets to fund their own capital redemptions. Evidence available to date seems to indicate that much of the repatriated investment was drawn out of markets in East Asia and the Pacific, which are more liquid than those in some other developing regions and have been a dominant destination for emerging-market equity investors. At the same time, multinational companies began to reduce their exposure through higher repatriation of profits.
- International capital inflows are projected to decline further in 2009, sinking to $363 billion (2.5 percent of GDP) before recovering in 2010 in tandem with the recovery in global economic growth discussed in chapter 1. Developing countries' participation in international bond markets picked up in the first months of 2009, but the prospects for continued improvement in access to international sources of capital are limited. The severe global downturn anticipated for this year (chapter 1) will continue to depress lenders' interest in developing countries and reduce investment flows. Going forward, developing countries may face sharp competition for funds as industrial-country governments begin in earnest to issue the securities necessary to finance their fiscal stimulus and bank rescue plans.
- The role of international banks in intermediating capital flows to developing countries is changing, as banks adjust to new realities born of the crisis. The implications of greater government involvement and tighter regulation for banks' lending to developing countries are now coming into view, as the total amount of loans outstanding with banks reporting to the Bank for International Settlements (BIS) declined in the last quarter of 2008, with all signs pointing to a continuation of that trend through 2009. Tight liquidity conditions in interbank markets drove banks' lending decisions in the early phase of the crisis—a restraint on credit that now has been moderated by massive liquidity injections from major central banks. More recently, the forces driving banks' credit decisions have been directly and indirectly related to the onset of the global economic recession, the associated weakening of the banks' balance-sheets, and the further tightening of credit standards. Econometric analysis conducted for this report confirms the importance of these two channels—the erosion of large lenders' balance-sheet quality (captured by various loan-performance and capitalization measures) and the tighter credit standards (measured by opinion surveys of loan officers). It therefore appears that the recently formed consensus to focus policy attentions on the health of the international banking system should benefit developing-country borrowers, to the extent that banks' balance sheets can be repaired and recapitalized.
- Foreign direct investment (FDI) inflows—the largest component of international capital flows to the developing world—are also projected to decline by 30 percent to $385 billion in 2009. Driven by the strong momentum of the first half of the year, FDI inflows to developing countries posted an increase in 2008 and remained at 3.5 percent of their combined GDP. Many factors that had led to the expansion of cross-border mergers and acquisitions (M&As)—chiefly high economic growth, favorable financing conditions, high corporate

profits, booming stock markets, and increased involvement by private equity firms, hedge funds, and sovereign wealth funds—are now absent. With weak corporate earnings and tough bank financing of deals, M&A transactions are now more difficult to initiate and fund. Significantly lower M&A transactions in the first quarter of 2009 signal weaker FDI inflows to developing countries.

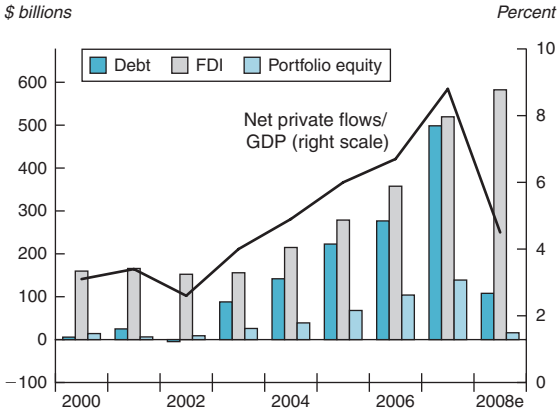
- Of the many consequences of the 2008 crisis, the most significant for development finance is likely to be the shift among foreign investors from private to public risk in emerging markets. The shift, if enduring, could be particularly costly for emerging market corporations. Before the crisis, a growing number of such corporations enjoyed access to international debt markets for the sophisticated financing they needed to grow and build a global presence through trade, investment, and cross-border M&A. Between 2003 and 2007, firms based in emerging markets raised $1.2 trillion in external debt via syndicated bank deals and bond issues, while only $237.2 billion went to the sovereign sector. So far in 2009, the balance of external financing between sovereign and corporate shifted, with the share of corporate sector declining to 66 percent of the total from 90 percent in 2008. As initial public offerings fell steeply in 2008 and local stock markets' share prices plunged, corporate finance in emerging markets faltered, signaling weaker growth prospects and fewer opportunities to generate employment in emerging economies.
- In the past, remittances have been stable, or even countercyclical, during economic downturns in the recipient economy. The present crisis, however, is affecting the countries from which remittances originate. Future flows are bound to be affected by the simultaneous economic recession in the high-income countries and lower growth in the developing countries, each of which host half of migrants from the developing world. Although the aggregate decline in worldwide remittance flows as a result of the crisis is expected to be small, the situation may prove more serious for some small, poor countries where remittances make up a relatively large share of GDP.

The global financial crisis severely reduced private capital flows to developing countries in 2008

The global financial crisis brought to an abrupt end the surge in private capital flows to developing countries that had occurred during 2003–07. In 2008, total net international flows of private capital to the developing world fell to $707 billion (4.4 percent of developing-country GDP) from the record-high level of $1.2 trillion (8.6 percent of GDP) reached in 2007 (figure 2.1 and table 2.1). Net portfolio equity flows plunged by almost 90 percent from $139 billion to a mere $16 billion in 2008. Similarly, private debt flows declined substantially to $108 billion from $499 billion, driven by the sharp fall in short-term debt flows, which moved from $202 billion in 2007 into negative territory (−$16.3 billion), and in bond financing, which came to just $11 billion in 2008, compared with $85 billion in 2007. Net medium- and long-term bank flows were $123 billion, 40 percent lower than in 2007. The rate of increase in FDI slowed markedly, ending the year at an estimated $583 billion, $60 billion higher than 2007.

The downturn affected all developing regions but to various degrees, with the exception of the Middle East and North Africa, where flows increased slightly (table 2.2). Emerging Europe and Central Asia were the hardest hit, accounting for half of the $451 billion decline in capital flows (figure 2.2). Across regions, the decline was concentrated in short-term debt flows (48 percent),

Figure 2.1 Net private capital inflows to developing countries, 2000–08



Sources: World Bank Debtor Reporting System; staff estimates.
Note: 2008 figures are estimated.

Table 2.1 Net capital inflows to developing countries

$ billions

	2001	2002	2003	2004	2005	2006	2007	2008e
Current account balance	15.5	68.6	118.4	171.2	306.6	438.2	406.1	377.9
Financial flows:								
Net private and official inflows	224.2	162.4	258.6	370.7	498.7	668.3	1157.7	727.3
Net private inflows	197.3	156.8	269.1	396.5	569.7	739.2	1157.5	706.9
Net equity inflows	172.3	161.5	181.0	254.7	347.2	462.7	658.6	599.0
Net FDI inflows	166.0	152.5	155.5	216.0	279.1	358.4	520.0	583.0
Net portfolio equity inflows	6.3	9.0	25.5	38.7	68.1	104.3	138.6	15.7
Net debt flows	51.9	0.9	77.6	116.0	151.5	205.6	499.1	128.3
Official creditors	26.9	5.6	−10.5	−25.8	−71.0	−70.9	0.2	20.4
World Bank	7.5	−0.3	−0.5	1.6	2.8	−0.4	4.9	7.1
IMF	19.5	14.1	2.5	−14.7	−40.1	−26.7	−5.1	10.9
Other official	−0.1	−8.2	−12.5	−12.7	−33.7	−43.8	0.4	2.4
Private creditors	25.0	−4.7	88.1	141.8	222.5	276.5	498.9	107.9
Net M-L term debt flows	2.1	0.7	26.6	73.3	135.9	166.4	296.4	124.2
Bonds	10.2	10.1	20.4	36.0	56.2	26.6	85.4	10.5
Banks	−1.9	−3.2	10.4	41.3	84.2	144.6	214.5	123.0
Other private	−6.2	−6.2	−4.2	−4.0	−4.5	−4.8	−3.5	−9.3
Net short-term debt flows[a]	22.9	−5.4	61.5	68.5	86.6	110.1	202.5	−16.3
Balancing item[b]	−159.1	−69.9	−90.7	−144.9	−419.5	−476.6	−486.3	−657.7
Change in reserves (− = increase)	−80.4	−160.6	−285.5	−396.2	−385.5	−629.9	−1077.3	−447.3
Memorandum items								
Private inflows excluding short-term debt	174.4	170.7	203.9	340.7	483.3	629.1	955.0	723.2
Net FDI outflows	12.7	16.8	22.4	44.5	59.2	125.2	138.8	164.0
Net portfolio equity outflows	10.8	6.0	8.2	7.2	11.6	21.5	50.6	80.0
Workers' remittances	95.6	115.9	143.6	161.3	191.2	229.0	265.0	305

Source: World Bank Debtor Reporting System and staff estimates.
Note: e = estimate.
a. Combination of errors and omissions and transfers to and capital outflows from developing countries.
b. Net bank lending numbers might be different from numbers in GDF 2009, volume 2.

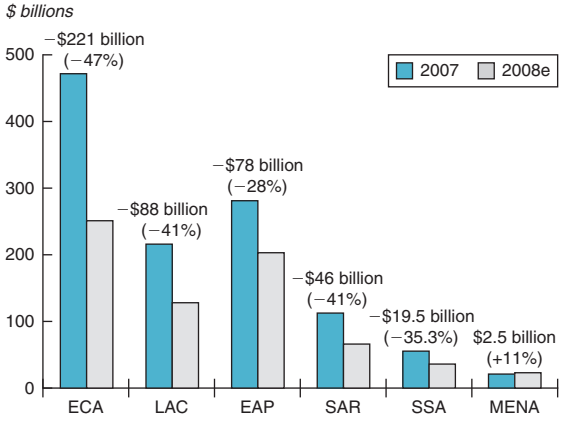
Table 2.2 Net capital inflows to developing regions, 2005–08

$ billions

	2005	2006	2007	2008e
Total	570	739	1158	707
By region:				
East Asia and Pacific	187	206	281	203
Europe and Central Asia	192	311	472	251
Latin America and the Caribbean	113	85	216	128
Middle East and North Africa	19	25	21	23
South Asia	25	72	113	66
Sub-Saharan Africa	33	40	55	36

Source: World Bank Debtor Reporting System and staff estimates.
Note: e = estimate.

Figure 2.2 Net private capital inflows to developing regions, 2007–08



Source: World Bank Debtor Reporting System and staff estimates.
Note: e = estimate.

portfolio equity (26 percent), and bonds (20 percent). Almost all regions experienced significant setbacks in short-term debt flows. Short-term debt accounted for a major share of the decline in East Asia and the Pacific (67 percent), South Asia (56 percent), and Europe and Central Asia (45 percent). In Sub-Saharan Africa, on the other hand, two-thirds of the $15 billion decline came in portfolio equity, with the rest in bond financing.

FDI inflows rose slightly in 2008. Most of the $63 billion increase flowed to the East Asia and Pacific and South Asia regions. FDI inflows to India doubled, reflecting economic reforms in recent years and progress in opening up additional

sectors for foreign investment. The high commodity prices that persisted through most of 2008 continued to support investment in resource-rich developing countries such as Angola, Brazil, Chile, Kazakhstan, and the Russian Federation. Because the unfolding crisis had an even more profound effect on FDI within the industrialized world (causing a 40 percent drop in 2008), the developing world increased its share in global FDI to a record 40 percent in 2008 from an average of 25 percent over the last decade. (Global FDI amounts to about $1.4 trillion.)

In 2008, foreign exchange reserves accumulation in the developing world slowed considerably, as many countries drew down reserves to cope with the impact of the financial crisis (see chapter 3 for a detailed discussion on foreign exchange reserves). The year ended with reserves up only $447 billion, about half of the almost $1 trillion increase seen in 2007.

The "balancing item" that reconciles the balance-of-payments accounting identity between the current and capital accounts and changes in foreign reserves fell by $172 billion to –$657.7 billion (see table 2.1). This item captures capital outflows as well as the various errors and omissions that are entailed in measuring capital- and current-account transactions in the balance of payments. With growing financial integration, capital outflows from developing countries have increased significantly in recent years. Driven by ample liquidity and a desire to diversify their assets, investors and multinational companies in developing countries have acquired assets and invested in debt markets abroad—both in developed and developing countries. Part of the balancing item can be explained by the resulting increase in net equity outflows, which reached $244 billion (1.5 percent of GDP) in 2008 from $190 billion (1.4 percent of GDP) in 2007. Net FDI outflows increased by $20 billion to an estimated $162 billion in 2008, led by the Russian Federation ($50 billion), China ($25 billion), Brazil ($18 billion), Malaysia ($15 billion), and India ($13 billion). Most of the outflows from Russia and China reflected investments in extractive industries, whereas the Malaysian investments were in financial services and the Indian in energy and services. Portfolio equity outflows also rose to $80 billion in 2008, from $50 billion in 2007.

Another part of the balancing item stems from the way that exchange rate valuation effects are taken into account in calculating changes in foreign reserves. Reserve holdings in each country at year-end are first converted into dollars before calculating changes in reserves from the end of the previous year. In contrast, the various current and capital account flows are converted into dollars at average exchange rates. The following exercise was undertaken to determine the importance of exchange rate valuation effects on reserves: A portfolio of reserve holdings was constructed by allocating the dollar value held by developing countries into the four main reserve currencies (U.S. dollar, euro, pound sterling, and Japanese yen). After changes in reserves were calculated for each reserve currency in each year, the resulting flows were reconverted to dollars. Calculating exchange rate valuation effects on reserve changes in such a manner instead of on reserve holdings raises the estimate of reserve accumulation by $108 billion (14 percent) in 2008 and reduces it by around $80 billion in 2006–07 (11 percent), which acts to stabilize the year-to-year fluctuations in the balancing item.

The downturn began in late 2008, as part of the global financial crisis

Most of the decline in net private capital flows to developing countries in 2008 occurred in the last quarter of the year, following the deterioration of global financial markets. As discussed in chapter 1, the financial turmoil began in the summer of 2007, as the distress in U.S. subprime mortgage markets became increasingly clear through a string of events that culminated in the collapse of Lehman Brothers in September 2008 (GEP 2008).[1] Those events depressed the confidence of investors and financial institutions in the ability of counterparties to make good on their financial commitments. Uncertainty over the ability of major financial institutions to survive the crisis, coupled with the sharp rise in volatility, drove investors toward safe assets. Meanwhile, financial institutions intensified their deleveraging process—shedding assets and raising capital—leading to major outflows from global markets, including the developing-country markets reviewed in the previous section.

The resilience of developing countries to the global financial crisis broke down after September 2008

Developing countries exhibited a certain degree of resilience to the emerging crisis during the first half of 2008. As the crisis intensified in September,

Figure 2.3 MSCI equity index from January 2007–February 2009

Source: Bloomberg Data Service.

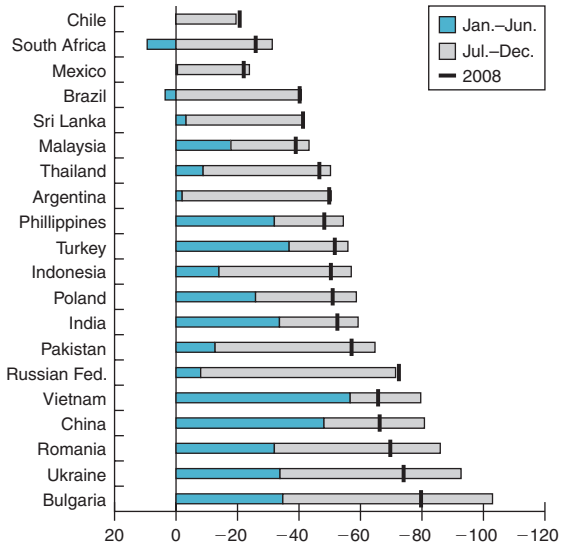
however, with a massive retreat from risky assets all around the world, the financial markets in developing countries felt the heat. Their stock markets joined those in high-income countries, falling 40 percent in dollar terms (figure 2.3). Bond spreads spiked, bond flows dried up, and (although difficult to document) there was a sharp increase in capital outflows. Virtually all the currencies in the world depreciated against the U.S. dollar, with some developing-country currencies losing more than 50 percent of their value.

The downturn in equity prices began early in 2008 but intensified dramatically in September (figure 2.3). The MSCI index (measured in U.S. dollars) dropped by 13 percent between January and June, then another 13 percent from July to mid-September, as markets in major commodity exporters such as Brazil and Russia reacted to the drop in commodity prices. It then plummeted by 42 percent between mid-September and mid-December.

Following further declines in January and February 2009, the fall in global equities ceased in March, led by financial stocks, as investor sentiment improved amid tentative signs of greater global economic optimism. But it is uncertain at this point whether stock markets have turned the corner. Upcoming economic data and corporate earnings reports still carry relatively high downside risks. Surprisingly, emerging market equities fared much better since March 2009, posting a gain of 60 percent, compared with the mature markets' gain of 33 percent.

Figure 2.4 Declines in developing-country stock markets in 2008

Total return (%)



Source: World Bank staff estimates.

With several other financial institutions coming under increasing stress during the second half of 2008, major international banks, hedge funds, and other investors—especially highly leveraged ones—were impelled to sell off their riskier assets, producing major outflows from emerging market equities and equity funds. Emerging market equity funds posted a record net outflow of $48.3 billion in 2008, compared with a net inflow of $54 billion in 2007. Outflows initiated by foreign portfolio investors were $30 billion in the third quarter alone, the highest quarterly level since 1995. Outflows continued in October and November but ceased in December, when the leak was breached by net inflows of $1 billion. Most of the repatriated capital was drawn out of East Asia and the Pacific, traditionally a dominant destination for emerging-market equity investors. Foreign investors withdrew $25.7 billion from emerging-country Asian stocks in 2008. In contrast, investors pulled out only $4.9 billion from funds in emerging Europe and $5.9 billion from funds in Latin America.

The impact of the sell-off on local equity markets was widespread among developing countries, but some were hurt more than others (figure 2.4). Stock markets in Brazil, China, India, and Russia experienced some of the biggest declines in 2008.

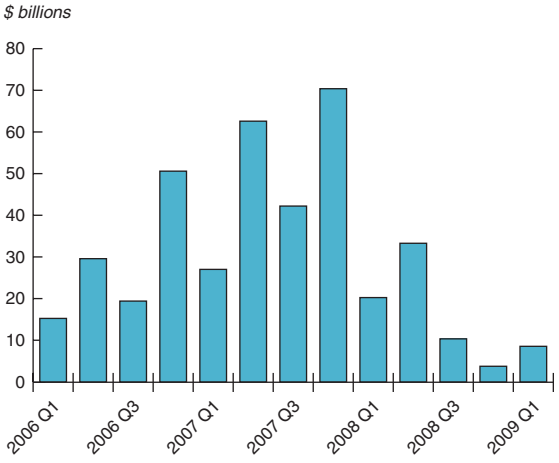
Russia was the worst performer of the four, chalking up a 72.5 percent decline in local currency terms. The fall of share prices resulted in margin calls and severe trading losses among major domestic banks, which brought the country's money market to a halt. Markets in the other three countries lost more than half of their value—Brazil posted a 40 percent decline, India 52 percent, and China 66 percent. The magnitude of the correction during the second half of the year was much more severe for Brazil and Russia than for China and India, reflecting the fact that the sharp drop in commodity prices affected the first two countries more than the second two. Even the best-performing emerging markets—those in Chile, Mexico, and South Africa—posted losses of more than 20 percent in 2008. Those with heavy external financing needs (especially certain emerging European economies) suffered larger declines in stock market prices (chapter 3). Due to the broad scope of the crisis, its impact on equity prices in developing countries has been deeper and broader in comparison to past episodes (box 2.1).

Equity issues in developing countries plunged with the fall in stock markets. Gross equity issuance fell to $67.6 billion in 2008, compared with $202.16 billion in 2007 (figure 2.5). Developing-country companies only raised $3.8 billion in the fourth quarter of last year, posting the worst quarterly volume since the third quarter of 2004. The same picture emerges from the collapse in initial public offerings (IPOs) (figure 2.6). About 52 IPO deals were withdrawn or postponed in 2008, the highest annual total on record. The value of completed IPO deals in 2008 was $27.7 billion from 149 issues, down 78 percent from record highs of $124.4 billion from 403 issues in 2007.

The sharp decline in IPO activity was due in part to the lack of participation by hedge funds, many of which have suffered major losses in the ongoing crisis. Hedge funds in recent years have become a dominant force in primary emerging equity markets. They are now considered a crucial part of IPO transactions—in developed and developing countries alike—owing both to the volume of their purchases and their early involvement in the IPO process. But lately many hedge funds have faced a wave of fund withdrawals and significant losses. The industry as a whole shed a fifth of its value last year, shrinking from its 2008 peak of $1.9 trillion to $1.5 trillion at the end of the year.

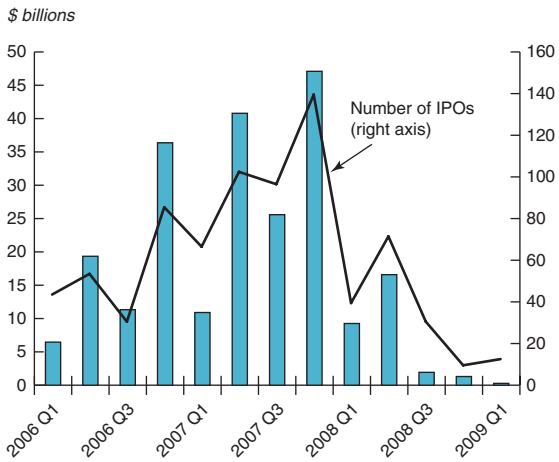
IPO activities are off to the slow start this year as a total of 11 deals by developing countries raised only $300 million in the first quarter of 2009, the lowest quarterly volume since the third quarter of 2001. This compares with 39 deals in the first quarter of 2008 that raised $9.3 billion. There was no IPO activity at all in Latin America and Sub-Saharan Africa during the first quarter of 2009. Most of the quarterly volume occurred in East Asia, where nine deals were made.

Figure 2.5 Gross equity issuance by developing countries, 2006–08



Source: World Bank staff estimates.

Figure 2.6 IPO activities in developing countries, 2006–08



Source: World Bank staff estimates.

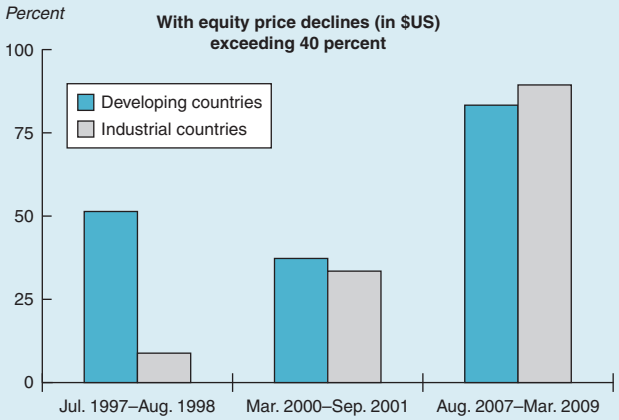
Box 2.1 The impact of the current financial crisis has been much deeper and broader than previous crises

Financial crises in developing countries over the past 50 years fell most heavily on a limited number of countries that had built up significant weaknesses. Other countries also were affected, owing to trade ties with the most-affected countries or the presence of similar weaknesses, which led investors to anticipate similar crises, and to the tendency of investors to withdraw from high-risk assets in times of economic difficulties. Nevertheless, in previous crises many developing countries were able to maintain their growth rates and escape significant financial disruptions. Although the full impact of the current financial crisis on growth is still unfolding, virtually all developing and high-income countries have suffered a deterioration in equity prices and, in the case of developing countries, sovereign bond spreads. The broad scope of the crisis greatly complicates prospects for recovery.

Developing countries' equity prices illustrate the broad reach of the present crisis in comparison to past episodes. Two in three developing countries have experienced equity-price declines of more than 40 percent in local currency, and three in four in U.S. dollars, since the peak reached in October 2007. During the Asian and Russian crises (July 1997 to August 1998), the proportion was just one in two (in U.S. dollars) (see figure on the right).

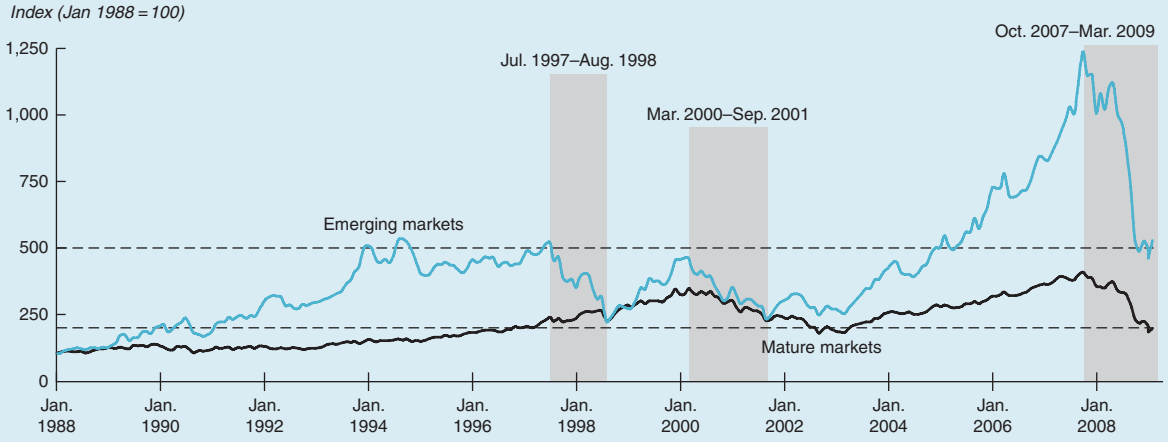
The average decline in developing countries' equity prices (in U.S. dollars) also has been more pronounced than in previous crises (figure below). This time around, the composite index for emerging markets (MSCI equity index) has fallen by almost 80 percent from the peak reached in October 2007, much greater than the 57 percent fall during the Asian and Russian crises.

Countries with declines in equity prices during three crises



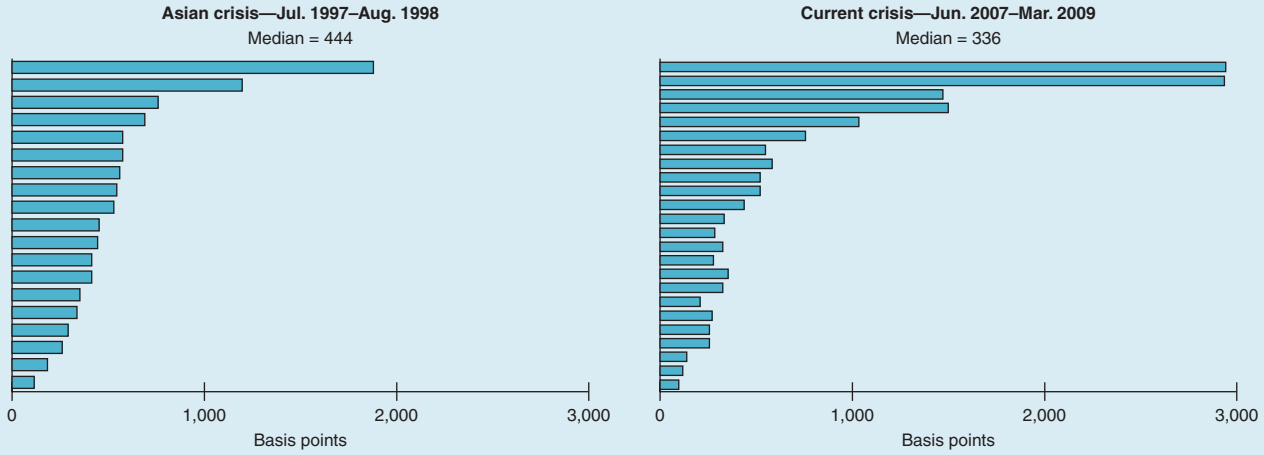
Source: World Bank staff calculations based on equity price data from MSCI Barra and nominal exchange rates from Datastream.

International equity prices, January 1998–January 2009
U.S. dollars



Source: JP Morgan.

Changes in emerging market bond spreads during two major economic crises

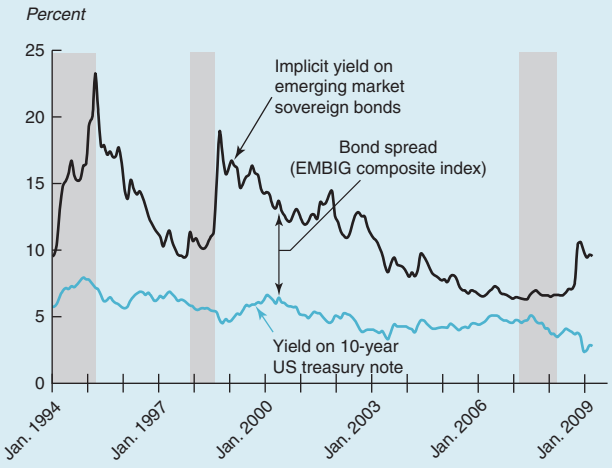


Source: JP Morgan.

More developing countries also have experienced a substantial widening of secondary-market spreads in this crisis than in previous episodes. For example, while the median rise in developing countries' secondary-market spreads[a] since mid-2007 has been 336 basis points, spreads have widened by more than 1,000 basis points in five countries (Argentina, Ecuador, Kazakhstan, Pakistan, and Ukraine). During the Asian and Russian crisis, the median increase was higher (444 basis points), but only two countries (the Russian Federation and República Bolivariana de Venezuela) experienced an increase of more than 1,000 basis points (figure above).

Note that during the current crisis, with significant monetary easing by major central banks, the decline in benchmark interest rates (2.6 percentage points from mid-2007 to end-2008 for 10-year U.S. treasury notes) has moderated the impact on borrowing costs: the yield on emerging market sovereign bonds tied to 10-year U.S. treasuries rose by only 330 basis points. The benchmark interest rate also declined during the Asian and Russian crisis but to a lesser extent (140 basis points between September 1997 and September 1998). During the Mexican peso crisis (which was triggered by a sharp increase in U.S. interest rates) the yield on emerging market sovereign bonds leaped to a record high of more than 23 percent (figure below).

Emerging market sovereign bond spread and yield, January 1994–March 2009



Source: JP Morgan.

a. In 2009, countries with secondary-market spread information include Argentina, Brazil, Bulgaria, Chile, China, Colombia, Ecuador, the Arab Republic of Egypt, Indonesia, Jamaica, Kazakhstan, Lebanon, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Russian Federation, South Africa, Turkey, Ukraine, and Vietnam.

Developing countries' access to international bond markets suffered as well

International bond issuance by developing countries contracted as the crisis unfolded. The reassessment of credit risks and increased risk aversion on the part of international investors led to a surge in bond spreads worldwide. The high-yield spreads in industrial countries widened by more-than 1,000 basis points between mid-September and early-December of 2008. Emerging market spreads were less affected than high-yield corporate borrowers in mature markets, widening by only 385 basis points over the same period. Nevertheless, spreads on developing countries' sovereign bonds reached a seven-year high of 874 basis points in late October, comparable to levels reached at the height of the Russian crisis a decade ago (figure 2.7).

In the last quarter of 2008, spreads on higher-risk bonds rose more than those on lower-risk bonds, reflecting the increased risk aversion among investors. The average spread in the B-rated category widened by 728 basis points, while spreads on bonds rated investment grade widened by an average of just 310 basis points (figure 2.8). The difference reflects both tiering within the corporate market and higher increases in spreads on corporate versus sovereign bonds.

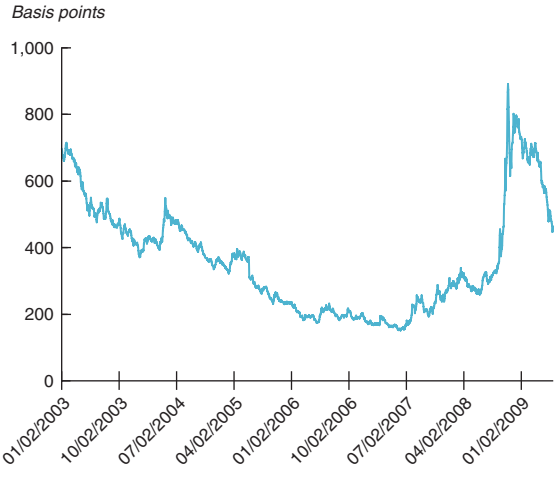
So far in 2009, the spreads for emerging market debt tightened by 260 basis points from the end of last year, closing at 464 basis points in late May. The tightening in spreads occurred across the entire spectrum of credit risk, reflecting a slight increase in investors' appetite for riskier assets.

Credit quality declined as bond spreads widened, with 17 downgrades of emerging market sovereign bonds in the fourth quarter of 2008—and no upgrades (figure 2.9). The deterioration in credit ratings was largely concentrated in Latin America and emerging Europe, with recent downgrades registered in the Dominican Republic, Ecuador, Kazakhstan, Romania, the Russian Federation, and República Bolivariana de Venezuela. So far in 2009, another 7 credit downgrades have occurred: in Jamaica, Latvia, Lithuania, Mongolia, Russia, Thailand, and Ukraine.

The escalation of the global crisis increased investors' fears that developing countries would default on their debt. In times of distress, when a country loses access to international capital markets, the prices of sovereign credit default swaps (CDSs)—a form of insurance protection against debt default—are often considered a leading indicator of the perceived risk of government debt. Traders use them to speculate on changes in sovereign credit quality. For example, in October 2008, sovereign CDS spreads in emerging market economies widened sharply, particularly in Argentina, South Africa, Turkey, and Ukraine (figure 2.10). Some of these countries were considered risky because of their need for substantial external financing (see chapter 3 for further discussion). In Argentina, however, five-year CDS spreads skyrocketed to more than 4,000 basis points (representing a cost of more than $4 million to insure $10 million of government debt over five years) after the government carried out a de facto nationalization of the country's private pension fund system. CDS spreads on Ukraine also spiked to 2,849 basis points in October, as the country sought and received $16.5 billion in emergency loans from the International Monetary Fund (IMF). Some emerging market countries that are considered relatively stable, such as Brazil and China, were also hit hard, signifying growing aversion to the perceived riskiness of emerging market countries as a class in the worsening global economic climate.

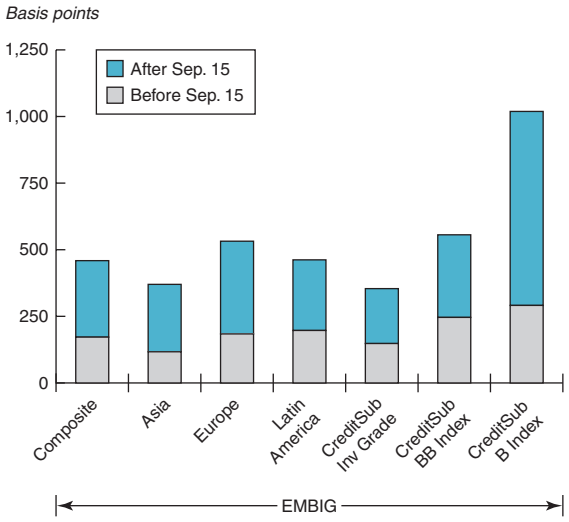
The financial crisis had a marked impact on bond issuance worldwide. The decline in global bond issuance began in the second half of 2007, and the volumes remained low throughout 2008.

Figure 2.7 Emerging market bond spreads widened sharply at year's end, 2003–09



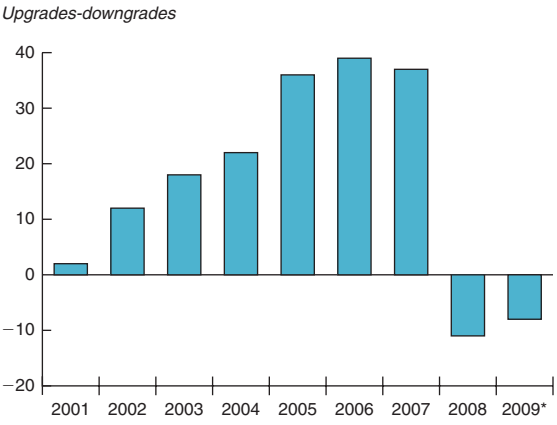
Source: Bloomberg.

Figure 2.8 Bond spreads widened in all asset classes in 2008



Sources: JP Morgan; Bloomberg.

Figure 2.9 Deteriorating credit quality for emerging markets in 2008

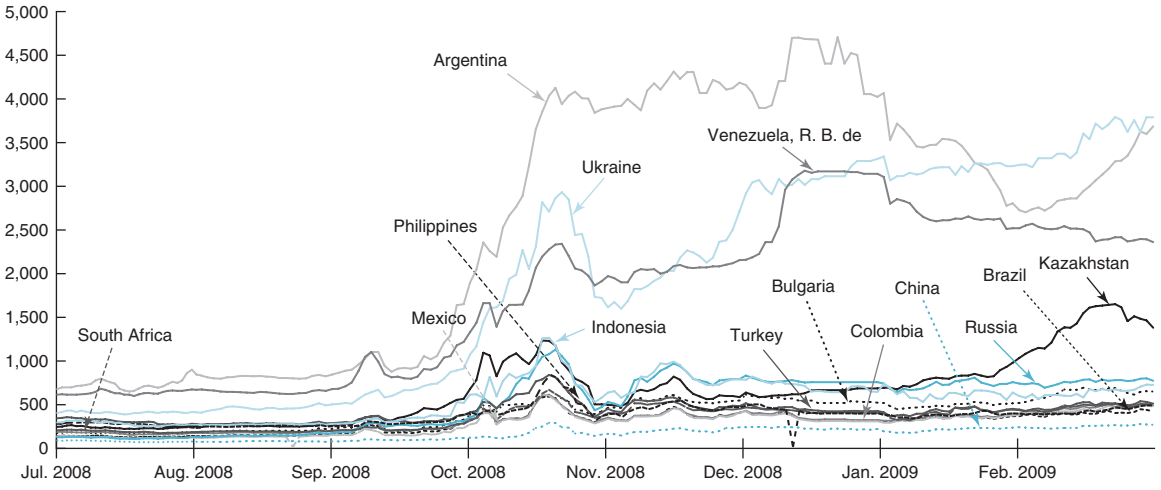


Sources: JP Morgan; Bloomberg.
*As of April 2009.

But the impact became definite in developing countries after September. Not one developing-country firm or sovereign issued a bond on international markets in October or November (figure 2.11), although December saw a $300 *million* issue by a Russian corporation and a $2 billion issue by the Mexican government.

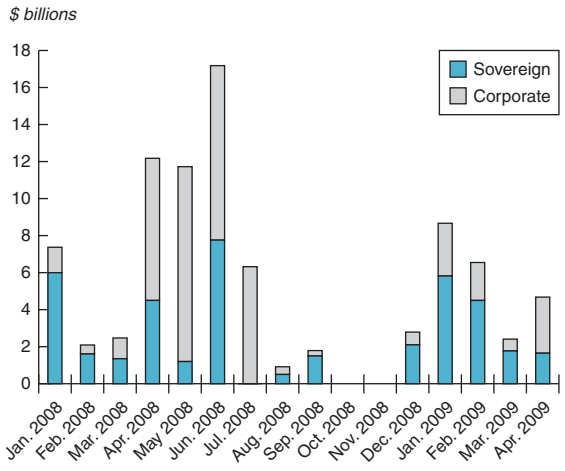
Issuance was surprisingly strong in the first two months of 2009. Sovereign borrowers have continued to tap the market, taking advantage of improving market conditions. In fact, sovereigns have dominated borrowing activity so far in 2009, accounting for $12 billion of the almost $17 billion in total borrowing (table 2.3). The sovereign bond market in 2009 remained open not only for creditworthy borrowers, such as Brazil and

Figure 2.10 Sovereign five-year credit default swap spreads, July 2008–February 2009



Sources: JP Morgan; Bloomberg.

Figure 2.11 Bond issuance by developing-country governments and firms, January–February 2009



Source: Dealogic Loan Analytics.

Poland, but also for B+ issuers, such as Turkey and the Philippines. Poland also made a successful return to the market at the end of January, with a €1 billion Eurobond sale, even as three emerging Europe sovereigns suffered ratings downgrades, with a subsequent widening of spreads. In contrast, corporate borrowers, most in Latin America, raised just $5 billion over the same period. Corporate issuance has been limited to high-grade borrowers, suggesting that the market remains closed to high-risk corporate borrowers. As a result, the share of sovereign in bond financing surged to 70 percent compared with the average of 35 percent over the past few years (2005–08).

In April, bond issuance by developing countries was limited. Only Colombia and Indonesia came to the market. Indonesia raised $650 *million* from sales of its five-year global Islamic bond, part of the country's budget financing plan for 2009. The issue marked the first U.S.-dollar-denominated Islamic bond this year. The reception was strong, with more than $4 billion in orders. The Colombian government also tapped the international debt market for $1 billion by reopening its 10-year, dollar-denominated bond. The government may have been pre-financing for 2010. Colombia sold the bond initially in January to cover this year's external funding needs, part of an early rush in bond issuance from emerging markets that required issuers to offer an enhanced risk premium to entice investors. On the corporate side, much of the 2.3 billion issuance was by the Russian gas company, Gazprom.

The collapse of the stand-alone investment banks seems to have had little impact on the developing-country bond market, as other international financial institutions filled the gap, and the concentration of emerging market bond arrangers increased only slightly after the collapse (table 2.4).[2] Since the last quarter of 2008, HSBC has almost tripled its market share to 14.4 percent from 5 percent during the previous seven quarters. With its acquisition of Lehman Brothers' U.S. investment banking business at the end of the third quarter of last year, Barclay Capital also gained a larger share in the market.

The reversal of short-term debt was significant . . .

Flows of short-term debt (debt with an original maturity of one year or less) to developing countries were strong during the first half of 2008.

Table 2.3 Emerging market bond issuance in 2009*

Country	Announced	Maturity	Size ($ billion)	Yield to maturity (%)	Issue price
Brazil	6-Jan-2009	15-Jan-2019	1.0	6.223	98.135
Colombia	6-Jan-2009	18-Mar-2019	1.0	7.634	99.136
Turkey	7-Jan-2009	14-Jul-2017	1.0	7.629	100.000
Philippines	7-Jan-2009	17-Jul-2019	1.5	8.668	99.158
Poland	22-Jan-2009	3-Feb-2014	1.3	5.940	99.725
Mexico	11-Feb-2009	17-Feb-2014	1.5	6.102	99.424
Indonesia	26-Feb-2009	4-Mar-2019	2.0	12.097	99.276
Lebanon	13-Mar-2009	19-Mar-2012	0.4	7.500	100.000
Panama	18-Mar-2009	15-Mar-2015	0.3	7.162	101.000
Peru	25-Mar-2009	30-Mar-2019	1.0	7.326	99.500
Colombia	14-Apr-2009	18-Mar-2019	1.0	7.509	99.990
Indonesia	16-Apr-2009	23-Apr-2014	0.7	8.994	100.000

*As of April 28th.
Source: Dealogic Loan Analytics.

Table 2.4 Major book-runners for emerging market bonds, 2007Q1–2009Q1

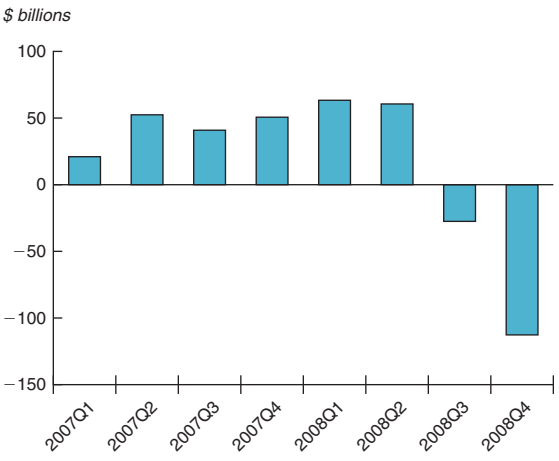
2007Q1–2008Q3				2008Q4–2009Q1			
Rank	Bookrunner	Deal value ($ billion)	% share	Rank	Bookrunner	Deal value ($ billion)	% share
1	Deutsche Bank	25	12.7	1	HSBC	25	14.4
2	Citi	23	11.8	2	Goldman Sachs	23	9.8
3	Credit Suisse	19	9.4	3	Barclays Capital	19	9.7
4	ABN AMRO	17	8.5	4	Citi	17	8.3
5	UBS	16	8.1	5	UBS	16	8.1
6	JP Morgan	14	7.3	6	Morgan Stanley	14	8.1
7	Barclays Capital	12	6.0	7	Credit Suisse	12	7.0
8	HSBC	10	5.0	8	JP Morgan	10	6.9
9	Bank of America/Merrill Lynch	9	4.4	9	Deutsche Bank	9	4.9
10	Morgan Stanley	8	4.1	10	VTB Capital	8	4.1
			77.3				81.2

Source: Dealogic Loan Analytics.

However, flows became negative in the third quarter of the year and later registered a sharper drop ($113 billion) in the last quarter of the year following the deterioration of the global financial markets (figure 2.12).[3] For the year, the stock of short-term debt in developing countries declined by $16 billion to $831 billion, well below the peak reached in 2007 (see further discussion in chapter 3).

Short-term debt flows have exhibited higher volatility than medium- and long-term flows, particularly during crises. During the Asian crisis, for example, short-term debt fell more sharply in developing countries than did other flows. The reason may be that in times of crisis lenders tend to shift their portfolios to more creditworthy borrowers, which are in a better position to serve longer-maturity loans.

Figure 2.12 Short-term debt flows to developing countries, 2007Q1–2008Q4



Source: World Bank staff estimates based on Bank for International Settlements data.

Note: Flows are calculated as the change in the stock between periods. These numbers might vary from the data reported by the World Bank due to difference in sources for some countries. World Bank Debt Reporting System (DRS) data are obtained, whenever available, directly from country authorities.

Access to trade finance has become more difficult

Many countries borrowed short-term to finance their growing trade as firms contracted short-term loans to finance imports and prepay for exports. In China, for example, trade finance in 2007 amounted to $133.1 billion, accounting for more than half of the country's short-term debt. Similarly, all of India's $45 billion in short-term debt is trade-related (table 2.5).

Table 2.5 Short-term debt stock in developing countries by sector, 2008Q3

		Corporate	
Country	Banks	Total	Trade credit
Russia	63.6	38.4	—
Brazil	46.4	1.1	0.3
Turkey	26.2	28.1	26.0
Poland	28.5	21.2	17.3
Mexico	4.5	21.3	7.6
Indonesia	7.3	10.8	1.6
South Africa	21.3	5.5	3.4
Thailand	4.4	16.2	11.7
Chile	3.2	15.4	12.3
India	—	46.8	46.3
Malaysia	36.4	2.2	—
Total	**226.1**	**202.7**	**126.7**
Memo: China	133	69	—

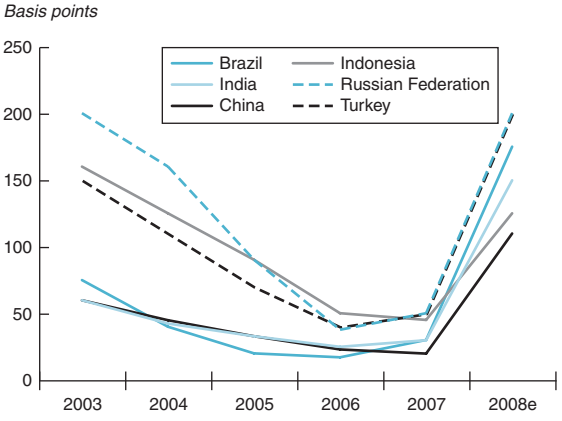
Sources: World Bank Quarterly External Debt Statistics (QEDS) (except for China); Central Bank of China (for China).
Note: — = Not available.

As a result, the sharp drop in short-term debt has also strained trade finance. Many developing countries worried that limited access to trade credit would affect global trade. In fact, in early October 2008, the Brazilian government announced that because its exporters were having trouble obtaining trade credit it would use its reserves to maintain the flow of credit and keep trade moving. Monthly balance-of-payments data for Brazil indicate that net flows of trade credit provided by nonresidents turned negative in October 2008 and remained so into December (BIS 2009). Amid concerns about the cost and continued availability of trade finance, the World Trade Organization (WTO) held an experts meeting on November 12, 2008. Several measures were floated, including an increase in trade finance.

In part, these changes reflected the higher capital requirements that banks faced as the creditworthiness of recipients of trade credit was downgraded. Indeed, capital requirements for trade finance tripled under the Basel II Accords over Basel I. In 2008 as the financial crisis intensified, the spreads on trade finance credit increased by a factor of three to five in major emerging markets, including China, Brazil, India, Indonesia, Mexico, and Turkey (figure 2.13). For example, the spread (over the 6-month LIBOR) for Turkey jumped to 200 basis points in November from 70 basis points in the third quarter, while Brazil's spread more than doubled in 2008. Similarly, spreads for several Sub-Saharan countries jumped from 100 basis points to 400 basis points, and most banks moved away from funding open-account facilities to more traditional forms of cash-backed or collateralized letters of credit.

Several countries entered into bilateral agreements to ease the strains on access to foreign currencies, including trade credit. In December 2008, the U.S. Federal Reserve entered into currency swap agreements with some of its counterparts, including Brazil and Mexico. Each partner in the agreement received a swap line of $30 billion. In addition, the United States and China—acting through their respective import-export banks—created a bilateral trade facility of $20 billion. In March 2009, China entered into similar agreements with its major trading partners (Argentina, Belarus, the Republic of Korea, Malaysia, Indonesia, and the Philippines) by providing swap facilities in its currency.

Figure 2.13 Spreads on trade finance credit spiked in 2008



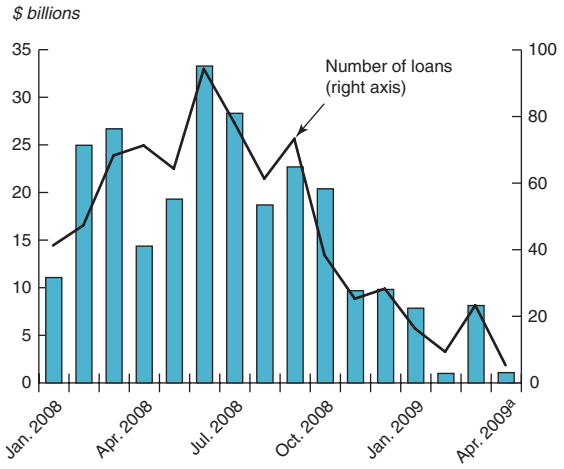
Source: World Bank staff estimates based on information from various international bank documents.
Note: e = estimate.

The decline in syndicated bank lending was more gradual than that of other debt flows in 2008 . . .

Several developing countries continued to access bank credit following the collapse of Lehman Brothers. Syndicated bank lending commitments (the only segment of international bank lending for which high-frequency data are available) declined by $80 billion in 2008, a drop of 25 percent, from record-high levels in 2007.

The drop in syndicated bank lending was modest compared with the 75 percent decline in bond financing and 50 percent decline in portfolio equity issuance during the same period. Even in the fourth quarter of 2008, syndicated loan commitments totaled $39.8 billion, down just $13 billion from the same period in 2007—but the number of transactions was halved. The bulk of the deals in the fourth quarter involved large long-term financing for energy projects. During October and November, Chinese banks financed energy projects in Kazakhstan ($7.5 billion) and Uzbekistan ($3.5 billion). Although most of the deals were guaranteed by the creditor's government, almost 90 percent of the loans went to the private sector. In contrast to project finance, syndicated loans for refinancing totaled only $2.7 billion, compared with an average of $10.4 billion for the first three quarters of the year.

Figure 2.14 Syndicated bank lending to developing countries, January 2008–April 2009



Source: Dealogic Loan Analytics.
a. April 2009 data is until April 26, 2009.

. . . but deteriorated significantly in the first quarter of 2009

But in the first quarter of 2009, syndicated bank lending to developing countries fell sharply (figure 2.14). Only 46 transactions totaling a mere $17 billion took place in the first quarter of the year, the lowest since 2003. While syndicated bank lending exhibits high volatility when viewed through high-frequency data (monthly or quarterly), the first quarter of 2009 marks a sharp decline from the same periods in 2007 ($81 billion, 171 transactions) and 2008 ($63 billion, 156 transactions). In January, three large syndicated loans valued at $8 billion were made to private companies in Mexico and Russia.[4] After an unprecedentedly subdued February, the Brazilian energy company Santo Antonio Energia managed in March to arrange a 25-year loan valued at $3.5 billion in local currency for project financing. As of the end of April, only five deals valued at $1.1 billion had been made.

There was an increase in bank-lending from other sources . . .

In contrast to syndicated bank lending, the first months of 2009 were an outstanding period in terms of (bilateral) bank lending from other sources to developing countries—although the picture is skewed by the presence of a few very large loans. In February, five large loans valued at $32 billion were made, a volume comparable to that of all such loans made in 2007 ($32.4 billion) and 2008 ($36 billion) (table 2.6). The two loans that the China Development Bank granted to Russian oil companies are the largest bilateral bank loans ever made in the developing world. The record-setters are 20-year pre-export loans with special clauses governing oil delivery for the duration of the loan. In most of the bilateral loans made so far in 2009, the lender was a quasi-governmental entity.

Even FDI inflows—the most stable international capital flows—showed signs of slowing in the last quarter of 2008

FDI inflows to developing countries tend to be more stable than other kinds of capital flows because FDI investors—mostly multinational companies—take a longer-term view than most portfolio investors and lenders. Nevertheless, the global financial crisis has begun to cut into FDI inflows to developing countries. In the fourth quarter of 2008, flows to 25 middle-income countries declined to their lowest level since the fourth quarter of 2006 (figure 2.15).

In some countries, multinationals repatriated larger shares of their income from direct investment

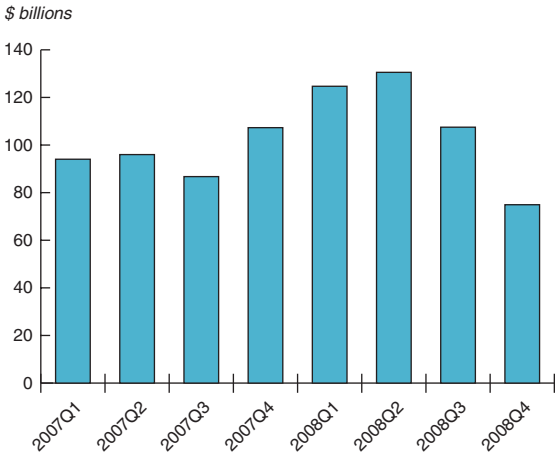
During the first three quarters of 2008, multinational corporations repatriated growing shares of income from some large countries, leaving less

Table 2.6 Major bilateral bank loans in February 2009

Borrower (Country)	Lender (Country)	Sector	Value ($ billion)
Rosneft (Russia)	China Development Bank (China)	Oil & Gas	$15
Transneft (Russia)	China Development Bank (China)	Oil & Gas	$10
SamrukKazyna (Kazakhstan)	Vnesheconombank (Russia)	Finance	$3
Prominvestbank (Ukraine)	Vnesheconombank (Russia)	Finance	$1

Source: Dealogic Loan Analytics.

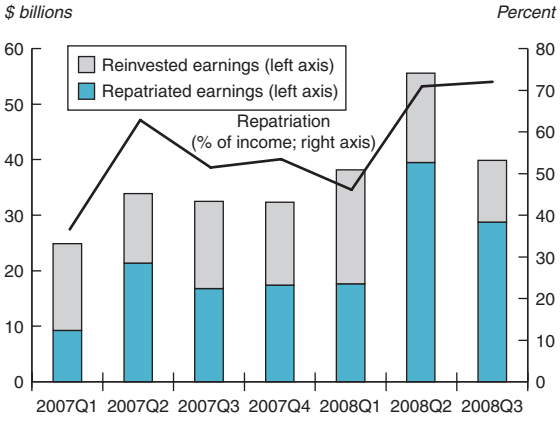
Figure 2.15 Quarterly FDI inflows to selected developing countries dipped in 2008



Source: World Bank staff estimates based on data from central banks of selected developing countries.

Note: Countries include Brazil, Bulgaria, Chile, China, Croatia, Egypt, India, Indonesia, Jordan, Kazakhstan, Malaysia, Mexico, Pakistan, the Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, and R. B. de Venezuela.

Figure 2.16 Distribution of income from FDI in selected economies, 2007Q1–2008Q3



Source: World Bank staff estimates.

Note: Countries include Bulgaria, Chile, Colombia, India, Poland, Russian Federation, and Thailand.

for reinvestment (figure 2.16). Repatriation as a percentage of income increased to as much as 70 percent during the second and third quarters of the year, compared with an average of 50 percent in previous quarters. Nevertheless, because of the significant rise in FDI income in 2008, the value of earnings reinvested in the same economies still increased by $5 billion (to $47 billion) during the first three quarters of the year compared with the same period a year earlier.

Several factors (such as stable payment of dividends, tax rates, and other regulations) affect corporate decisions to reinvest or repatriate equity earnings (World Bank 2007). During the previous crises centered in host economies, multinational companies repatriated earnings in excess of current income or called in intra-company loans to reduce their exposure to a country quickly without selling assets (box 2.2). Following the Asian crisis, for example, U.S. multinationals repatriated *all* their FDI income from the region (World Bank 2004). Over the last 10 years, by contrast, multinationals have reinvested 30 to 40 percent of their income from foreign operations back into the host country. Reinvested earnings and intra-company loans made up 20 percent and 15 percent of FDI flows to developing countries, respectively.

Some troubled financial institutions have begun to repatriate assets

Some financial institutions, positioning themselves to weather the crisis, have been raising capital by selling assets (mostly in their noncore business) in developed and developing countries. The sales lead to direct disinvestments from developing countries when domestic companies buy the assets. For example, in 2008, two troubled institutions, American International Group Inc (AIG) and Citigroup, sold their shares in Brazil's Unibanco (for almost $1 billion) and in India's Global Services Ltd (for $500 million) to local companies. In December 2008, AIG sold its consumer finance businesses in Argentina, Brazil, Colombia, and Mexico. More recently, it also sold its subsidiaries in Thailand to a local company for $500 million.[5]

In 2008, the value of such sales by developed-country financial firms to local companies in developing countries doubled to $11 billion, well up from $5 billion in 2007 (figure 2.17). Anecdotal evidence indicates that this trend has continued in 2009. While the amount of these sales is small in the aggregate, it may represent a considerable decline in FDI inflow for some of the affected countries.

A sharp drop in cross-border M&A transactions in developing countries signals weak FDI flows in 2009

An early indicator for the projected decline in FDI inflows is the slowdown in cross-border

Box 2.2 The composition of foreign direct investment in times of crisis in the host economies

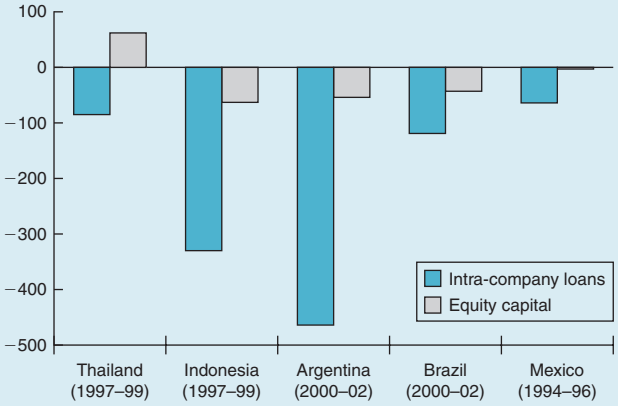
By definition, foreign direct investment (FDI) comprises equity investment, reinvested earnings (earnings not distributed as dividends and earnings of branches not remitted to the direct investor), and intra-company debt transactions (OECD 2008). Intra-company debt transactions include the borrowing and lending of funds, including debt securities and trade credits, between parent and subsidiaries and among subsidiaries.

The resilience of FDI can be traced to its equity component, which reflects the long-term strategic behavior of foreign direct investors. In contrast to the relatively stable equity component, intra-company loans and reinvested earnings are often used as a means to adjust FDI exposure (World Bank 2004). During a crisis in a host country, repaying loans or repatriating earnings is often easier than selling off direct equity. Also, a direct equity holding usually reflects a long-term strategic commitment and may not change immediately following a crisis—although it may change if the crisis is prolonged. This can be seen from the experience of some countries that faced financial crises, where the decline in intra-company loans following the crisis was significantly larger than the decline in the equity component of FDI (figure on the left). In the case of Argentina, for example, intra-company loans fell 464 percent between 2000 and 2002, indicating that subsidiaries paid back their (accumulated) intracompany loans to their parents. At times, the intra-company-loan component of FDI may be subject to the same degree of volatility as international debt flows (World Bank 2004).

Crises can also affect companies' dividend repatriation strategies. Companies usually expect steady dividend flows from their subsidiaries, implying that reinvested earnings fluctuate with the company's income (World Bank 2008). Following a crisis, however, companies may increase their dividend repatriation significantly. For example, after the Asian crisis, in 1999, U.S. companies in affected countries repatriated income in excess of their earnings that year from developing countries. Thus, their reinvested earnings became negative (figure at right). Similarly, in the midst of Argentina's financial crisis in 2002, repatriated earnings outstripped equity earnings by a factor of five, as corporations attempted to evade the introduction of controls on outflows and foreign exchange transactions.

Other factors, such as investment climate, may play a role in multinationals' repatriation strategies. The portion of equity earnings that is repatriated tends to be lower (and thus the share of reinvested earnings higher) in countries with better investment climates. Sudden shifts in political risk and the imposition (or threat) of capital controls can lead to abrupt changes in repatriated earnings (World Bank 2004; Lehmann and Mody 2004; Desai, Foley, and Hines 2002).

Intra-company loans versus equity components of FDI during financial crisis



Distribution of US earnings in developing countries

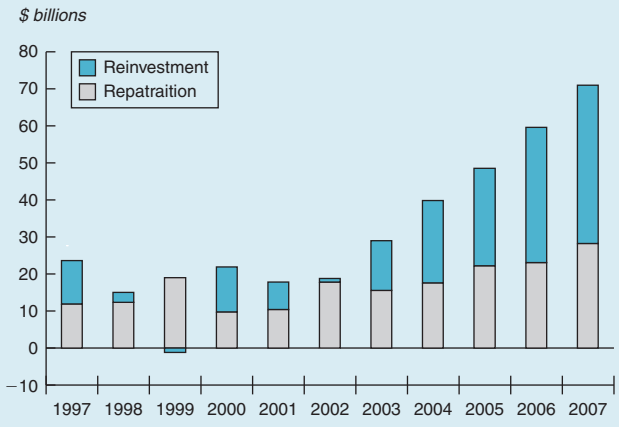
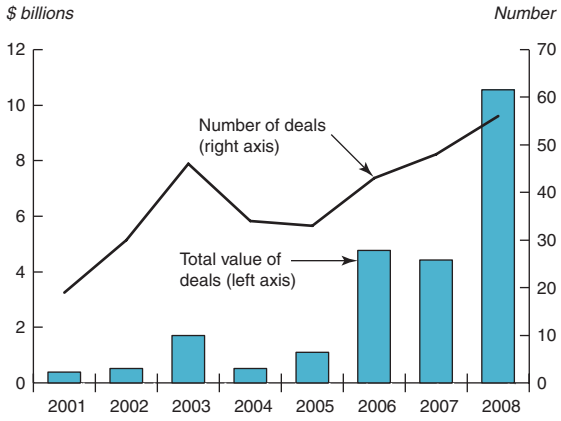


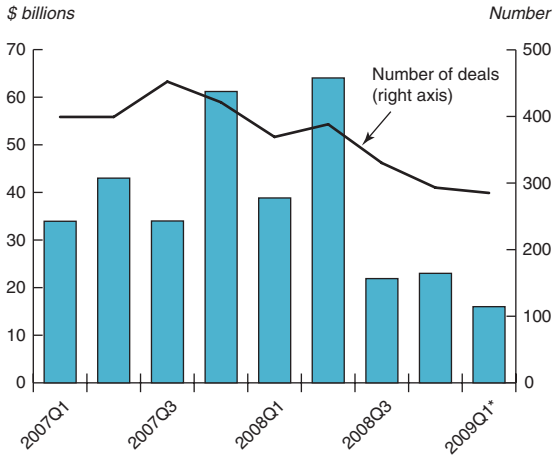
Figure 2.17 Repatriation of assets by financial firms from selected developing countries, 2001–08



Source: Staff estimates are based on the M&A data compiled from Bloomberg.

Note: Only cross-border acquisitions, in which the acquiring firm buys more than 10 percent of the target firm are included. The countries are Argentina, Brazil, Bulgaria, Chile, China, Colombia, Egypt, India, Indonesia, Kazakhstan, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, and Vietnam.

Figure 2.18 Cross-border M&A flows to developing regions, 2007Q1–2009Q1



Source: See figure 2.17.

mergers and acquisitions (M&As) in developing countries. M&A flows have been one of the main drivers of FDI inflows in developing countries in recent years, accounting for some 30 percent of FDI. In the first quarter of 2009, M&A activity declined to $16 billion in inflows, compared with more than $30 billion in the previous two years (figure 2.18). Lower acquisitions by developed-country multinationals—reflecting lower earnings and less financing available for investment—accounted for much of the decline.

Remittance flows began to slow down in 2008

The value of the remittances that migrant workers send home to their families in developing countries increased to $305 billion (1.9 percent of GDP) in 2008 from $281 billion (2.1 percent of GDP) in 2007 (table 2.7). However, the pace of remittances slowed sharply beginning in the third quarter of the year as the economic crisis gathered strength in the countries where migrants work. Recorded flows to Latin America and the Caribbean have already stagnated since 2007, as the U.S. recession, especially in the construction sector, has reduced the employment and income of Latin American (especially Mexican) migrants. It should be noted, however, that tighter enforcement of immigration rules in the United States may well have pushed more remittances into hand-carried and other unrecorded channels.

Remittances continued to grow in 2008 in other regions, although the pace of growth began to slow in the second half of the year. Growth was particularly impressive for countries in South and East Asia, which are relatively less dependent on remittances from the United States and more dependent on the countries of the Gulf Cooperation Council (GCC). High oil prices (until mid-2008) and robust economic growth in the oil-exporting countries of the Middle East contributed to strong demand for migrant labor from South Asia. Bangladesh and Nepal have reported a surge—year-on-year growth of more than 40 percent through September 2008—in remittance inflows, although the pace of growth moderated in the fourth quarter of 2008 in response to the sharp decline in the price of crude oil—and as the crisis spread to the GCC countries. Officially recorded remittance flows to South Asia are estimated to have swelled by 31 percent in 2007 and by 27 percent in 2008 to an estimated $66 billion in 2008. But remittances to Sub-Saharan Africa appear to have

Table 2.7 Remittance flows to developing countries, 2002–08 (US$ billion)

	2002	2003	2004	2005	2006	2007	2008e
All developing countries	115.5	144.3	164.4	194.8	228.7	280.8	305.4
as % of GDP	*1.9*	*2.1*	*2.0*	*2.0*	*2.0*	*2.1*	*1.9*
By region							
East Asia and Pacific	29.5	35.4	39.2	46.7	53.0	65.3	69.6
Europe and Central Asia	13.7	15.5	22.2	31.2	38.3	50.4	53.1
Latin America and the Caribbean	27.9	36.6	43.3	50.1	59.2	63.1	63.3
Middle East and North Africa	15.2	20.4	23.0	24.3	25.7	31.3	33.7
South Asia	24.1	30.4	28.7	33.1	39.6	52.1	66.0
Sub-Saharan Africa	5.0	6.0	8.0	9.4	12.9	18.6	19.8

Source: World Bank staff estimates. Remittances are defined as the sum of workers' remittances, compensation of employees, and migrant transfers – see www.worldbank.org/prospects/migrationandremittances for data definitions and the entire dataset.
Note: e = estimate.

decelerated sharply from a high growth rate of 44 percent the previous year, in part because of a slackening in flows to Nigeria following the 70 percent increase recorded in 2007.[6]

Remittance flows may fall with the global financial crisis

In the past, remittances have been stable, or even countercyclical, during economic downturns in the recipient economy. The present crisis, however, is affecting the countries from which remittances originate. Future flows are bound to be affected by the simultaneous economic recession in the high-income countries—including the United States and Western Europe, which account for almost two-thirds of the remittances that migrants send home to developing countries—and lower growth in the developing countries that account for about 10–30 percent of remittance flows to other developing countries.

Remittance flows from the countries of the GCC may fall slightly, as the recent decline in oil prices and the spread of the crisis to the financial sector of these countries—especially Dubai in the United Arab Emirates (UAE)—depresses the construction activities that employ thousands of migrants from developing countries in South Asia and the Middle East and North Africa. However, it is important to distinguish between the impact of the crisis on Dubai, which is more dependent on trade, finance, and real estate than are other parts of the UAE and other GCC countries, which depend primarily on oil revenues. In recent years, remittance outflows from Saudi Arabia have been uncorrelated with oil prices. Like Saudi Arabia, many GCC countries are following a long-term strategy of infrastructure development, drawing on large reserves accumulated over the years. It is unlikely that such countries will delay infrastructure investments and lay off migrant workers in large numbers. Remittance flows from the GCC countries are forecasted to decline modestly by 3 percent in 2009 (Ratha and Mohapatra 2009).

Increased uncertainty about exchange rates during a period of unusually high volatility may further depress remittance flows. In the last quarter of 2008 and early 2009, the U.S. dollar gained strength against the currencies of many major migrant destinations, such as the Euro Area, the United Kingdom, Canada, Australia, and New Zealand. The appreciation of the U.S. dollar has depressed the value of remittances from these countries, at least in U.S. dollar terms. A similar effect was at work in Russia, a major source of remittances to countries such as Tajikistan, as the ruble depreciated against the U.S. dollar by more than 35 percent between August 2008 and March 2009. A similar decline in outward remittances in dollar terms is also expected in other important South-South remittance corridors, such as India to Nepal, South Africa to the countries of the Southern African Development Community (SADC), and Malaysia to Indonesia.

Under the base-case scenario, in which the number of migrants remains constant at its 2008 levels, remittance flows to developing countries are expected to decline by 5 percent to $290 billion in 2009 and to recover to $299 billion in 2010 (table 2.8). In the Middle East and North Africa, remittance flows for 2009 are expected to decline modestly by 1.4 percent from their 2008 levels in dollar terms. The expected decline will be more than 4 percentage points in East Asia and the Pacific, Latin

Table 2.8 Outlook for remittance flows to developing countries, 2009–10

		Base case		Low case	
	2008e	2009f	2010f	2009f	2010f
All developing countries	305	290	299	280	280
By region:					
East Asia and Pacific	70	67	68	64	64
Europe and Central Asia	53	48	50	46	47
Latin America and the Caribbean	63	60	62	58	58
Middle East and North Africa	34	33	34	32	32
South Asia	66	63	65	61	62
Sub-Saharan Africa	20	19	20	18	18

Source: Ratha and Mohapatra 2009.
Note: e = estimate; f = forecast.

America and the Caribbean, South Asia, and Sub-Saharan Africa. Flows to emerging Europe and Central Asia, on the other hand, are expected to decline in U.S. dollar terms by 10 percentage points.

Faced with weakening job markets, many destination countries are tightening immigration access. The impact of the crisis on remittance flows may be accentuated if new migration slows significantly and if some migrants are forced to return home in response to the crisis. In this low-case scenario, remittances to developing countries would register a sharper decline of 8.2 percent to $280 billion in 2009, and remain stagnant in 2010. In 2009, if the low-case scenario held, all developing regions would suffer a larger drop in flows, with the Europe and Central Asia region experiencing the largest decline. An additional risk not reflected in the low case reported in table 2.8 may arise from unexpected movements in exchange rates. For example, a depreciation of the euro from its current level may result in an even larger decline in remittance flows expressed in U.S. dollar terms.

The situation is particularly serious for countries in which remittances are a large share of GDP

Although the aggregate decline in worldwide remittance flows as a result of the crisis is expected to be small, the situation may prove more serious for some small, poor countries where remittances make up a relatively large share of GDP, such as Tajikistan (45 percent), Moldova (38 percent), Tonga (35 percent), Lesotho (29 percent), and Honduras (25 percent). For these and other countries, declines in remittance inflows have been compounded by the strengthening of the U.S. dollar against the currencies of migrant-destination countries such as Russia, which is the main source of remittances for Central Asian countries such as Armenia, Moldova, Kyrgyz Republic, and Tajikistan. Many of the workers from these countries are employed in the oil and gas industry in Russia, sectors already suffering from a precipitous decline in global prices. Compounding that decline, Russia's currency depreciated sharply in the second half of 2008 and into early 2009 (when the ruble fell about 35 percent against the U.S. dollar), significantly reducing the local-currency value of ruble-denominated remittances.

A similar decline in outward remittances in dollar terms is also expected from India to Nepal, South Africa to SADC countries, and Malaysia to Indonesia. This kind of decline need not mean any significant loss of purchasing power for the beneficiaries of remittances, but the falling dollar volume can make it more difficult for governments to meet their external payment obligations. Furthermore, a strengthening dollar also means that goods and services and assets back home are significantly cheaper in dollar terms, which may encourage migrants to send more remittances for investment purposes. This latter effect—a surge in remittances as the local currency depreciates against the U.S. dollar—was evident in the U.S.-Mexico corridor in October 2008, and is believed to be going on currently in South and South-East Asia, and to an extent in Moldova and Tajikistan.

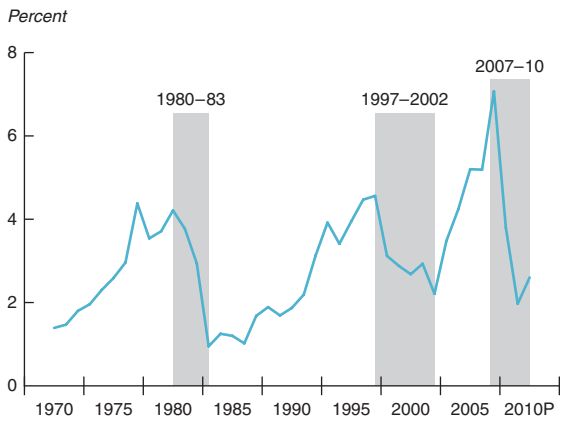
Prospects: The fall in private capital flows will continue in 2009

The present crisis already ranks as one of the most difficult financial and economic episodes in modern history—and it is not yet over. Its full

impact on developing countries, in terms of international financial flows and the real economy (chapter 1), will not become apparent until later in the year. Despite some signs of a turnaround, with outflows from several emerging equity markets appearing to slow, markets have remained highly volatile. Developing-country sovereigns have carried out only a few international bond issuances so far in 2009, while developing-country corporations—which have major refinancing needs—are likely to continue to be shut out from international bond financing. Bank lending has fallen considerably through the first quarter of 2009, and risks remain in the sector. Even more worrisome is the increasing evidence of a major plunge in FDI inflows to developing countries.

Taken together, the signs point to a continued drop in private capital flows to developing countries in 2009. Net private debt and equity flows, which comprise net debt flows (incoming disbursements less principal repayments) and net equity flows (FDI and portfolio inflows less outflows), are projected to decline from a record high of 7 percent of GDP in 2007 to just 2.6 percent in 2010 (figure 2.19), exceeding the peak-to-trough decline during the Latin American debt crisis in the early 1980s (3.3 percentage points) and the Asian and Russian crises of the late 1990s (2.4 percentage points). As in previous crises, the decline is expected to affect all categories of debt—bonds, bank loans, and short-term debt.

Figure 2.19 Net private capital flows as a share of GDP in developing countries, 1970–2010



Source: World Bank Debt Reporting System and staff estimates.
Note: Estimate for 2008; projections for 2009–10.

FDI inflows are expected to fall for the first time in a decade

In 2009, FDI in developing countries is projected to fall by 30 percent to $385 billion—a decline of about 1 percentage point of GDP. (Annex 2A describes the forecasting model.) The fall is less sharp than that projected for debt flows (more than 4 percentage points). But, if realized, the expected decline in FDI will mark the first fall of more than 10 percent since 1986. The relative resilience of FDI stems from the longer view of its investors and the large fixed costs that multinational firms incur to develop an integrated network to support FDI operations. Rapid disinvestments of large, fixed, illiquid assets are considerably more difficult than the pulling of loans or the sale of stock holdings. In previous crises these factors were enough to sustain direct investments in the face of economic downturns (Albuquerque, Loayza, and Servén 2005; Lipsey 2001; World Bank 1999).[7]

Slower global growth in 2008 squeezed the profitability of almost all multinationals, while tight credit conditions and weak global demand are limiting the ability and willingness of multinationals to expand. FDI flows may also be affected by the drop in commodity prices, as oil and mineral investments played an important role in the surge in FDI to developing countries after 2003. Several energy companies have already announced cutbacks in their investment plans, and some energy deals have been postponed or canceled.[8] Global investors also have concerns over policies of nationalization and state control in some countries, as well as signs of protectionism. Still, energy-oriented FDI will not cease completely for several reasons. Chief among them are that many companies with expertise in energy exploration still have a strong cash position, the prices of developing-country energy assets are falling sharply, and some state-owned firms will continue to invest to promote energy security.

A sharp decline in private debt flows is expected in 2009 . . .

Private debt flows to developing countries are projected to fall in 2009 to –0.3 percent of GDP, with much of the movement in short-term debt. Although medium- and long-term debt is not projected to slide into negative territory, it is expected to be limited in 2009. The fact that lenders tend to lengthen the maturity structure of their portfolio

during crises is likely attributable to a compositional effect: lenders shift their portfolios to more creditworthy borrowers, who are in a better position to service longer-maturity loans.

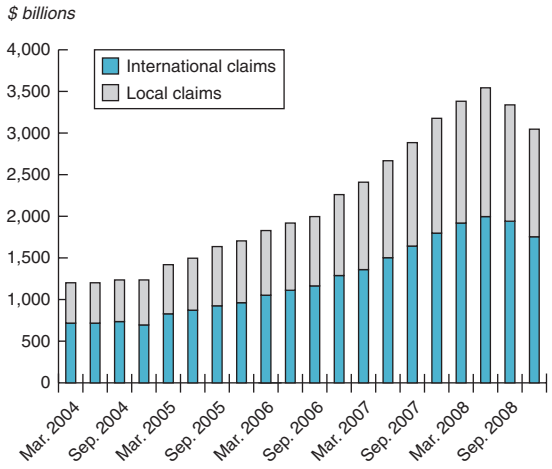
In the current crisis, three factors seem to be affecting the supply of credit from international banks to developing countries. Those factors are (a) mounting pressure on major banks' capital positions; (b) liquidity problems in the global interbank market; and (c) a tightening of credit standards in the face of the global economic recession. The liquidity factor was in full force in 2007, as heightened counterparty risk and the seizing up of securitized funding sources made banks hesitant to lend to each other (World Bank 2008). The impact of this factor seems have eased temporarily, as banks continued to lend both domestically and internally through the first half of 2008. But with the deepening of the global economic recession in the second half of 2008 the credit supply behaviors of international banks changed markedly vis-à-vis both home-country and developing-country borrowers.

Total foreign claims on developing countries held by banks reporting to the BIS are a key measure of international bank activity in developing countries. The amount of such claims declined to $3 trillion in the second half of 2008, a drop of some $500 billion. The decline involved both banks' cross-border lending as well as their lending through local affiliates in developing countries (figure 2.20). Econometric analysis (annex 2B) reveals that although frictions in the interbank money market remain a problem, monetary easing and liquidity injections by major central banks helped to offset the effects of the liquidity squeeze on emerging-market borrowers in the early phase of the crisis. However, as their financial health came under increasing pressure in the last quarter of 2008, banks reduced their exposure to emerging market borrowers, and overall lending fell for the first time in six years.

. . . and prospects for international bank lending remain gloomy

Ongoing problems in the global financial industry are likely to curtail the lending capacity of many major global financial institutions for some time, causing financing shortages to appear even as the decline in global economic activity (chapter 1) cuts corporations' planned investment expenditures and associated financing needs. In addition, the dramatic reversal in investors' risk tolerance has greatly increased the cost of external financing for all but the most creditworthy borrowers.

Figure 2.20 International banks' claims on emerging markets, 2004–08



Source: World Bank staff estimates based on Bank for International Settlements data.

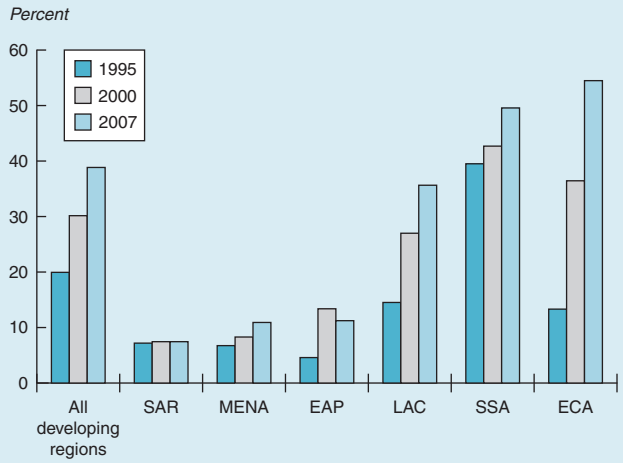
Going forward, significant downside risks remain related to the ability and willingness of financial institutions to lend, particularly across borders. First, the health of the balance sheets of international banks remains as uncertain as the depth and duration of the economic contraction. In the first months of 2009, many international banks continued to announce further losses and write-downs. Additional losses are widely expected to be reported through 2010, a sign that problems in the banking sector are not yet over (IMF 2009). In addition, growing concerns over credit risk and problems with cross-currency and foreign-exchange swap markets are likely to sharpen the so-called home bias in bank lending. In addition, in the interest of improving their capital ratios, banks may prefer to continue limiting their cross-border exposures, which typically involve higher regulatory capital charges to compensate for currency or country risk.

The risk that banks may reduce their support for subsidiaries in developing countries has also grown (box 2.3). Intrabank lending (loans made from a parent bank to a subsidiary or branch) has played a prominent role in bank lending in some countries, particularly those in emerging Europe and Central Asia. This type of flow is believed to have contributed to the relative resilience of bank

Box 2.3 Bank lending in developing countries and the presence of foreign banks

The participation of foreign banks in developing countries' financial systems has increased rapidly in recent years. At the end of 2007, the 910 foreign banks with a presence in developing countries controlled combined assets in excess of $1.2 trillion and accounted for more than 39 percent of total domestic banking assets. Foreign-owned lenders account for a particularly high proportion of local banking assets in three regions—70 percent in several Eastern European countries, and approximately 40 percent in some Latin American and Sub-Saharan countries (see figure). In some countries, such as Peru and Mozambique, their share is almost 100 percent, while in others, such Albania and Croatia, one or two foreign banks control the largest share of the local banking system (World Bank 2008, chapter 3).

Share of banking assets held by foreign banks, by region, 2007



The rising share of foreign banks in many developing countries has been accompanied by robust growth in international claims. Particularly in emerging Europe, a substantial share of bank activity is believed to depend on support from the parent banks, as these have injected funds through their subsidiaries and branches (BIS 2009; World Bank 2008). In 2008, such support protected countries from a sudden cutoff of the credit spigot, but whether it will continue remains uncertain, given the poor health of many international banks.

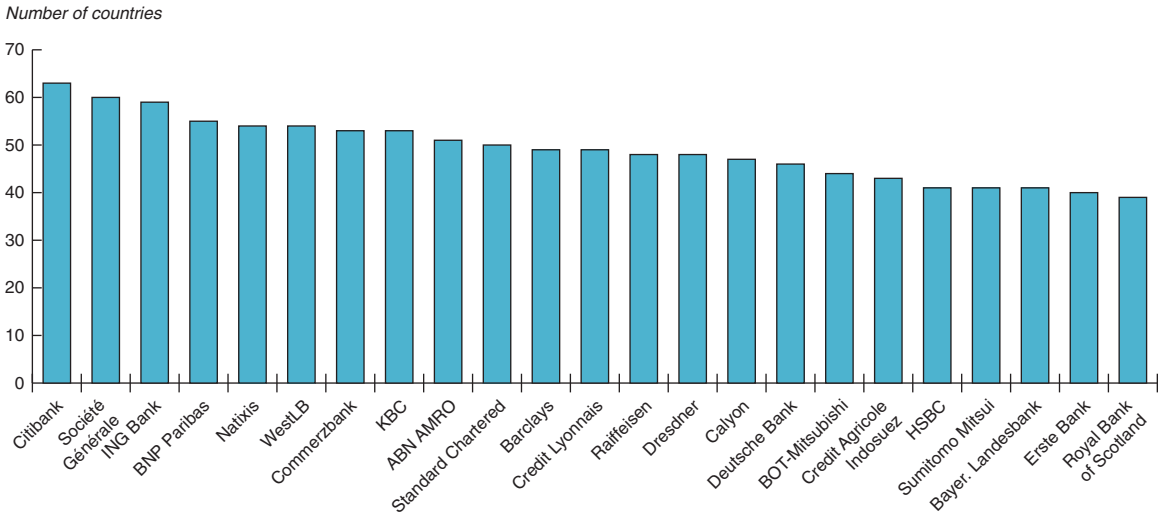
The literature highlights several factors, including home- and host-country conditions, as well as characteristics of the subsidiaries themselves, to explain variations in the level of support that parent banks provide to their subsidiaries (de Haas and van Lelyveld 2006a; Stein 1997). A multinational bank holding company may support subsidiaries with capital and liquidity in cases of significant losses (support effect), but it also tries to allocate capital across all of its subsidiaries depending on their expected risks and returns (substitution effect). Several factors shape the net outcome. Some subsidiaries may be more independent than others, for example (de Haas and van Lelyveld 2006b). Or negative capital shocks in host economies may force banks to reduce their assets to satisfy capital requirements (Van den Heuvel 2002).

In the current crisis, several of these factors are in play. With limited access to international debt markets, many of the subsidiaries of foreign banks have no choice but to rely on their parents for funds. Given the limited funding available also to those parents, however, intrabank loans may fall significantly in certain economies as parents reallocate these funds based on relative growth prospects and credit quality of the countries.

lending to developing countries in 2008. In the current environment, however, where the financial crisis has hit both the home and host countries of international banks, the relation between parent and subsidiary has become much more complex. For example, the deteriorating financial strength of subsidiaries in developing countries—particularly several Eastern European countries that were hit the hardest by the crisis—has taken a toll on the balance sheets of the parent banks, a toll serious enough in some cases to imperil the credit rating of the parent. Any downgrade in creditworthiness would raise the cost of capital for the affected bank.

The growing role of the state in some of the major international banks may affect their operations and cross-border lending practices. Since October 2008, several developed-country governments have injected capital into large international banks to improve their capital ratios in exchange for ownership shares ranging from 10 to 70 percent. For example, the British government now owns 66 percent of both Lloyds and the Royal Bank of Scotland. Similarly, the German government now owns 25 percent of the combined assets of Commerzbank and Dresdner Bank—which Commerzbank acquired last year. In March 2009, Citigroup was still in talks with

Figure 2.21 Major international banks with cross-border lending exposure to at least 30 developing countries, 1993–2007



Source: World Bank staff estimates based on data from Bankscope.

the U.S. government for additional aid in exchange for an additional ownership stake, which, if realized, may raise the government's share in the banking giant to 40 percent. Several of the affected banks had been active in lending to developing countries (figure 2.21). Although no general change in official lending practices has been announced so far, governments tend to encourage banks to lend domestically.[9] Given already limited funds, that tendency may further hamper cross-border lending to developed and developing countries alike.

The reversal of international capital flows to developing countries will have major consequences

The growing integration of the global economy and the increasing importance of private actors in international finance have provided enormous benefits to developing countries, while widening the scope for economic turmoil when global conditions deteriorate. Developing countries are much more dependent on private capital flows today than ever before. The growing dependence has greatly magnified the potential impact of changes in global economic conditions. Thus, even though most developing countries maintain better policies and have stronger institutions than they did at the onset of previous crises, more countries are nevertheless vulnerable to external disruptions.

Hence, the projected sharp decline in international capital flows, together with expected decreases in workers' remittances and other cross-border flows, is likely to oblige developing countries to make major macroeconomic adjustments and to restrict their ability to finance current-account transactions. The narrowing of access to international debt markets will be especially hard on developing-country corporations, some of which may be unable to refinance their obligations. As a result, the incidence of restructuring and bankruptcy among developing-country banks and companies is expected to rise in coming months. While the impact will be widespread, low-income countries and countries with high current-account deficits will have to go through the most serious macroeconomic and social adjustments.

The level and duration of the contraction in capital flows to developing countries, and its overall impact, will depend on how fast international investor confidence is restored, how soon conditions in international financial markets return to normal, and the degree to which international cooperation can mitigate the worst of the damage. The revitalization of the world economy, and its prospects in coming years, will be determined by the success of the national and international policy measures taken to address the present crisis. The importance of international efforts to reverse the deterioration of the global economy is one of the key topics of the next chapter.

Annex 2A: Methodology for assessing trends in foreign direct investment

The forecasts of FDI flows presented in this chapter are based on an econometric model that uses the following explanatory variables: GDP growth rate of the top seven industrial countries, the major suppliers of FDI; the difference between the GDP growth rate of each developing country and that of the G-7 countries (three-year moving average) as a proxy for investors' expectations about excess rates of return in the medium term; the rating of *Institutional Investor* magazine (lagged one year) as a proxy for the investment climate; the price of oil to capture resource-industry-related foreign investment; a volatility factor[10] (lagged one year) as a proxy for global economic uncertainty; and the lagged dependent variable (FDI), representing the persistence of FDI flows over time. In addition, country fixed effects account for the size of the economy and other characteristics. The model uses panel data for 1994–2008 from 34 developing countries that accounted for about 90 percent of FDI flows to developing countries in the last five years. Regression results are summarized in table 2A.1. The model builds on those used in previous editions of Global Development Finance.

Table 2A.1 Regression results of FDI forecasting model, fixed-effects panel regression

Explanatory variable	Coefficient
G-7 growth rate	0.152
	(3.19)***
GDP growth rate – G-7 growth rate (3-year moving average)	0.032
	(3.59)***
Institutional Investor rating (t-1)	0.012
	(2.27)**
Oil price	0.011
	(5.16)***
Volatility factor (t-1)	−0.011
	(3.12)***
FDI (t-1)	0.514
	(9.01)***
Constant	2.618
	(6.43)***
Within R^2	0.63
Overall R^2	0.77
Observations	416

Source: World Bank staff.
Note: Coefficients computed using White heteroskedasticity-consistent standard errors. Statistical significance at the 1% (***) and 5% (**) levels.

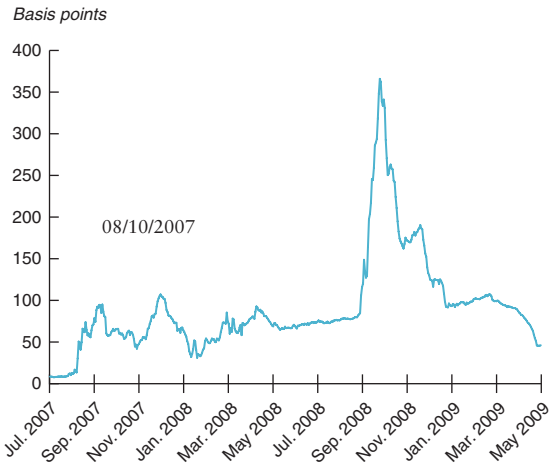
Annex 2B: Liquidity problems, bank solvency, and international bank lending to developing countries

Financial shocks affect lending by international banks to emerging-market borrowers through three major channels: balance-sheet effects, changes in interbank liquidity, and changes in lending standards. To assess the likely impact of each, we specify linear regression models of the flow of credit to emerging economies as a function of variables capturing a particular monetary-policy channel, a lagged dependent variable, and various macroeconomic and institutional control variables. We explore how the effects have differed since the onset of the financial crisis and whether the economic forces shaping capital flows to emerging economies have changed during the current economic turmoil.

The dependent variable is the (log of the) quarterly foreign-bank claims (FC) compiled by the Bank for International Settlements on up to 105 emerging economies from the fourth quarter of 2001 to 2008 (see figure 2.20). Throughout the analysis we distinguish between the precrisis and crisis periods. We date the beginning of the financial crisis to the run-up in the LIBOR-OIS spread in August 2007, which indicated growing liquidity and problems of counterparty risk in the interbank market (figure 2B.1). Accordingly, we create a binary variable (Crisis) that takes the value 1 from the third quarter of 2007 onward and 0 before that time.

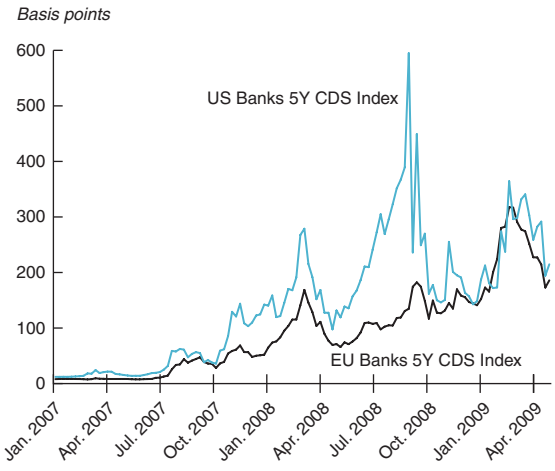
To assess whether the various factors contributing to the crisis also exert differential effects on the provision of credit to developing countries, we further divide the crisis period into two subperiods. In line with figure 2B.2, which shows how widespread bankruptcy fears in the U.S. and European banking sectors caused premiums on credit default swaps to spike during the first quarter of 2008, we conjecture that liquidity factors dominated the early phase of the crisis (up to the second quarter of 2008), whereas solvency issues have since come to the fore in the banking sector. Hence we create binary variables Liq and Solv. Liq takes

Figure 2B.1 Three-month LIBOR-OIS spread, July 2007–April 2009



Source: Bloomberg.

Figure 2B.2 Five-year CDS sector index for banks in the United States and European Union, January 2007–April 2009



Source: Bloomberg.

the value 1 from the third quarter of 2007 to the first quarter of 2008 and 0 at other times. Solv takes the value of 1 from the second quarter of 2008 onward, and 0 before that time. To clarify whether the crisis and conjectured solvency and liquidity effects independently affect credit to emerging economies, we interact the various crisis dummies with our key explanatory variables and their lags. We estimate the various specifications with country fixed effects (FE) and clustered standard errors or regional dummy variables. P-values are reported in parentheses.

To capture the traditional credit channel, we rely on the LIBOR-OIS spread (OIS) as an indicator for the availability of liquidity and for counterparty risk in interbank lending. Similarly, we measure banks' risk tolerance ("risk-taking channel") by the proportion of respondents who report in the Federal Reserve Board's "Senior Loan Officer Opinion Survey on Bank Lending Practices" that their institution has tightened its lending standards for commercial and industrial loans (Tightening).

To investigate the importance of the "balance-sheet channel" for the provision of credit to emerging markets, we use the quarterly average of noncurrent loans (Noncurrent: future problems) as a fraction of outstanding loans, net charge-offs (Charge-offs: past problems) as a fraction of outstanding loans, and the fraction of unprofitable lenders (Unprofit) as a proxy for the health of the global banking system. Given the need to restore bank capitalization to meet international standards, we also use their leverage (Leverage), Tier-I, and total risk-based capital ratio (RBCap) to measure balance-sheet effects. The sample consists of approximately 114 U.S. banks with foreign offices (with small variations by year and quarter through mergers, international expansion, and retrenchment) that hold about 12 percent of all foreign claims on emerging economies. This sample is a good proxy for global institutions that extend credit to borrowers in developing countries. In fact, the monthly correlation between U.S. and European bank credit default swap indexes is 0.904 (figure 2B.2), so that the U.S. data provide excellent instrumental variables for the health of the global banking system.

The results indicate that the lack of interbank lending, as measured by the LIBOR-OIS spread, adversely affects the provision of credit to emerging economies (table 2B.1, specifications 1, 2, and 5). To put this effect into perspective, an increase of 100 basis points in the spread can be expected, according to our results, to reduce the flow of credit to developing countries by 15 percent. The interaction terms suggest that the crisis is primarily responsible for this effect. However, the lagged OIS-Crisis term also reveals how the unprecedented injection of liquidity into the banking system during 2007 has counteracted the global credit retrenchment. For instance, specification 5 shows that the net effect of an increase of 100 basis points in the spread reduces emerging-market lending by only 17 percent over two quarters, although the initial effect suggests a reduction of about 50 percent (specification 5). Taken together, the results are consistent with the conclusion that monetary policy partially offset the effects of the liquidity crisis in 2007 on emerging-market borrowers. By contrast, such measures seem to have failed in 2008, when bank-solvency issues came to the forefront (results are not reported).

The crisis also seems to have affected the state of the lending cycle or, equivalently, banks' willingness to take credit risks as measured by the fraction of banks tightening their lending standards for commercial and industrial (C&I) loans. Before the crisis, lending standards apparently had a negligible economic effect on emerging-market lending. For the crisis period, however, our results are consistent with the view that the global recession has induced lenders to tighten their credit standards, thereby restricting access to global lending for marginal credit risks (an effect known as the "flight to quality"). Specifications 3, 4, and 6 indicate that rising lending standards further exacerbate the impact of the financial crisis: a 10-percentage-point increase in banks tightening their lending standards reduces the flow of credit to developing countries by 4 percent for the crisis period (steady state), for an overall decline of 3.8 percent. Furthermore, the delayed nature of the effect—tighter credit standards tend to take two quarters to filter through to emerging-market lending—bodes ill for the future provision of funds to borrowers in developing countries.

Table 2B.2 summarizes our estimates of the impact of bank performance—that is, the health of global banking as proxied by that of U.S. foreign lenders—on the flow of credit to developing countries. According to the balance-sheet view of monetary-policy transmission, frail financial institutions (as measured by their operating performance)

Table 2B.1 Lending standards, interbank liquidity, and credit to emerging economies

Dependent Var	Log(Foreign Claims)				1st difference log(FC)	
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE
Lagged log(FC)	0.8133	0.861	0.819	0.8654		
	(0.000)***	(0.000)***	(0.000)***	(0.000)***		
Log(GDP)	0.1674	0.1925	0.2434	0.2243	0.0357	0.0508
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.1200)	(0.008)***
Inflation	0.0023	−0.0497	0.0546	−0.0284	−0.0481	−0.0432
	(0.9790)	(0.5160)	(0.5450)	(0.7100)	(0.5630)	(0.6030)
Growth	−0.0008	−0.0013	0	−0.0009	0.0016	0.0017
	(0.5880)	(0.3390)	(0.9860)	(0.5170)	(0.2440)	(0.2270)
ICRG Composite		−0.0029		−0.0024	0.0004	0.0003
		(0.069)*		(0.1290)	(0.8240)	(0.8440)
OIS spread	−0.0006	0.0038			0.0037	
	(0.8180)	(0.073)*			(0.093)*	
Lagged OIS	−0.0040	−0.0057			−0.0035	
	(0.065)*	(0.002)***			(0.061)*	
OIS*Crisis	−0.0004	−0.005			−0.005	
	(0.8950)	(0.026)**			(0.035)**	
Lag-OIS*Crisis	0.0039	0.0055			0.0033	
	(0.074)*	(0.002)***			(0.074)*	
Volatility of OIS	−0.0006	−0.0005			−0.0003	
	(0.1390)	(0.1100)			(0.3230)	
Lagged volatility	−0.0016	−0.0013			−0.0012	
	(0.000)***	(0.000)***			(0.001)***	
Vol-OIS*Crisis	0.0006	0.0005			0.0003	
	(0.1610)	(0.1190)			(0.3340)	
Lag-vol*Crisis	0.0018	0.0015			0.0014	
	(0.000)***	(0.000)***			(0.000)***	
Tightening			0.0014	0.0021		0.0017
			(0.076)*	(0.002)***		(0.013)**
Lag1-Tight			−0.002	−0.0026		−0.0024
			(0.019)**	(0.000)***		(0.001)***
Lag2-Tight			0.0011	0.0009		0.0009
			(0.014)**	(0.026)**		(0.028)**
Tight*Crisis			0.0019	0		−0.0002
			(0.2250)	(0.9750)		(0.8960)
Lag1-Tight*Crisis			−0.0006	0.0011		0.0007
			(0.7980)	(0.5380)		(0.7100)
Lag2-Tight*Crisis			−0.0048	−0.0047		−0.004
			(0.004)***	(0.000)***		(0.005)***
Constant	−0.0849	−0.532	−0.9551	−0.982	−0.3092	−0.4916
	(0.7480)	(0.026)**	(0.000)***	(0.000)***	(0.2180)	(0.011)**
Observations	2,902	2,297	2,902	2,297	2,291	2,291
Countries	108	85	108	85	85	85
R-squared	0.832	0.905	0.831	0.905	0.036	0.034

Source: World Bank staff estimates.
Note: *, **, *** denote statistical significance at 10%, 5%, and 1%, respectively.

Table 2B.2 U.S. bank performance and credit to emerging economies

Dependent Var	Log(Foreign Claims)					1st difference log(FC)	
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE	(7) FE
Lagged log(FC)	0.855	0.852	0.856	0.854	0.853		
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***		
Log(GDP)	0.169	0.195	0.185	0.195	0.226	0.023	0.022
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.3680)	(0.3670)
Inflation	−0.145	−0.123	−0.14	−0.125	−0.101	−0.101	−0.102
	(0.077)*	(0.1500)	(0.097)*	(0.1410)	(0.2330)	(0.2580)	(0.2520)
Growth	−0.001	−0.001	−0.001	−0.001	−0.001	0.002	0.002
	(0.5580)	(0.4650)	(0.4340)	(0.3990)	(0.3780)	(0.2800)	(0.3130)
ICRG Composite	−0.005	−0.005	−0.005	−0.005	−0.005	−0.001	−0.001
	(0.002)***	(0.003)***	(0.004)***	(0.006)***	(0.003)***	(0.4800)	(0.5410)
Noncurrent	−6.32	12.956				1.447	
	(0.2420)	(0.2430)				(0.9090)	
Lag1-Noncur	24.531	−9.501				5.181	
	(0.038)**	(0.6020)				(0.8140)	
Lag2-Noncur	−26.352	−7.508				−9.659	
	(0.000)***	(0.4260)				(0.4040)	
Noncur*Liq		26.543				25.257	
		(0.2750)				(0.3390)	
Lag1-Noncur*Liq		−32.329				−27.108	
		(0.2710)				(0.4850)	
Lag2-Noncur*Liq						−4.289	
						(0.8100)	
Noncur*Solv		−40.295				−23.276	
		(0.010)***				(0.1730)	
Lag1-Noncur* Solv		192.147				177.621	
		(0.024)**				(0.048)**	
Lag2-Noncur* Solv		−175.596				−183.061	
		(0.071)*				(0.072)*	
Charge-offs			0.71	2.486			−2.159
			(0.8710)	(0.5700)			(0.6360)
Lag1-Charge			12.332	11.526			16.594
			(0.028)**	(0.037)**		(0.004)***	
Lag2-Charge			−19.014	−17.497			−16.867
			(0.000)***	(0.000)***		(0.000)***	
Charge-offs*Crisis			40.16				
			(0.000)***				
Lag1-Charge*Crisis			−33.829				
			(0.011)**				
Lag2-Charge*Crisis			−20.083				
			(0.1250)				
Charge-offs*Liq				26.409			22.194
				(0.038)**		(0.1230)	
Lag1-Charge* Liq				−30.156			–29.708
				(0.053)*			(0.094)*
Lag2-Charge* Liq							3.501
							(0.8370)
Charge-offs*Solv				82.188			77.496
				(0.002)***		(0.005)***	
Lag1-Charge* Solv				−32.96			–43.168
				(0.083)*			(0.030)**
Lag2-Charge* Solv				−84.475			–67.461
				(0.011)**		(0.050)*	
Unprofitable					0.363		
					(0.034)**		
Lag1-Unprof					−0.574		
					(0.000)***		
Lag2-Unprof					−0.46		
					(0.000)***		
Unprof*Crisis					−0.547		
					(0.003)***		
Lag1-Unprof*Crisis					0.713		
					(0.001)***		
Lag2-Unprof*Crisis					0.123		
					(0.6200)		
Constant	−0.057	−0.354	−0.287	−0.417	−0.684	−0.07	−0.083
	(0.8060)	(0.2030)	(0.2570)	(0.1040)	(0.008)***	(0.8100)	(0.7590)
Observations	2,214	2,214	2,214	2,214	2,214	2,209	2,209
Countries	85	85	85	85	85	85	85
R-squared	0.900	0.901	0.901	0.901	0.900	0.031	0.037

Source: World Bank staff estimates.
Note: *, **, *** denote statistical significance at 10%, 5%, and 1%, respectively.

hinder the provision of credit to the real economy. The results suggest that the quality of banks' loan portfolios and their general profitability significantly affect their ability to lend to developing countries. For instance, a one-percentage-point increase in noncurrent loans, which indicates future balance-sheet problems, decreases the flow of credit by 5.44 percent (specification 6). The fact that these effects primarily occur from the second quarter of 2008 onward is consistent with the interpretation that bank-solvency issues now dominate not only the financial crisis but also emerging-market lending. We take these findings as evidence that the fundamental economic forces currently shaping global finance are associated with the postulated balance-sheet channel of monetary policy.

To further clarify the economic forces that affect the provision of credit to developing countries since the onset of the financial crisis, we also investigate the direct effect of credit losses. The results reveal that credit charge-offs, indicative of past loan-portfolio problems, depress emerging-market lending, as do drops in the general profitability of the banking sector. Regarding the former, the impact is more evenly distributed across the two crisis subperiods. Our estimates suggest that an increase in charge-offs by 10 basis points reduces the flow of credit to developing countries by 4 percent as a direct consequence of the financial crisis, whereas the noncrisis net effect is economically insignificant. The results for the fraction of unprofitable banks (specification 5) confirm these findings: as profitability in global banking falls, institutions cut back on marginal activities such as lending to developing countries, which naturally reduces the flow of funds to borrowers in such markets.

The recapitalization of banking sectors that suffered dramatic losses in investments and loan portfolios is currently a regulatory priority in many countries. Under pressure from investors and regulators, banks are striving to improve their capitalization through a mixture of new private and public equity injections, complemented by actions to shrink their balance sheets and improve the quality of the assets they hold—for example, by writing down and making provisions for problem loans. These actions further reduce banks' lending activities and narrow the access of emerging-market borrowers to credit. We first assess the effect of bank leverage on the availability of credit to borrowers in developing countries. Specifications 1, 2, and 5 in table 2B.3 provide evidence that emerging economies benefited in recent years from banks' unprecedentedly high leverage. A 10-percentage-point increase in bank leverage raises the flow of credit by about 5 percent. Consistent with the balance-sheet-channel view, leverage does not seem to have played any role during the early liquidity phase of the financial crisis. By contrast, excessive leverage has harmed emerging-market borrowers during the current solvency crisis. When viewed in isolation, leverage during the latter part of 2008 seems actually to have shrunk the flow of credit to emerging markets: during this subperiod, a 10-percentage-point increase in leverage reduces the provision of credit to developing countries by 35 percent, a finding consistent with the view that bank-solvency issues now dominate global financial flows.

Our analysis also gauges the effect of capital adequacy standards on lending to developing countries. A rise in the Tier-I capitalization ratio unsurprisingly appears to reduce credit to such markets. In normal times, an increase by one percentage point in the Tier-I capitalization ratio reduces the flow of credit by 15 percent (specification 6), with the financial crisis further exacerbating this effect. However, these effects clearly depend on the extent of regulatory enforcement of capital-adequacy standards. Risk-based capitalization ratios (specifications 4 and 7) provide a much better gauge of the economic consequences of the banking sector's deleveraging for emerging-market borrowers. A one-percentage-point increase in banks' risk-based capitalization appears to reduce the flow of credit to developing countries by about 10 percent (specification 7), suggesting that restoring financial order to the balance sheets of global banks, a precondition for continued lending in developing countries, may hurt emerging-market borrowers in the short term.

Table 2B.3 U.S. bank capitalization and credit to emerging economies

Dependent Var	Log(Foreign Claims)				1st difference log(FC)		
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE	(7) FE
Lagged log(FC)	0.858	0.857	0.854	0.855			
	(0.000)***	(0.000)***	(0.000)***	(0.000)***			
Log(GDP)	0.2170	0.2270	0.2110	0.2040	0.044	0.048	0.039
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.021)**	(0.028)**	(0.1220)
Inflation	−0.1	−0.075	−0.097	−0.114	−0.075	−0.072	−0.084
	(0.2300)	(0.3660)	(0.2450)	(0.1780)	(0.3880)	(0.4100)	(0.3450)
Growth	0	−0.001	−0.001	−0.001	0.002	0.002	0.002
	(0.9320)	(0.5490)	(0.6070)	(0.4200)	(0.2690)	(0.2340)	(0.2660)
ICRG Composite	−0.003	−0.004	−0.004	−0.005	−0.001	−0.001	−0.001
	(0.054)*	(0.018)**	(0.013)**	(0.007)***	(0.6230)	(0.7140)	(0.6150)
Leverage	−0.734	−4.899			−8.233		
	(0.9130)	(0.4760)			(0.2510)		
Lag1-Lev	22.754	24.679			26.893		
	(0.007)***	(0.003)***			(0.002)***		
Lag2-Lev	−20.566	−24.046			−26.372		
	(0.001)***	(0.000)***			(0.000)***		
Lev*Crisis	–3.957						
	(0.6030)						
Lag1-Lev*Crisis	−59.158						
	(0.000)***						
Lag2-Lev*Crisis	63.081						
	(0.000)***						
Lev*Liq		−22.28			−16.808		
		(0.2610)			(0.4170)		
Lag1-Lev* Liq		22.663			8.106		
		(0.2480)			(0.7860)		
Lag2-Lev* Liq					8.762		
					(0.6840)		
Lev*Solv		1.56			2.531		
		(0.8520)			(0.7710)		
Lag1-Lev* Solv		−61.591			−64.524		
		(0.000)***			(0.000)***		
Lag2-Lev* Solv		59.4630			61.009		
		(0.000)***			(0.000)***		
TierI			−8.398			−1.018	
			(0.1010)			(0.8500)	
Lag1-TierI			3.467			5.798	
			(0.5630)			(0.3670)	
Lag2-TierI			−18.744			−15.264	
			(0.000)***			(0.007)***	
TierI*Crisis			−15.433				
			(0.085)*				
Lag1-TierI*Crisis			−28.19				
			(0.058)*				
Lag2-TierI*Crisis			42.889				
			(0.000)***				
TierI*Liq						26.072	
						(0.2610)	
Lag1-TierI* Liq						−32.693	
						(0.2190)	
Lag2-TierI* Liq						6.603	
						(0.7360)	
TierI*Solv						−27.261	
						(0.1010)	
Lag1-TierI* Solv						−26.572	
						(0.1750)	
Lag2-TierI* Solv						53.192	
						(0.001)***	
RBCap				−2.634			1.543
				(0.4810)			(0.6950)
Lag1-RBCap				6.005			5.887
				(0.1270)			(0.1610)
Lag2-RBCap				–10.972			–11.012
				(0.001)***			(0.003)***
RBCap* Liq				22.356			13.948
				(0.061)*			(0.2680)
Lag1-RBCap* Liq				–22.189			–16.389
				(0.064)*			(0.2740)

(table continues on next page)

Table 2B.3 U.S. bank capitalization and credit to emerging economies (*continued*)

Dependent Var	Log(Foreign Claims)				1st difference log(FC)		
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE	(7) FE
Lag2-RBCap* Liq							2.457
							(0.8090)
RBCap* Solv				–32.981			–36.488
				(0.008)***			(0.005)***
Lag1-RBCap* Solv				–25.88			–28.253
				(0.068)*			(0.056)*
Lag2-RBCap* Solv				59.433			65.042
				(0.000)***			(0.000)***
Constant	–0.908	–0.546	1.466	0.367	0.201	0.532	0.14
	(0.052)*	(0.2590)	(0.054)*	(0.5680)	(0.6900)	(0.5440)	(0.8380)
Observations	2,214	2,214	2,214	2,214	2,209	2,209	2,209
Countries	85	85	85	85	85	85	85
R-squared	0.900	0.901	0.900	0.901	0.038	0.033	0.033

Source: World Bank staff estimates.
Note: *, **, *** denote statistical significance at 10%, 5%, and 1%, respectively.

Annex 2C: Debt Restructuring with Official Creditors

This annex lists official debt restructuring agreements concluded in 2008. Restructuring of intergovernmental loans and officially guaranteed private export credits takes place under the aegis of the Paris Club. These agreements are concluded between the debtor government and representatives of creditor countries. Paris Club treatments are defined individually, by consensus of all creditor countries. Most treatments fall under the following predefined categories, listed by increased degree of concessionality: "Classic terms" represent the standard treatment; "Houston terms" are for highly-indebted lower-middle-income countries; "Naples terms" are for highly-indebted poor countries; and "Cologne terms" are for countries eligible for the Heavily Indebted Poor Countries (HIPC) Initiative. To make the terms effective, debtor countries must sign a bilateral implementing agreement with each creditor.

Agreements with countries

Guinea. On January 23, 2008, Paris Club creditors reached agreement with the government of Guinea to restructure its external public debt, following the IMF's approval in December of the country's arrangement under the Poverty Reduction and Growth Facility (PRGF). The agreement, concluded under Cologne terms, consolidated about $300 million in debt, of which $160 million consisted of arrears and late interest. The agreement resulted in the immediate cancellation of $180 million of debt, and the rescheduling of about $120 million. On an exceptional basis, the agreement also deferred until after 2010 the repayment of arrears accumulated by Guinea. These measures would reduce by $378 million all debt-service payments to Paris Club creditors falling due between January 1, 2008, and December 31, 2010.

The Gambia. On January 24, 2008, Paris Club creditors agreed to a debt reduction for The Gambia, which reached its completion point under the enhanced HIPC Initiative in December 2007. As a means of restoring the country's debt sustainability, the Paris Club decide to cancel debt valued at $11.6 million in nominal terms. The stock of debt owed to Paris Club creditors by The Gambia was estimated at about $40 million in nominal value as of December 1, 2007. The Gambia agreed to allocate the resources freed up by debt relief to priority areas identified in the country's poverty reduction strategy.

Liberia. The government of Liberia reached its HIPC decision point in March 2008 and entered an agreement with Paris Club creditors in April 2008 to restructure its external public debt. As of January 2008, the stock of debt due to Paris Club creditors by Liberia was estimated to be more than $1.5 billion in nominal terms, of which more than 97 percent consisted of arrears and late interest. Liberia's agreement with its creditors, under Cologne terms, rescheduled $1.043 billion, of which $1.028 billion comprised arrears and late interest. The agreement also led to immediate cancellation of $254 million in debt and a rescheduling of around $789 million, which will be considered for debt relief when Liberia reaches is HIPC completion point. Several creditors also committed on a bilateral basis to grant additional relief, fully canceling the country's debt.

Togo. Following the IMF's approval of a new three-year arrangement under the PRGF in April 2008, Paris Club creditors agreed to a debt-relief package for the government of Togo in June 2008. This agreement consolidated $739 million, canceled $347 million, and rescheduled $392 million under Naples terms, whereby repayment is extended over 40 years with a 16-year grace period. On an exceptional basis, this agreement also required no payments from the country between

April 1, 2008, and March 31, 2011. Paris Club creditors also committed to further debt reduction as soon as Togo successfully reaches its decision point under the enhanced HIPC Initiative.

Djibouti. In October 2008, Paris Club creditors agreed with the government of Djibouti to a restructuring of its external debt. This decision followed the IMF's approval of the country's arrangement under the PRGF on September 17, 2008. This agreement concluded under Houston terms, with exceptional additional measures considering the country's limited capacity for repayment. The agreement consolidated around $76 million in debt, of which $58 million consisted of arrears and late interest. Some $64 million was to be rescheduled and the remaining $12 million was to be deferred. As a result, the country's debt owed to Paris Club creditors was reduced to $19 million from $85 million, a 79 percent reduction.

Republic of Congo. On December 11, 2008, Paris Club creditors agreed with the government of the Republic of Congo to a reduction of its external public debt. This decision followed the IMF's approval (on December 8, 2008) of the country's contract under the PRGF. This agreement was conducted under Cologne terms, and will result in the cancellation of $805 million in debt and the rescheduling of $155 million over the three-year consolidation period. In accordance with Cologne terms, concessional assistance (ODA) is to be repaid over 40 years with a grace period of 16 years. Ninety percent of the commercial debt was to be canceled, with repayment of the remaining 10 percent rescheduled over 23 years with a 6-year grace period. The stock of debt owed to Paris Club creditors by the country as of July 1, 2008, was estimated to be more than $3.4 billion in nominal terms.

Notes

1. Financial distress escalated in the United States and Europe over the course of 2008, beginning with the takeover of Bear Sterns by JP Morgan in March, and culminating by September when several other financial institutions came under stress including American International Group (AIG) and Lehmann Brothers in the United States and Lloyds TSB in the United Kingdom (Global Economic Prospects 2008, page 20).

2. By the end of September 2008, investment banks Bear Stearns and Lehman Brothers had collapsed, Merrill Lynch had been acquired by Bank of America, and Goldman Sachs and Morgan Stanley had become commercial banks.

3. The discussion here is based on quarterly short-term debt data from Bank for International Settlements. Flows are calculated as the change in the debt stock between periods. These numbers might vary from the short-term debt data reported by the World Bank (table 2.1) due to differences in sources for some countries. World Bank Debt Reporting System (DRS) data are obtained, whenever available, directly from country authorities. DRS only reports annual data.

4. In January, Mexican multinational companies Grupo Bimbo (food processing) and Cemex (cement) borrowed $2.3 billion for acquisition and $1.4 billion for refinancing purposes, respectively. Also, there was a $1.4 billion syndicated loan to Russian oil company Rosneft for trade finance purposes.

5. AIG finalized its sale of its credit card and banking assets in Thailand to Bank of Ayudhya. The company received proceeds of about $45 million from the sales but also disclosed that it had also been able to pay off intercompany debt of $495 million with the transaction. http://uk.reuters.com/article/marketsNewsUS/idUKN0852725120090408.

6. Nigeria recently revised upward to $18 billion for 2007 the data it reports to the IMF. This represents a 450 percent increase over inflows for 2005, raising suspicion that the increase may mask the inclusion of other types of private flows, such as trade payments. Our estimates for 2006 and 2007—$5.4 billion and $9.2 billion, respectively—were therefore constructed using data reported for 2005 to the IMF and the growth of remittance inflows reported in a global survey of central banks conducted by the World Bank's Development Prospects Group in mid-2008. The Arab Republic of Egypt reported $7.6 billion in remittances for 2007, a significant increase from 2006.

7. During the Latin American debt crisis of the 1980s the fall in other long-term (and short-term) flows from banks and the bond market was seven times greater that that of FDI. Similarly, during the Mexican debt crisis in 1994, FDI inflows fell by 27 percent and recovered fully by 1997. However, portfolio equity and debt flows fell by 89 percent and 45 percent, respectively, in just one year, from 1994 to 1995. The 1997 currency and banking crisis in East Asia (Indonesia, Korea, Malaysia, the Philippines, and Thailand) saw a drop of 22 percent in net long-term inflows to these countries, while FDI fell by less than 5 percent from 1997 to 1998.

8. For example, Mexican Quimpac canceled its acquisition of Colombian mining company Prodesal because of the financial crisis (http://global.factiva.com/ha/default.aspx). See also http://uk.reuters.com/article/UK_SMALLCAPSRPT/idUKL521661520090105.

9. French banks that tap government assistance have pledged to increase lending by 3–4 percent annually. ING, a Dutch bank, announced on January 26 that it would extend €25 billion ($32 billion) to Dutch businesses and consumers in return for another round of government assistance. http://www.economist.com/displaystory.cfm?story_id=13057265.

10. The market volatility index is derived as the predicted common factor in a factor analysis of eight variables: VIX, US$/euro volatility, US$/yen volatility, US$/sterling volatility, agriculture commodities price index volatility, energy price index volatility, industrial metals price index volatility, and TED spread.

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