CHAPTER III EMERGING MARKET FINANCING

Although emerging market issuance of international bonds, equities, and syndicated loans rose in 2000 to the highest level since 1997, access to the international capital markets was characterized by an "on-off" nature. Increased asset price volatility in mature markets and the prospects of a slowdown in global growth combined with market turbulence in key emerging markets to make it difficult for many emerging markets to achieve sustained access. Indeed, the "on-off" nature of market access for emerging markets so evident during the 1990s is now viewed by many market participants as a key characteristic of international financial markets.

The terms and conditions of access to international markets for emerging markets are naturally influenced by events in both mature and emerging markets. However, developments in mature markets (particularly increased asset price volatility and the prospect of slower growth) have been especially important in the year ending May 2001. In the Asian and Russian crises, mature market financial conditions (particularly interest rate differentials) contributed to the buildup of external debt by emerging market private and public sector entities, but the abrupt losses of market access experienced during these crises were associated with the emergence of exchange rate and banking crises in key emerging markets and the ensuing contagion. In the past year, however, there were periods, especially in the fourth quarter of 2000, where developments in mature markets (such as the closing of U.S. high-yield markets and the collapse of equity prices on the Nasdaq) effectively eliminated emerging markets' access to international capital markets. The crises in countries such as Argentina and Turkey clearly resulted in an immediate loss of market access for these countries; but there were limited spillover effects to other countries, in part reflecting the view that fundamentals in many emerging markets had continued to improve (with sovereign credit rating upgrades outnumbering downgrades by four to one in 2000).

In 2000, there was also a sharp break in the high positive correlation between gross and net capital flows to emerging markets that had existed throughout the 1990s. Although gross issuance of international bonds, equities, and syndicated loans rose by 32 percent (to reach $216.4 billion), net capital flows fell by 55 percent (to $32.2 billion). This divergence primarily reflects the experience of the fuel-exporting emerging markets, however. Due to a rise in oil prices, the current account surpluses of the fuel-exporting countries increased sharply and this led to the accumulation of both official foreign exchange reserves and claims (mainly deposits) on international banks, thereby generating a large net private capital outflow ($44 billion).

The nature of the current investor base for emerging market assets has been one of the key channels for transmitting the effects of developments in mature markets to emerging markets, as well as for affecting the "on-off" nature of recent market access.[1] The holdings of emerging market assets by "dedicated" emerging market investors remain relatively limited, and market participants argue that the activities of highly leveraged institutions (such as hedge funds) with regard to emerging markets are now much more limited than during the Asian and Russian crises. This latter development reflects the closing of several large macro hedge funds, the orientation of other hedge funds toward mature market investments, and reductions in the capital allo-

[1]See Box 3.5.

cated to support the activities of proprietary trading desks of investment banks. Nonetheless, it remains difficult to gauge the activities of hedge funds because of the limited disclosure of their investment activities. As a result, the current investor base is dominated largely by "crossover" investors who make most of their investments in mature markets but will devote a small proportion of their investment funds to emerging market investments if they are expected to offer an attractive return. However, since the benchmarks used to evaluate the performance of the portfolio managers of crossover investors typically do not encompass emerging market assets, these investors can reduce or eliminate their holdings of emerging market assets if the outlook for emerging markets deteriorates, more attractive investment opportunities become available in mature markets, or if managers become more risk averse and seek to lower the overall level of volatility of their holdings. (This contrasts sharply with the situation for dedicated investors, who necessarily are judged against emerging market benchmarks.) Such portfolio adjustments by crossover investors can lead to an abrupt expansion or contraction of market access for emerging markets that can be unrelated to changes in emerging market fundamentals. Unless the dedicated emerging market investor base expands significantly (which is regarded by market participants as unlikely), this on-off market access is likely to be a regular feature of the international financial system.

Emerging market borrowers have recently shown deftness in adapting to the on-off nature of market access. In part, this has involved turning to the syndicated loan market when access to bond markets has been restricted. In addition, they have attempted to develop access to the retail and institutional bond markets denominated in euros and yen when the U.S. dollar bond market has been closed. Moreover, they have employed staff in debt management agencies with extensive investment banking and trading experience, exploited "windows of opportunity" to prefund their yearly financing requirement, engaged in debt exchanges to extend the maturity of their external debt and avoid a bunching of maturities, and made greater use of local debt markets.

Developments in Aggregate Net Private Capital Flows to Emerging Markets

In contrast to the relatively high, positive correlation between net and gross private capital flows to emerging markets that has existed throughout the 1990s (Figure 3.1), net capital flows declined substantially in 2000 (Table 3.1) whereas gross issuance of international bonds, equities, and syndicated loans by emerging markets was buoyant (as discussed below). However, the $39 billion decline in net capital flows between 1999 and 2000 encompassed sharply divergent experiences for fuel and nonfuel emerging market exporters. As oil prices rose from an average of $18 per barrel in 1999 to $28 per barrel in 2000, the current account surpluses of fuel-exporting emerging markets rose from $10 billion to $94 billion, leading to a sharp buildup in claims on international banks and a substantial net capital outflow. In contrast, net private capital flows to nonfuel-exporting emerging markets fell by only $5 billion.

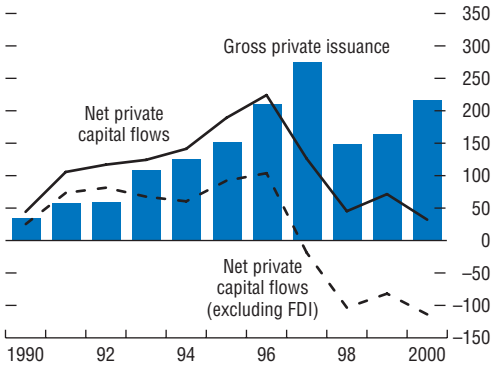
Despite the strengthening of aggregate emerging market current account positions in 2000, the decline in net private flows resulted in a somewhat slower buildup of foreign exchange reserves. However, there was again a sharp distinction between the experiences of the fuel- and nonfuel-exporting countries. The fuel-exporting emerging markets experienced a sharp increase in their current account surplus, which was accompanied by an increase in both official foreign exchange holdings (which had declined in both 1998 and 1999) and private claims (mainly deposits) on international banks. This was a pattern reminiscent of the accumulation of "petro-dollar" deposits in the 1970s. As a result, net bank exposures to fuel exporters declined by $40 billion (Table 3.1). In contrast, the current account surpluses and accumulated foreign exchange reserves of the nonfuel-exporting countries declined. Moreover, the slower accumulation of foreign exchange reserves primarily

reflected a slowdown in the rapid accumulation of reserve assets in Asia; accumulation of reserves accelerated in all other regions.

The decline of net private capital flows reflects, for the first time since 1990, a slowdown in foreign direct investment (FDI) as well as a continuing cutback in net bank claims on emerging markets. FDI nonetheless remains the largest single source of private capital in all regions. For the first time since 1997, however, new FDI flows did not offset the decline in bank exposures. The slowdown in FDI was largest in Asia and the Western Hemisphere, reflecting the winding down of mergers and acquisitions activity (M&A) in Asia and of privatization-related FDI in Latin America. Analysts have attributed the continuing slowdown in FDI flows to a number of factors: a decline in M&A activity in Asia after an initial spurt following the Asian crisis; the completion of many large-scale privatizations in Latin America; weakening earnings growth for multinational corporations, which reduced their capacity to acquire or build new assets; and a shift by multinationals from expansion to consolidation as global growth has slowed.

The sharp decline in net bank claims on emerging markets ($172 billion in 2000) represents a continuation of a trend that has been evident since the onset of the Asian crisis in 1997.[2] In contrast to both 1998 and 1999, however, the contraction in net bank claims in 2000 represented a surge of deposits into international banks rather than a decline in bank lending to emerging markets (Table 3.2). While loan repayments had exceeded new credits by a large margin between 1997 and 1999, gross bank claims on emerging markets (that is, gross of liabilities) remained relatively stable during the first three quarters of 2000. Although the placement of deposits by residents of the fuel-exporting countries seems reminiscent of the 1970s, it notably

Figure 3.1. Net Private Capital Flows and Gross Private Issuance to Emerging Markets
(In billions of U.S. dollars)



Sources: Capital Data; and IMF, *World Economic Outlook*.

[2]Net bank claims are measured by the difference between assets and liabilities of BIS-reporting banks' external positions vis-à-vis developing countries. Amounts outstanding are adjusted for exchange rates, liabilities consist nearly entirely of deposits, and net flows equal total assets (claims) minus total liabilities.

Table 3.1. Net Private Capital Flows to Emerging Markets

(In billions of U.S. dollars)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Emerging markets									
Total net private capital inflows	116.9	124.3	141.3	189.0	224.2	126.2	45.2	71.5	32.2
Bank loans and other	28.5	–14.0	–49.5	49.5	18.7	–62.1	–127.2	–135.6	–172.1
Net portfolio investment	53.0	81.6	109.9	42.6	85.0	43.3	23.8	53.7	58.3
Net foreign direct investment	35.5	56.7	80.9	96.9	120.4	144.9	148.7	153.4	146.0
Africa									
Total net private capital inflows	0.9	3.2	11.4	12.3	12.3	16.8	10.9	12.7	8.6
Bank loans and other	–2.1	0.0	5.5	6.4	4.9	1.6	0.1	–4.9	–2.4
Net portfolio investment	2.0	0.9	3.5	3.1	2.8	7.0	3.7	8.7	4.3
Net foreign direct investment	1.0	2.2	2.4	2.9	4.7	8.1	7.0	8.9	6.8
Asia									
Total net private capital inflows	15.0	41.5	67.1	74.4	113.9	18.9	–55.4	2.0	–2.6
Bank loans and other	–12.7	–9.5	3.4	6.3	31.2	–48.4	–119.1	–88.4	–97.8
Net portfolio investment	12.9	18.0	18.9	19.7	27.1	7.1	6.5	36.6	45.9
Net foreign direct investment	14.7	33.0	44.7	48.5	55.5	60.2	57.2	53.8	49.3
Europe									
Total net private capital inflows	10.5	24.2	2.2	54.4	30.1	12.4	21.3	19.6	12.8
Bank loans and other	2.9	5.2	–22.3	24.6	2.0	–13.9	2.2	–7.6	–25.1
Net portfolio investment	2.4	12.3	18.5	15.7	14.9	10.2	–1.8	5.5	12.4
Net foreign direct investment	5.2	6.7	6.1	14.1	13.2	16.1	21.0	21.8	25.5
Middle East									
Total net private capital inflows	37.9	18.1	17.7	6.3	5.0	10.1	6.7	–3.2	–25.9
Bank loans and other	25.8	12.3	6.4	–1.9	–4.9	3.4	4.1	–0.4	–24.5
Net portfolio investment	10.9	3.2	6.7	1.7	2.3	0.0	–4.6	–7.5	–9.0
Net foreign direct investment	1.2	2.6	4.6	6.5	7.7	6.7	7.2	4.7	7.6
Western Hemisphere									
Total net private capital inflows	52.7	37.3	42.8	41.6	62.8	68.1	61.8	40.4	39.2
Bank loans and other	14.6	–22.1	–42.6	14.2	–14.4	–4.7	–14.5	–34.2	–22.3
Net portfolio investment	24.7	47.2	62.4	2.5	38.0	19.0	19.9	10.4	4.7
Net foreign direct investment	13.4	12.2	23.1	24.9	39.3	53.8	56.3	64.2	56.9
Fuel exporters[1]									
Total net private capital inflows	31.5	17.2	13.7	–1.3	–4.3	–1.7	4.2	–9.5	–43.5
Bank loans and other	15.8	10.9	4.9	–5.1	–10.2	–8.3	–4.8	–10.6	–39.7
Net portfolio investment	13.9	6.2	5.1	–0.6	–2.9	–5.2	–3.2	–8.2	–14.5
Net foreign direct investment	1.7	0.1	3.7	4.3	8.8	11.7	12.3	9.2	10.7
Nonfuel exporters									
Total net private capital inflows	85.4	107.1	127.6	190.4	228.5	127.9	41.0	81.0	75.7
Bank loans and other	12.6	–24.9	–54.5	54.6	28.9	–53.8	–122.4	–125.1	–132.4
Net portfolio investment	39.0	75.5	104.9	43.3	88.0	48.5	27.0	61.9	72.8
Net foreign direct investment	33.8	56.6	77.2	92.5	111.6	133.2	136.4	144.2	135.3
Memorandum items:									
Change in reserve assets									
Emerging markets	27.2	83.1	92.6	123.7	109.1	68.8	60.6	90.1	83.8
Africa	–3.2	1.4	5.1	1.8	5.1	11.2	–1.9	4.4	6.5
Asia	7.7	43.7	79.4	48.2	61.7	23.8	63.7	79.7	47.1
Europe	–1.0	13.4	9.8	40.9	3.0	8.3	5.0	7.0	15.2
Middle East	1.0	4.3	2.6	7.8	12.8	11.7	2.5	6.3	12.5
Western Hemisphere	22.7	20.3	–4.1	24.9	26.5	13.7	–8.8	–7.2	2.6
Fuel exporters	–8.0	–0.5	0.2	–0.4	17.6	10.8	–4.1	–0.7	21.0
Nonfuel exporters	35.2	83.6	92.4	124.1	91.5	58.0	64.6	90.8	62.9
Current account									
Emerging markets	–73.7	–108.2	–71.9	–98.0	–98.6	–71.7	–55.5	42.7	121.8
Africa	–11.3	–12.3	–12.3	–16.9	–6.3	–8.0	–20.5	–15.5	1.3
Asia	3.1	–12.1	–2.8	–36.5	–39.8	25.7	114.2	111.7	87.5
Europe	–7.4	–14.5	5.9	–3.0	–20.6	–27.3	–27.7	–3.6	16.1
Middle East	–23.4	–23.4	–10.7	–4.7	6.9	4.7	–31.3	5.7	64.8
Western Hemisphere	–34.7	–45.9	–52.0	–36.9	–38.9	–66.8	–90.2	–55.7	–47.9
Fuel exporters	–28.2	–22.0	–4.0	2.1	30.0	19.2	–35.2	10.1	93.8
Nonfuel exporters	–45.5	–86.1	–67.9	–100.1	–128.7	–90.9	–20.3	32.6	28.0

Sources: IMF, *International Financial Statistics;* and IMF, *World Economic Outlook.*

[1]Fuel exporters are defined (as in *World Economic Outlook,* October 2000) as countries for which oil exports constitute at least 20 percent of exports in the base period (1995–97): Algeria, Angola, Bahrain, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Saudi Arabia, Trinidad and Tobago, United Arab Emirates, and Venezuela.

Table 3.2. Changes in Net Assets of BIS-Reporting Banks in Selected Countries and Regions

(In billions of U.S. dollars)

	Net Assets						Assets						Liabilities[1]					
			2000						2000						2000			
	1999	2000	Q1	Q2	Q3	Q4	1999	2000	Q1	Q2	Q3	Q4	1999	2000	Q1	Q2	Q3	Q4
Total	–100.9	–155.1	–40.9	–24.5	–55.2	–34.5	–69.1	–10.1	1.3	–3.8	–1.3	–6.3	31.8	145	42.2	20.7	53.9	28.2
Africa																		
South Africa	–3.1	0.1	–0.4	0.0	–1.2	1.7	–1.3	0.2	–0.5	–0.5	0.4	0.8	1.8	0.1	–0.1	–0.6	1.6	–0.9
Asia																		
Thailand	–15.2	–10.8	–2.3	–2.4	–0.8	–5.3	–15.1	–8.7	–1.2	–2.9	–1.5	–3.2	0.1	2.1	1.1	–0.5	–0.7	2.1
Malaysia	–2.3	–2.1	–2.0	–0.5	–0.4	0.8	–3.4	0.5	0.0	0.0	–0.8	1.3	–1.0	2.6	2.0	0.5	–0.3	0.5
Philippines	–1.9	1.6	–0.8	2.4	–0.2	0.3	0.8	–0.8	–0.8	–0.5	–0.5	1.1	2.7	–2.4	0.0	–2.9	–0.3	0.8
Indonesia	–5.4	–3.4	–1.8	–1.7	–0.5	0.6	–5.9	–4.6	–2.7	–1.1	–1.1	0.2	–0.5	–1.2	–0.9	0.6	–0.6	–0.4
Korea, Republic of	0.7	–3.5	–5.7	2.8	1.3	–2.0	–3.5	–6.1	5.1	0.3	–2.5	–8.9	–4.2	–2.6	10.7	–2.5	–3.8	–7.0
India	0.9	0.5	1.6	0.1	–1.5	0.3	0.6	–1.5	–1.5	0.3	–0.3	0.0	–0.4	–2.0	–3.1	0.2	1.2	–0.3
China	–11.0	–42.1	–12.5	–13.7	–7.1	–8.8	–14.9	–7.8	–1.0	–3.3	–2.6	–0.8	–3.8	34.3	11.5	10.3	4.5	8.0
Hong Kong SAR	–91.3	–91.1	–34.8	–20.4	–14.8	–21.0	–65.5	–62.3	–28.8	–24.4	–8.8	–0.3	25.7	28.8	6.0	–4.1	6.1	20.7
Singapore	–46.7	–34.3	–22.2	–3.1	–5.9	–3.2	–45.9	0.1	–11.6	–10.1	–6.4	28.3	0.7	34.5	10.5	–7.1	–0.6	31.6
Taiwan POC	–10.0	–23.6	1.4	–0.7	–7.1	–17.2	–2.7	–4.8	1.0	–0.1	–1.1	–4.6	7.3	18.8	–0.4	0.6	6.0	12.7
Europe																		
Czech Republic	–4.1	0.1	0.9	–1.5	–0.2	0.9	–0.9	–0.1	–0.8	–0.6	0.7	0.7	3.2	–0.2	–1.7	0.9	0.8	–0.2
Hungary	–0.8	3.1	0.7	1.5	–0.3	1.2	0.3	1.0	–0.2	0.3	–0.1	1.0	1.0	–2.1	–0.9	–1.3	0.2	–0.1
Poland	0.4	–2.9	0.0	–0.5	0.4	–2.7	3.6	0.1	–0.7	0.3	–0.6	1.1	3.2	3.0	–0.7	0.8	–1.0	3.9
Russia	–14.6	–14.8	–4.6	–4.8	–7.6	2.2	–11.1	–7.7	–2.3	–1.4	–4.6	0.7	3.5	7.1	2.3	3.4	3.0	–1.5
Turkey	2.5	8.4	2.2	3.3	1.5	1.4	5.1	10.2	2.0	2.7	1.3	4.3	2.5	1.8	–0.3	–0.7	–0.2	2.9
Middle East																		
Egypt	3.8	0.0	–0.1	–0.2	–0.2	0.5	2.0	0.1	0.2	0.1	–0.6	0.4	–1.8	0.1	0.3	0.3	–0.4	–0.1
Kuwait	–0.7	–3.6	–1.7	–0.5	0.1	–1.4	–0.4	0.2	0.0	0.1	0.5	–0.3	0.3	3.8	1.7	0.6	0.3	1.1
Saudi Arabia	20.4	–10.6	–0.7	0.9	–7.0	–3.9	1.8	–0.4	–1.5	–0.2	–0.4	1.6	–18.6	10.2	–0.8	–1.1	6.6	5.5
United Arab Emirates	7.2	–0.3	–0.8	–0.6	1.4	–0.3	–2.5	–0.9	0.3	1.1	–0.3	–2.1	–9.7	–0.6	1.1	1.7	–1.7	–1.7
Western Hemisphere																		
Argentina	0.1	–2.3	–1.8	–0.2	–1.6	1.3	0.0	0.8	–1.5	–0.1	2.0	0.4	–0.1	3.1	0.3	0.1	3.6	–0.9
Brazil	–10.9	13.9	0.3	9.0	0.9	3.8	–9.3	9.2	1.1	0.1	3.2	4.8	1.7	–4.7	0.9	–8.9	2.3	1.0
Chile	–4.3	1.5	2.4	–0.5	0.5	–0.9	–1.8	0.1	0.7	–0.4	0.2	–0.5	2.5	–1.4	–1.7	0.2	–0.3	0.4
Colombia	–3.8	0.3	0.6	–0.5	–0.5	0.7	–2.3	–0.5	–0.5	–0.4	0.1	0.3	1.4	–0.8	–1.1	0.0	0.7	–0.4
Mexico	–8.4	–8.5	–3.1	–0.2	–3.2	–2.1	–4.6	–2.0	0.9	3.9	–3.2	–3.6	3.8	6.5	4.0	4.0	–0.1	–1.5
Venezuela	1.3	–4.0	–1.4	–1.5	–1.1	0.0	1.2	–0.3	0.1	–0.3	–0.3	0.2	–0.1	3.6	1.5	1.2	0.7	0.2
Fuel exporters[2]	26.6	–34.7	–9.8	–6.5	–8.0	–10.5	–3.8	2.3	1.2	–2.7	–0.8	4.7	–30.4	37.0	11.0	3.7	7.1	15.2
Nonfuel exporters	–127.5	–120.4	–31.1	–18.0	–47.2	–24.0	–65.3	–12.4	0.1	–1.1	–0.5	–11.0	62.2	108.0	31.2	17.0	46.8	13.0

Source: Bank for International Settlements.

[1]Mainly deposits.

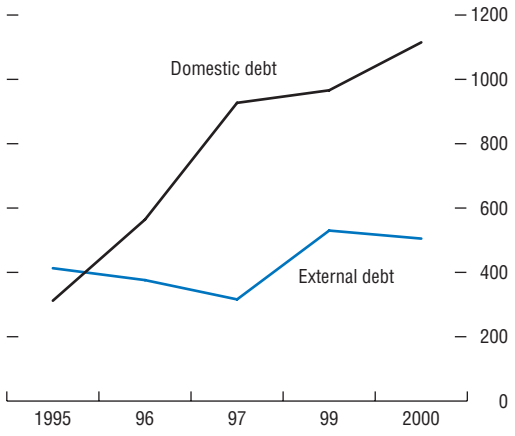
[2]Fuel exporters are defined (as in *World Economic Outlook,* October 2000) as countries for which oil exports constitute at least 20 percent of exports in the base period (1995–97): Algeria, Angola, Bahrain, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Saudi Arabia, Trinidad and Tobago, United Arab Emirates, and Venezuela.

has not been accompanied by large increases in cross-border bank exposures to other emerging markets as had occurred in the earlier period. Although it is true that banks have increased their exposures to some countries in Europe and Latin America, this has been offset by reduced exposures to Asian emerging markets. The repayments in Asia were dominated largely by reduced claims on Thai and Indonesian entities, due in part to a shift by domestic banks and corporations to local currency funding as a result of relatively low domestic interest rates (and possibly a desire to reduce vulnerability to cross-currency exposures).

One factor cushioning the impact of the decline in net private flows to nonfuel-exporting emerging markets, as well as the on-off nature of access to international markets, has been the greater reliance of sovereign and high-quality corporates on local funding sources, particularly local bond markets in both Asia and Latin America (Figure 3.2). The recent growth of emerging bond markets can be attributed in part to the bank and corporate restructuring in the aftermath of the Asian crisis. During the financial restructuring exercises, the national authorities have issued large amounts of domestic bonds to fund purchases of nonperforming loans and the recapitalization of local banks. In addition, corporate bond issuance has risen sharply in some countries. For instance, between 1997 and 2000, the outstanding stocks of local currency-denominated, long-term bonds in Malaysia, the Republic of Korea, Thailand, Indonesia, and the Philippines more than doubled from a total of $181 billion to $422 billion (see Annex II for a discussion of the development of local bond markets in Asia and Latin America).

Argentina provides one example of the greater reliance on domestic markets when the prospect for raising funds in the international capital markets has weakened. The share of domestic debt in Argentina's total public debt increased from about 28 percent at end-1997 to 36 percent at end-2000. These figures underestimate residents' holdings of government debt,

Figure 3.2. Emerging Market Domestic Debt and External Debt
(In billions of U.S. dollars)



Source: Merrill Lynch.

however, since Argentina's financial institutions hold a substantial portion of the country's U.S. dollar-denominated external debt (see Annex II). Moreover, in 2000, the Argentine authorities intended to fulfill about 78 percent of their financing program by tapping local investors. Of the $17.5 billion earmarked for local investors, $4.3 billion was expected to come from private pension funds, $6 billion from banks, and $3 billion from insurance companies and other investors.

Developments in the Bond, Equity, and Syndicated Loan Markets

Total emerging market issuance of international bonds, equity, and syndicated loans grew by 32 percent in 2000, and there was a further surge in issuance early in the first quarter of 2001 (Table 3.3).[3] However, issuance activity during this period aptly illustrated the on-off nature of market access experienced by emerging markets, with both the expansion and contraction of market access often triggered by events in mature markets (Annex III). In the first quarter of 2000, total issuance reached $60.4 billion, the highest quarterly rate since the third quarter of 1997. However, issuance moderated subsequently as equity prices fell sharply on the U.S. Nasdaq market and concerns grew about the extent and duration of the tightening of U.S. monetary policy. Although equity prices, especially in the technology, media, and telecoms (TMT) sector, continued to decline in the third quarter as earnings prospects were reevaluated, perceptions that the U.S. economy was slowing alleviated concerns about higher U.S. interest rates. In this environment, higher bond issuance partially offset declines in equity placements and syndicated loans. As a result, this was the best third quarterly issuance level in three years, with gross issuance through the first three quarters of 2000 exceeding the annual amounts raised in 1998 and 1999.

Heightened concerns about a slowdown of the U.S. economy, a further downgrading in the earning prospects of the global TMT sector, and a deterioration in U.S. credit markets (especially in the high-yield sector) all took their toll on emerging bond and equity markets in the last quarter of 2000. Emerging market interest rate spreads widened in line with those in the U.S. high-yield market, and concerns about developments in Argentina and Turkey led to an almost complete drying up of emerging market bond issuance. Nonetheless, overall issuance was sustained during the period by large equity issues by Chinese entities and continued syndicated lending. Overall, issuance in 2000 thus reached the highest level since 1997.

All emerging market regions experienced significant percentage increases in gross inflows in 2000, except the Middle East. In Asia, nearly half the increase came in the form of the equity issues already noted and increased syndicated bank loans accounted for the remainder—especially loans to northern Asian countries or regions, notably Hong Kong SAR and Taiwan Province of China. In the Western Hemisphere, emerging market economies also increased both equity and loan issuance, notably new bank lending to Mexican corporates. In emerging Europe, bank lending increased significantly to Central European economies and Slovenia. And the rise

[3]The differences between the balance of payments data discussed in the previous section and the gross financing data discussed in this section reflect both conceptual differences and—presumably mainly in the balance of payments data—measurement error. Balance of payments data—taken here from the IMF's *World Economic Outlook* database—potentially offer the most complete coverage of total capital flows, but are subject to errors and omissions (and also to substantial revision). By contrast, gross financing data include new capital raising that occurs in the context of formal international offerings or syndicates, but exclude bank lending that is not syndicated and investments that do not occur through international public offerings: thus, substantial amounts of trade financing, foreign direct investment, and investment in domestic securities are excluded from these data. In addition, such data are for gross new financing, and therefore exclude purchases in the secondary market and do not reflect repayments or take account of the maturity of the financing (e.g., a 2-year note issuance facility that is renewed five times will show up in the data five times, while an economically equivalent 10-year bond issue will show up only once).

Table 3.3. Gross Private Market Financing to Emerging Markets, by Region, Financing Type, and Borrower Type[1]

(In billions of U.S. dollars)

							First Half	1998				1999				2000				2001	
	1995	1996	1997	1998	1999	2000	2001	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2[1]
All emerging markets	**151.1**	**209.8**	**274.8**	**149.0**	**163.6**	**216.4**	**86.9**	**41.2**	**50.4**	**30.1**	**27.3**	**32.0**	**50.8**	**32.4**	**48.4**	**60.4**	**55.4**	**50.3**	**50.3**	**41.6**	**44.4**
Asia	79.6	109.4	115.7	34.2	56.0	85.9	39.7	8.3	13.5	5.2	7.2	11.1	14.9	15.5	14.5	19.5	26.1	18.3	22.0	19.1	20.0
Western Hemisphere	35.9	63.0	89.2	65.7	61.4	69.1	27.8	22.6	22.0	10.4	10.8	13.2	21.8	9.4	16.9	23.7	13.9	18.8	12.7	15.2	12.6
Europe	17.3	21.6	38.9	35.6	26.2	37.0	10.0	7.6	12.7	9.4	5.9	3.2	8.0	5.1	9.9	9.4	9.1	7.4	11.2	5.1	4.7
Africa	9.2	5.5	15.2	3.9	4.7	9.4	3.2	1.6	0.9	0.2	1.2	1.0	1.8	0.3	1.6	6.3	1.8	0.6	0.7	1.9	1.3
Middle East	9.1	10.3	16.0	9.6	15.4	15.0	6.2	1.2	1.4	4.8	2.1	3.5	4.3	2.1	5.5	1.4	4.6	5.3	3.8	0.5	5.7
Fuel exporters[2]	11.9	9.6	15.2	11.8	10.6	11.9	3.0	0.2	4.0	6.1	1.4	3.2	2.9	1.0	3.5	2.1	3.9	3.3	2.6	1.2	1.8
Nonfuel exporters	139.3	200.2	259.6	137.2	153.0	204.5	83.9	41.0	46.4	23.9	25.8	28.9	47.9	31.4	44.9	58.3	51.5	46.9	47.7	40.5	42.6
Bonds	59.2	103.0	126.2	79.5	82.4	80.5	54.7	26.7	27.9	14.0	10.8	21.8	26.5	15.5	18.6	33.8	16.1	21.1	9.4	26.4	27.5
Equities	10.0	17.8	26.2	9.4	23.2	41.8	7.6	2.8	3.6	0.3	2.8	2.4	6.7	6.1	8.0	8.9	11.6	8.8	12.4	2.3	5.3
Loans	82.0	89.0	122.5	60.0	58.1	94.2	24.6	11.7	18.9	15.8	13.6	7.8	17.7	10.8	21.8	17.6	27.7	20.4	28.5	12.9	11.6
Sovereign	25.6	39.5	40.4	49.9	47.3	52.0	25.7	17.9	14.5	10.5	7.0	12.5	15.8	6.8	12.1	24.9	9.2	12.0	5.9	11.5	13.9
Public	47.6	53.3	73.4	32.3	25.4	35.9	13.6	5.0	12.3	8.9	6.1	5.1	6.2	5.7	8.4	8.8	8.7	8.6	9.9	7.1	6.5
Private	77.9	117.0	161.0	66.7	90.9	128.5	47.6	18.3	23.6	10.7	14.1	14.4	28.8	19.8	27.8	26.7	37.6	29.8	34.5	23.0	24.0
Bonds by region	59.2	103.0	126.2	79.5	82.4	80.5	54.7	26.7	27.9	14.0	10.8	21.8	26.5	15.5	18.6	33.8	16.1	21.1	9.4	26.4	27.5
Asia	26.6	44.4	45.5	12.4	23.4	24.5	21.3	3.3	6.7	0.4	2.0	7.0	6.3	6.2	4.0	8.7	4.2	6.9	4.7	9.6	11.2
Western Hemisphere	23.2	46.9	52.0	39.5	38.3	35.6	21.0	15.5	13.3	5.1	5.6	10.8	13.1	6.5	8.0	16.1	6.6	10.7	2.3	12.1	8.9
Europe	6.6	7.5	16.2	24.0	13.9	14.2	7.0	5.4	8.0	7.8	2.8	2.6	4.3	1.8	5.1	7.1	3.3	2.6	1.2	3.6	3.1
Africa	2.0	1.6	9.9	1.4	2.3	1.5	1.4	1.4	0.0	0.0	0.0	0.4	1.2	0.2	0.5	1.2	0.3	0.0	0.0	0.9	0.5
Middle East	0.7	2.6	2.7	2.2	4.4	4.7	4.0	1.0	0.0	0.8	0.4	1.0	1.6	0.9	0.9	0.7	1.8	1.0	1.2	0.3	3.7
Fuel exporters[2]	0.4	2.2	2.4	2.7	2.7	2.3	0.9	0.0	2.1	0.5	0.1	1.2	1.2	0.2	0.0	0.7	1.7	0.0	0.0	0.5	0.4
Nonfuel exporters	58.8	100.8	123.7	76.9	79.7	78.2	53.8	26.7	25.9	13.5	10.7	20.6	25.3	15.3	18.6	33.2	14.5	21.1	9.4	26.0	27.1
Equity by region	10.0	17.8	26.2	9.4	23.2	41.8	7.6	2.8	3.6	0.3	2.8	2.4	6.7	6.1	8.0	8.9	11.6	8.8	12.4	2.3	5.3
Asia	8.0	11.0	14.4	4.5	18.3	31.6	6.5	1.8	1.9	0.0	0.7	1.4	5.7	5.3	5.8	6.7	9.6	3.0	12.2	2.0	4.6
Western Hemisphere	0.6	3.6	5.4	0.2	0.8	5.1	0.6	0.0	0.1	0.1	0.0	0.2	0.0	0.3	0.3	1.3	0.6	3.3	0.0	0.0	0.6
Europe	0.6	1.3	3.3	2.5	1.4	3.3	0.3	0.8	1.0	0.1	0.7	0.3	0.4	0.2	0.5	0.5	1.1	1.7	0.0	0.3	0.0
Africa	0.4	0.8	0.7	0.8	0.7	0.1	0.1	0.1	0.2	0.0	0.6	0.0	0.2	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.1
Middle East	0.3	1.1	2.4	1.5	2.1	1.6	0.0	0.2	0.4	0.1	0.8	0.5	0.3	0.3	0.9	0.4	0.4	0.8	0.1	0.0	0.0
Fuel exporters[2]	0.0	0.9	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonfuel exporters	10.0	16.9	24.7	8.7	23.2	41.8	7.6	2.8	3.6	0.3	2.0	2.4	6.7	6.1	8.0	8.9	11.6	8.8	12.4	2.3	5.3
Loans by region	82.0	89.0	122.5	60.0	58.1	94.2	24.6	11.7	18.9	15.8	13.6	7.8	17.7	10.8	21.8	17.6	27.7	20.4	28.5	12.9	11.6
Asia	44.9	54.0	55.9	17.4	14.3	29.8	11.8	3.1	4.9	4.8	4.5	2.7	2.9	4.0	4.6	4.1	12.4	8.3	5.0	7.5	4.2
Western Hemisphere	12.1	12.5	31.7	26.0	22.3	28.4	6.2	7.0	8.6	5.2	5.2	2.3	8.8	2.7	8.6	6.3	6.7	4.9	10.4	3.1	3.1
Europe	10.0	12.8	19.4	9.0	10.9	19.5	2.8	1.4	3.7	1.6	2.4	0.3	3.2	3.1	4.3	1.8	4.7	3.1	10.0	1.2	1.6
Africa	6.7	3.1	4.6	1.7	1.7	7.8	1.7	0.2	0.7	0.2	0.7	0.6	0.5	0.1	0.6	5.1	1.5	0.6	0.6	1.0	0.7
Middle East	8.1	6.6	10.9	5.9	8.9	8.7	2.2	0.0	1.0	4.0	0.9	1.9	2.3	0.9	3.7	0.4	2.4	3.5	2.5	0.2	2.0
Fuel exporters[2]	11.4	6.5	11.3	8.4	7.9	9.6	2.1	0.2	2.0	5.6	0.6	2.0	1.7	0.8	3.5	1.4	2.3	3.3	2.6	0.7	1.4
Nonfuel exporters	70.5	82.4	111.2	51.6	50.1	84.6	22.5	11.5	16.9	10.1	13.1	5.9	16.0	10.0	18.3	16.2	25.4	17.0	26.0	12.2	10.2
Bonds by sector	59.2	103.0	126.2	79.5	82.4	80.5	54.7	26.7	27.9	14.0	10.8	21.8	26.5	15.5	18.6	33.8	16.1	21.1	9.4	26.4	27.5
Private	26.5	45.7	60.2	24.5	26.2	26.2	22.5	8.7	9.7	2.4	3.8	7.1	8.9	5.3	5.0	8.5	5.0	8.1	4.7	11.6	10.4
Public	12.6	21.5	29.1	10.3	13.8	11.7	7.1	2.7	3.9	1.9	1.9	3.5	2.9	4.1	3.2	5.3	2.0	2.8	1.5	3.5	3.6
Sovereign	20.1	35.9	36.9	44.7	42.3	42.5	25.1	15.3	14.4	9.8	5.2	11.2	14.7	6.2	10.3	20.0	9.1	10.2	3.2	11.4	13.5
Loans by sector	82.0	89.0	122.5	60.0	58.1	94.2	24.6	11.7	18.9	15.8	13.6	7.8	17.7	10.8	21.8	17.6	27.7	20.4	28.5	12.9	11.6
Private	41.5	53.6	74.7	32.8	41.5	60.5	17.5	6.8	10.3	8.1	7.6	4.9	13.3	8.5	14.8	9.3	20.9	12.9	17.3	9.2	8.3
Public	35.0	31.7	44.2	22.1	11.6	24.2	6.5	2.3	8.4	7.0	4.3	1.6	3.2	1.6	5.2	3.4	6.7	5.7	8.4	3.6	2.9
Sovereign	5.5	3.7	3.6	5.2	5.0	9.4	0.5	2.6	0.1	0.7	1.8	1.4	1.2	0.7	1.8	4.9	0.0	1.7	2.8	0.1	0.4

Sources: Capital Data; and IMF staff calculations.

[1]Bond data include only the new money component of bond exchanges.

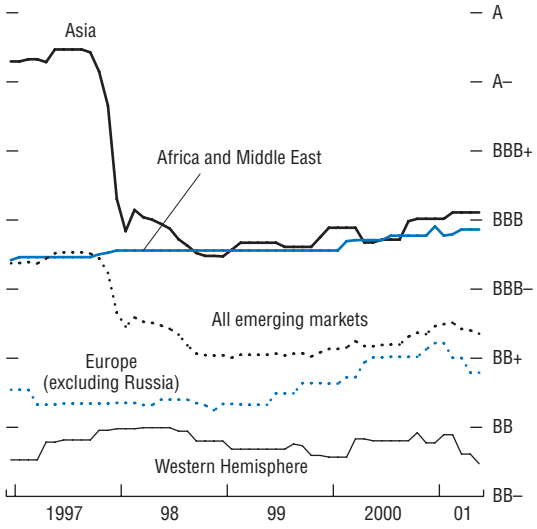
[2]Fuel exporters are defined (as in *World Economic Outlook*, October 2000) as countries for which oil exports constitute at least 20 percent of exports in the base period (1995–97): Algeria, Angola, Bahrain, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Saudi Arabia, Trinidad and Tobago, United Arab Emirates, and Venezuela.

in flows to Africa was mainly accounted for by bank lending to South African corporates.

Following the announcement of multilateral financial packages for Argentina and Turkey in December, and especially after the surprise cut in U.S. interest rates in early January 2001, conditions in global bond and equity markets improved. A number of emerging market borrowers quickly came to the market with new bond issues and equity market prices rallied strongly. Many emerging market sovereigns successfully prefunded much of their financing needs for 2001. In February and March, however, the rallies on the secondary markets for bonds and equities dissipated on continuing evidence of a U.S. economic slowdown and poor corporate earnings reports that more than offset the effects of lower U.S. short-term interest rates. Moreover, international bond markets were essentially closed for emerging market borrowers as investor concerns about emerging market fundamentals grew. Turkey experienced a major crisis and was forced to float the exchange rate, and doubts about the sustainability of Argentina's debt position came to the fore. For the first quarter 2001 as a whole, the record bond issuance in January was offset by drops in international equity placement and syndicated lending, leaving the quarterly total well below the average quarterly issuance levels in 2000.

Notably, the abrupt changes in market access experienced during this period were not associated with sharp changes in market perceptions about emerging market fundamentals as a whole. During 2000, average emerging market credit quality continued the improvement that had been evident since the Russian crisis of 1998 (Figure 3.3). Although there were concerns about fiscal developments in Argentina in May and October 2000, it was not until January 2001 that concerns about Argentina and Turkey (which resulted in credit rating downgrades), and about the likely effects of deteriorating global growth on emerging markets, led to declines in the average level of emerging market credit ratings. Moreover, market participants continued to project sustained growth for

Figure 3.3. Average Credit Ratings in Emerging Markets[1]



Sources: IMF staff calculations based on data from Moody's, Standard and Poor's, and Capital Data.

[1]Includes all major emerging markets with credit ratings as of December 1996.

emerging markets typically until the third quarter of 2000, when anticipated growth fell off rapidly during the remainder of the year (Figure 3.4). If changing market views on emerging market fundamentals were relatively stable or evolved slowly, this raises the issue of what factors contributed to the on-off pattern of market access so evident during 2000 and early 2001. These factors can best be illustrated by examining the experience with primary bond issuance and secondary bond market developments.

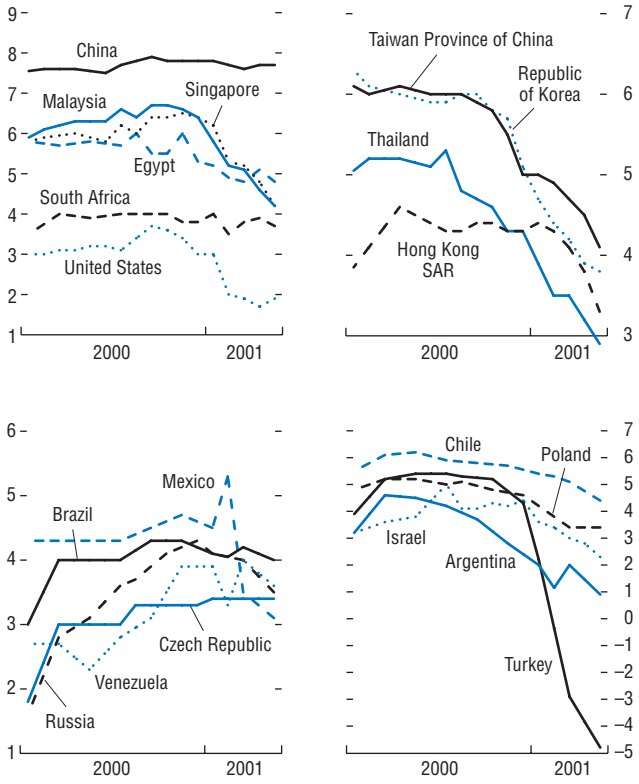
Bond Market Developments

Primary Market Issues

Although the first quarter of 2000 saw the largest quarterly issuance of emerging market bonds since the third quarter of 1997, total issuance declined by 2 percent between 1999 and 2000 (Table 3.3). Western Hemisphere borrowers accounted for almost half of total issuance in 2000, a slight reduction over prior year levels. Asian issuance was flat in 2000, but low interest rate spreads for high-grade corporate issuers stimulated new issuance among corporates and banks in a number of Asian countries in the first half of 2001. Issuance in Europe, Africa, and the Middle East was roughly unchanged, and continued to be heavily weighted toward sovereigns. Only Turkish issuance increased sizably, by some 30 percent to $8.5 billion in 2000, although not surprisingly the issuance came to a halt in the fourth quarter.

As already noted, issuance of bonds surged in January 2001 following the unexpected cut in U.S. interest rates and efforts by emerging market sovereigns to prefund their 2001 financing requirements. However, the market turbulence in Turkey (in February) and in Argentina (in March) caused issuance to taper off quickly. In particular, issuance by Argentina and Turkey in the first quarter of 2001 dropped by $8 billion in comparison to the corresponding figure in the first quarter of 2000. Total bond issues by emerging markets in the first quarter nonetheless reached $26.3 billion, which compared fa-

Figure 3.4. Real GDP Growth Consensus Forecast
(Year-on-year percent change)

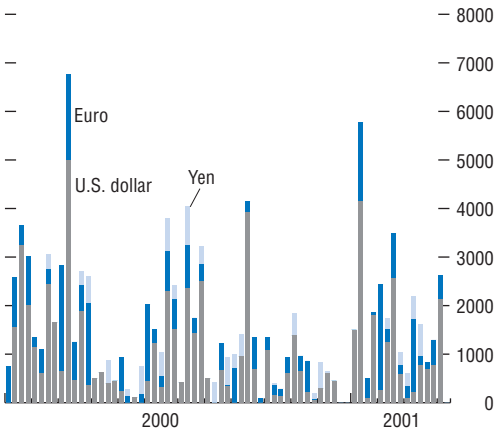


Source: Consensus Forecasts.

vorably with average quarterly issues of around $20 billion during 1998–2000. Latin America was again the largest issuer (accounting for 46 percent) in the first quarter, and Mexico exceeded its bond financing program for 2001 with two Eurobond issues totaling $2.2 billion. High-grade Mexican corporates followed, with Telmex and Pemex each issuing $1 billion deals. Asian borrowers accounted for 35 percent of total bond issues in the quarter, which was dominated by Hong Kong SAR corporate Hutchison Whampoa's issue of both a $2.5 billion convertible bond and a $1.5 billion plain vanilla Eurobond.

One of the characteristics of emerging debt markets over the course of 2000–01 has been repeated market closures. There are a number of potential definitions of market closures, but one simple standard is to look at weeks where issuance falls short of 20 percent of the prior year's weekly average issuance (excluding the holidays at end-December and in early January when issuance is always low). Under this definition, U.S. dollar emerging bond markets were closed for 16 weeks during 2000–01 (see Annex III for more details). In addition, market participants argued that December 2000 issuance had been limited, even after taking into account seasonality. These market closures typically occurred at times of great uncertainty, reflected in upturns in Emerging Markets Bond Index (EMBI) spreads. This, in turn, caused both issuers and investors to become reluctant to participate in primary issuance.[4] It is interesting to note that the euro and yen markets were open at times that the U.S. dollar segment was closed (Figure 3.5). An example of this is the multiple small tranches offered in the euro market by the Argentine sovereign, during May 2000, after the dollar market closed to emerging market issuers. Similarly, in the fourth quarter of 2000, Brazil and Turkey issued in the relatively receptive Samurai market. Indeed, the overall market for emerging market debt was

Figure 3.5. Currency Composition of Emerging Market Bond Issues
(In millions of U.S. dollars)



Sources: Capital Data; and IMF staff calculations.

[4]IMF (2000b), p. 20.

closed less than half the time that the U.S. dollar segment was.[5]

Excluding bond exchanges (see below), sovereign borrowers continued to account for the majority (53 percent) of emerging market bond issues in 2000. Other public sector issuers accounted for a further 15 percent of total issues. Corporate issues were strong in the early part of the third quarter of 2000, amid improving market conditions in the United States and after the main emerging market sovereign borrowers had completed their financing programs for the year. Some of the top-rated corporates that maintained access nevertheless preferred to borrow locally because of lower domestic interest rates. In early 2001, there were sizable issues by corporates (in particular from Asia), given the room left by the light issuance calendar of sovereigns in 2001 and the reopening of the U.S. high-yield market in the first quarter. Latin American corporates suffered from developments in Argentina over the period and were able to issue only minimally from the fourth quarter of 2000 onward.

After a large drop in the share of U.S. dollar-denominated bonds between 1998 and 1999 (from 74 percent to 61 percent), there was relatively little change from 2000 to the early part of 2001, with the dollar share declining from 60 percent to 59 percent of total bond issuance (Figure 3.5). Issues denominated in Japanese yen took on a more important role in 2000, rising from 3 percent of total issues in 1999 to 10 percent in 2000. Euro-denominated issues declined to some 27 percent in 2000 from 32 percent in 1999. The reemergence of Samurai issuance by emerging market sovereigns is related to the growth of both institutional and retail demand, and reflects the low-yield investment opportunities available in Japan at a time when there was a large-scale maturing of Japanese postal savings deposits (Box 3.1). Euro-denominated bond issuance has been supported by a retail market attracted by high coupon bonds and the development of the European institutional investor base (Box 3.2). The slower issuance in euro-denominated emerging market bonds in 2000 and in early 2001 can be attributed, in part, to disruptions in the infant euro high-yield market, which is dominated by telecoms, cable, and media issuers, whose stocks fell out of favor. Another cause of slower issuance in this segment was the strength of the U.S. dollar, which rose against the euro in the early months of 2001, resulting in reduced investor appetite for euro-denominated instruments. Both yen and euro-denominated markets were tapped opportunistically in 2000–01, when U.S. dollar issuance weakened (Figure 3.5).

In 2000 and the first quarter of 2001, emerging market sovereigns (mostly in Latin America) continued to undertake external debt liability management transactions, designed to lengthen the maturity of their external liabilities and reduce their outstanding stock of Brady bonds. For example, Mexico added $500 million to its 10-year global bond issue in January 2000 and reopened its $1 billion global bond (with an 8-year maturity, paying 8.625 percent) for $500 million in March 2000 to buy back Brady bonds. In March 2000, Brazil reopened its 30-year global bond for $600 million and also used the proceeds to buy back Bradys. In August 2000, Brazil issued a $5.16 billion, 40-year (callable on or after 2015) global bond in exchange for Brady bonds.

In early 2001, Brazil exchanged $2.2 billion in four Brady bonds—Par, Discount, Capitalization (C), and Debt Conversion (DCB) bonds—for a new global bond maturing in 2024. Moreover, Brazil decreased its Brady debt by paying the final principal payment of the amortizing Brazil Interest Due and Unpaid (IDU) bond, its shortest Brady bond. This marked the first time a Brady bond had actually matured. Argentina reduced its Bradys by exchanging Floating Rate Bonds (FRBs), Bontes, and Bocones for $2.1 billion in 11- and 30-year global bonds and paying about $650 million in principal on the amortizing FRBs, offsetting $1.4 billion bonds that matured. Since the first exchange by Argentina in 1995, emerging market sovereigns have reduced the stock of outstanding Brady debt by $80 bil-

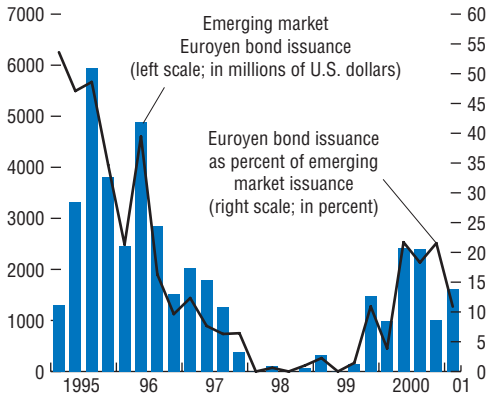
[5]The main factors behind this divergent behavior are discussed in Boxes 3.1 and 3.2, and Annex III.

Box 3.1. Emerging Market Sovereigns Return to the Euroyen Market

A notable development in 2000 was the return of emerging market sovereigns to the euroyen market. After being squeezed out for a two-year period following the Asian crisis, emerging market sovereigns have tapped the euroyen market during the 18 months to May 2001 for about 12 percent of their international bond issues (see the first figure). The recent turbulence in emerging markets does not appear to have precluded countries such as Argentina, Brazil, Colombia, Mexico, and Turkey from issuing bonds in the euroyen market at spreads that are significantly lower than in the dollar market (see the second figure). For instance, Turkey launched a three-year, ¥50 billion samurai bond in October 2000 at a spread of just 219 basis points over the yen-swap rate. Additionally, Tunisia launched a five-year, ¥35 billion global samurai bond in March 2001 aimed at both the domestic yen and the U.S. investor bases, with a spread of only 163 basis points over the yen-swap rate. The distinction between euroyen and samurai bonds is not entirely clear-cut: the former are sold internationally and the latter domestically in Japan. Euroyen issues may, therefore, have a significant domestic tranche, and ownership is further dispersed in secondary market trading.[1] Market participants expect the euroyen market for emerging market sovereign issues to deepen in the year ahead (accompanied by a growing dispersion and heterogeneity of the emerging market investor base). Emerging market corporates, however, have accessed this market only to a limited extent and are not expected to make significant inroads in the near term—hence, the exclusive focus on sovereigns.

[1]Samurai bonds are listed in Japan and have to conform with local securities regulations, which tends to make the retail investor comfortable about the legal status of these bonds. Bonds listed in the global euroyen format, in contrast, conform to Securities and Exchange Commission (SEC) regulations. Arbitrage opportunities between the global and samurai markets tend to be somewhat stymied by regulations that restrict who can trade in which market.

Emerging Market Sovereign and Public Sector Euroyen Bond Issuance

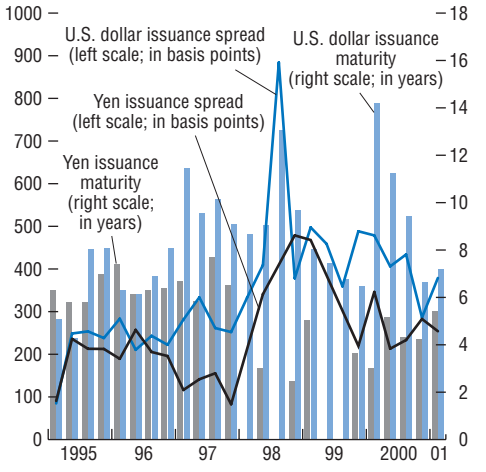


Sources: Capital Data; and IMF staff estimates.

The recent revival of the euroyen market, however, needs to be viewed in perspective. A sizable chunk of gross issues by emerging market sovereigns in the year to May 2001 in this

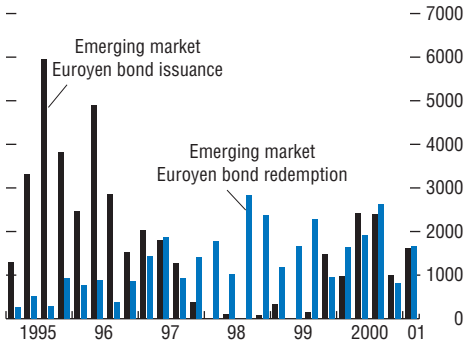
Emerging Market Sovereign and Public Sector Weighted Spreads

(By currency of issuance)



Sources: Capital Data; and IMF staff estimates.

Emerging Market Sovereign Euroyen Bond Issuance
(In millions of U.S. dollars)



Source: Capital Data.

market has been for rolling over maturing bonds (see the third figure). The maturity profile of recent issues has been for a shorter duration than was the case in 1995–97, and noninvestment grade ratings have constituted a relatively smaller portion of recent issues than before. Nevertheless, given that there were literally no rollovers during 1997–99—a period characterized by significant maturity clustering—the recent reactivation of the euroyen market constitutes an important development in international capital markets.

What accounts for the revival of the euroyen market for emerging market sovereign bonds? The primary driving force, as argued below, is a clustering in recent years of economic and policy developments in Japan that have favored the samurai market. Emerging market sovereigns have been nimble in understanding and using this window of opportunity to widen their funding base.

Developments in Japan

The search for yield intensified when the Bank of Japan (BoJ) introduced its zero interest rate policy in February 1999. Both the corporate and household sectors in Japan have been flush with liquidity in recent years—BoJ estimates indicate that cash and deposits held by the household sector alone are almost 140 percent of GDP. Moreover, the cash position of households is being enhanced by the wave of maturing 10-year postal savings deposits amounting to a cumulative ¥106 trillion during fiscal years 2000 and 2001. The search for yield, however, has not been transformed into an appetite for equities—risk aversion among households is strong, given past experience with investing in stocks. Alternatives to holding cash, other than to invest in Japanese government bonds (JGBs), have been limited in recent years. High-grade corporates in Japan, faced with a combination of favorable cash flow positions and dwindling incentives for expanding operations domestically, have responded by cutting back on bond issues—the supply of corporate bonds was down by about 40 percent in 2000 from the previous year. Unlike in the United States, Japan does not have a deep high-yield domestic bond market.

With limited options for securing higher yields in the domestic bond market, both institutional and retail investors in Japan have been eyeing the euroyen market for possibilities—with the former investors focusing mainly on the global euroyen market, and the latter primarily on the samurai market. Although institutional investors have exhibited a preference for euroyen bonds issued by foreign corporates, retail investors have an overwhelming preference for emerging market sovereign over corporate debt instruments. Retail investors—a category that includes middle-class salary earners, rich individuals, small companies, and private endowments—have been significant buyers of samurai bonds issued by emerging market sovereigns during the 18 months to May 2001. According to market participants, the purchase of emerging market samurais by retail investors appears to be driven by their gut feeling that while countries do not go out of existence, companies can and do so periodically.

Regional banks in Japan are also significant holders of emerging market sovereign samurais. However, they have recently adopted a more

Box 3.1 *(concluded)*

cautious attitude to this category of debt instruments because of the introduction of mark-to-market accounting from April 2001. While regional banks, like retail investors, tend to hold emerging market samurais to maturity, and hence are less concerned in practice with price volatility, mark-to-market accounting nevertheless introduces a new element of balance sheet risk. Consequently, they have focused mainly on shorter duration emerging market sovereign samurais in recent months to minimize risks to balance sheets.

Duration mismatches in the bond market have had positive spillovers for emerging market sovereign euroyen issues. First, there has been a relative paucity of debt instruments of shorter duration in Japan—JGBs tend to be concentrated mainly in the 10-year range. While the Ministry of Finance has recently done a good job of spreading the issues across the yield curve, this still has not fully alleviated the relative shortage of debt instruments in the two- to five-year range. While JGBs and emerging market sovereign euroyen bonds are not perfect substitutes, issuers of the latter category of debt instruments have used the window of opportunity created by the duration mismatch in yen instruments to focus on the shorter end of the yield curve, and increase their placements of bonds in the two- to five-year range.

Technical features

Listed below are some of the main defining characteristics of the emerging market sovereign euroyen bond market.

- There is no technical secondary market for emerging market samurais—that is, a market in which bid-ask prices for these instruments are quoted on a daily basis. Since emerging market sovereign samurais are generally held to maturity, the absence of a secondary market has not crimped demand for these instruments. Furthermore, market-makers try to fill the gap left by the absence of a proper secondary market by offering to buy back the samurais in order to maintain an ongoing relationship with their clients. However, the prices at which such sales and purchases of emerging market sovereign samurais take place between the market-maker and the client are not public knowledge, so that it effectively functions as an over-the-counter market, presumably to the advantage of the market-maker.
- Market-makers sell emerging market samurais directly to retail investors—these can be purchased in denominations as small as $1,000 equivalents. There is very little bundling of emerging market debt into bond funds for the retail market. Listings in the global euroyen market are in much larger denominations to meet the needs of institutional clients. The recent launch of the Tunisian euroyen bond, for instance, was structured to take account of the different issuing requirements of the samurai and global euroyen markets.
- Institutional investors in Japan tend to depend primarily on risk assessments provided by international credit rating agencies in deciding how large a spread to demand on emerging market sovereign issues. While retail investors also make use of assessments provided by Japanese credit rating agencies, they tend to take the lead mainly from the international credit rating agencies in cases where there is a difference of opinion between the local and the foreign rating agencies.
- Japanese retail investors make a distinction between Asian and non-Asian sovereign debt. In general, they appear to be more negative on debts issued by the Asian countries—memories of the Asian crisis still appear to be fresh. While the "Miyazawa Plan" opened the door to Japanese guarantees of Asian samurai issues, there has been little use made so far of these guarantees, except by the Philippines, and much of the recent samurai issuance has been by South American sovereigns.
- Asian sovereigns, in general, prefer to keep their yen exposure, and do not swap into dollars. Non-Asian sovereigns prefer to swap some of their yen exposure to dollars, and do so.

Box 3.2. The European Investor Base for Emerging Market Debt

One of the major structural changes in international financial markets over the past three years has been the growth of the European investor base for emerging market debt. In 1997, new bond issues denominated in the 12 predecessor (national) currencies of the euro accounted for 13 percent of total emerging market bond issues, compared to 73 percent for U.S. dollar-denominated issues. The share of euro-denominated issues rose to around 30 percent in 1999 and remained at that level in 2000; for dollar-denominated issues, the figures fell to 61 percent in 1999 and 60 percent in 2000. These bond issuing trends remained similar in the first two months of 2001 (see the table).

Emerging Market Debt Issues by Currency
(Percentage of total)

	1997	1998	1999	2000	January 1–April 15, 2001
Euro	13	24	32	27	30
U.S. dollar	73	74	61	60	59
Other	14	2	7	13	11

Source: Capital Data Bondware.
Note: The euro sector includes issues denominated in the 12 legacy (component) currencies.

Following the introduction of the euro in January 1999, the market for euro-denominated emerging market debt expanded rapidly, with issues in 2000 amounting to some €26 billion, compared to U.S. dollar issues of $44 billion. At end-February 2001, outstanding debt in euros (and its component currencies) was €60 billion compared to $250 billion for the U.S. dollar sector. Of the euro issues, €34.6 billion, equal to 58 percent of the total, was issued by sovereign and public sector borrowers, and the remainder by private sector borrowers.

The main structural factors driving growth of the European investor base have been the creation of a pan-European debt market since the inception of the euro and the growth of European pension funds.

The appearance of the euro has been accompanied by a strong move by European investors, primarily institutional and, to a lesser degree, retail, out of individual country fixed-income and equity markets into internationally traded, euro-denominated fixed-income (not only emerging market, but also high-yield and investment-grade). Although both individual country and international bonds are denominated in euro, the latter are more liquid instruments because of the scale of issuance (both of single bonds and in aggregate). By contrast, European Economic and Monetary Union (EMU) convergence criteria have reduced not only the amounts of individual country bonds available, but also the yields on offer. Thus, the creation of the euro has released funds for cross-border investment that were previously prohibited by rules forbidding cross-currency investment, and the funds have flowed to the international market because of its better liquidity.

In addition, demand for liquid, euro-denominated assets has been driven by rapid growth in the European pension fund industry; most of this demand has come from firms setting up funded employee schemes, and also from individuals building up pension savings through mutual funds and other means.

As a result of these developments, the main investors in euro-denominated emerging markets have been euro-area residents. Market participants argue that about 60 percent of the investors are bank-managed funds and newly created mutual funds; pension funds and private banking (that is, managed funds for wealthy individuals) account for a little less than 10 percent each; direct retail investors are a very small percentage; and the remainder, about 20 percent, is accounted for by asset managers representing a variety of funds, both euro-area and non-euro-area.

The euro-area investors are located mainly in Germany, Italy, the Netherlands, and Spain (the latter country being dominated by bank funds), which account for roughly three-fourths of transactions, according to market participants. Investors from France, Portugal, and (through bank funds) Austria are also active. To date, diversification by U.S. and other non-euro-area investors appears to have been a minor factor in market development.

Emerging market issuers in the euro market have been the traditional borrowers from Latin America and Europe. In 2000, borrowers (sovereigns, corporates, and banks) from Argentina,

Box 3.2 *(concluded)*

Brazil, Mexico, and Turkey accounted for 59 percent of new issues, similar to the figure for 1999. Additional borrowers have been accessing this market, however. For example, in early 2001, Venezuela, Colombia, and Jamaica were able to access the market. In addition, South Africa, with an investment-grade rating of BBB–, issued €500 million at a 7-year maturity; Croatia, also with a rating of BBB–, was able to issue €500 million at a 10-year maturity; and Poland was able to access funds at E+28 basis points (E denoting EURIBOR, the interbank offered rate in euro). Turkey was able to borrow €750 million at three years in February 2001, just prior to the float of the Turkish lira, thanks to the strength of its traditional retail investor base. Indeed, one motivation for borrowers to issue euro-denominated bonds has been the perception that the investor base is stable and, therefore, a reliable source of funds.

The main market characteristics for emerging market euro debt, compared to dollar-denominated debt, are less depth and liquidity (that is, ability to trade in size), but also less price volatility. Also, the euro market is shorter in duration, without the range of 20- to 30-year bonds that have become common offerings in U.S. dollars in recent years. The depth of the market is improving, nevertheless, as shown by its ability to comfortably absorb new issues of €1 billion, without the previously used backstop of a 144A tranche (which permitted private placement with investors in the United States if the issue faced difficulties).

Market participants have noted that the euro market has been much less volatile than the dollar market but has also offered a lower total return. For example, from January 1999 (inception of the euro) to end February 2001, the annual standard deviation of prices has averaged just under 10 percent for U.S. dollar bonds, and just under 3 percent for euro bonds. Over the same period, the euro market returned substantially less, thanks largely to the depreciation of the euro against the dollar, but also because of tighter spreads to corresponding government bonds. The low volatility of prices to some extent is seen to be reflecting the role of retail investors who trade very little, preferring to buy and hold.

Prices of euro-denominated emerging market debt are closely linked to euro investment-grade and high-yield debt, through crossover investors. Unlike dollar-denominated debt, however, high-yield debt is comparatively unimportant, and investment grade is the dominant influence because it is overwhelmingly the bigger market. In 2000, new issues in the euro investment-grade market amounted to €472 billion (compared to $546 billion in the U.S. dollar market), whereas in the euro high-yield market it was less than €7 billion (compared to $42 billion in the U.S. dollar market, down from $100 billion in 1999).

One feature common to the euro-denominated debt markets has been the use of the swap curve, rather than a government securities yield curve, as the benchmark for pricing. The relatively good liquidity in the interest rate swap market out to 10-year maturities, in comparison with illiquid and heterogeneous individual country government bonds (of differing size, rating, and liquidity), has led to pricing in terms of swap rates and implied spreads over EURIBOR.

lion (Brazil, –$29.2 billion; Argentina, –$15.5 billion; and Mexico, –$15.1 billion—see Table 3.4) through exchanges, buybacks, calls, warrant exercises, default and subsequent restructuring (Ecuador), amortization, and (most recently) exchanges including cash payments. As a result, only 47 percent of the original face value of Brady debt ($153.7 billion) remained outstanding as of the end of the first quarter of 2001. At the same time, issuance of Eurobonds grew substantially and emerging market sovereign debt now consists of 70 percent Eurobonds versus 30 percent Brady debt.[6]

[6]In June 2001 (just after the period covered by this report), Argentina completed a voluntary, market-based debt exchange operation, encompassing the swap of bonds with a face value of $29.5 billion. The operation aimed at reducing the gross financing requirements in 2001–05, through both an extension of principal and a reduction in interest obligations.

Table 3.4. Decline of Brady Debt[1]
(In billions of U.S. dollars)

	1995	1996	1997	1998	1999	2000	2001 (Q1)	Total
Argentina	–1.3	–0.2	–3.4	–2.9	–1	–5.4	–1.3	–15.5
Brazil	0	0	–10.5	–1.5	–5.4	–6.6	–5.2	–29.2
Ecuador	0	0	0	0	0	–6	0	–6
Mexico	0	–6.5	–1.3	0	–0.9	–2.6	–3.8	–15.1
Panama	0	0	–0.6	–0.6	0	0	0	–1.2
Peru	0	0	0	–0.4	0	0	0	–0.4
Philippines	0	–0.6	–0.1	–0.2	–0.9	–0.2	0	–2
Poland	0	0	–1.7	–0.7	0	–0.8	0	–3.2
Venezuela	0	0	–4.9	–0.8	–1	–0.7	–0.1	–7.5
Total	–1.3	–7.3	–22.5	–7.1	–9.2	–22.3	–10.4	–80.1

Sources: Merrill Lynch; and IMF staff calculations.
[1]Reduction in the stock of Brady debt.

In addition to the issuance of long-dated debt to retire Bradys, emerging market sovereigns issued about $24 billion of bonds with maturities greater than or equal to 10 years (about one-fifth of gross issuance). Argentina, Brazil, and Turkey—and also Qatar and the Central Bank of Tunisia—were able to issue 30-year bonds.

Secondary Market Developments

Emerging debt markets were the best performing asset class in 2000, as the total return of the asset class reached 14.4 percent (based on the EMBI global), although it fell back somewhat in the first four months of 2001 (Table 3.5). The performance during 2000 must be put in perspective, however. The return is only mar-

Table 3.5. Returns on Different Asset Classes[1]
(In percent)

				2001	2000				2001	
	1998	1999	2000	First Half	Q1	Q2	Q3	Q4	Q1	Q2
Bond Indices										
Emerging markets (EMBI Global)										
All countries	–11.5	24.2	14.4	5.8	6.6	0.4	5.0	1.9	2.3	3.5
Africa	–0.2	20.6	6.7	18.2	2.0	–6.5	8.4	3.3	9.2	8.3
Asia	13.4	14.4	8.2	7.5	0.3	1.2	3.3	3.2	4.9	2.5
Europe	–47.6	56.7	30.9	18.9	22.2	4.2	3.4	–0.6	5.2	13.0
Middle East	n/a	4.5	8.9	6.1	4.4	0.1	2.1	2.1	3.7	2.3
Latin America	–6.1	21.3	12.5	1.4	4.7	–0.5	5.7	2.2	0.6	0.8
U.S. Government Bond (Salomon)	9.8	–2.2	13.2	2.3	3.2	1.6	2.8	5.0	2.5	–0.2
GBI European (JP Morgan)	20.5	–14.8	0.6	–8.2	–2.0	0.2	–6.2	9.2	–4.0	–4.4
GBI Japan (JP Morgan)	15.9	15.7	–8.3	–4.9	–0.3	–2.3	–2.2	–3.7	–6.3	1.5
Global Government Bond (Salomon)	15.3	–4.3	1.6	–4.6	0.2	–0.1	–2.6	4.3	–3.0	–1.6
U.S. Investment Grade (Salomon)	8.6	–1.6	9.3	5.6	1.4	1.0	3.2	3.4	4.4	1.2
U.S. High Yield (Merrill Lynch)	3.7	1.6	–3.9	4.9	–1.8	0.6	1.3	–4.0	6.3	–1.3
Equity Indices										
Emerging markets (MSCI EMF)										
All countries	–25.3	66.4	–31.8	–3.3	2.0	–10.8	–13.4	–13.5	–6.2	3.1
Asia	–11.0	69.4	–42.5	–1.7	4.0	–14.0	–22.3	–17.3	–0.1	–1.6
Europe and Middle East	–26.0	79.6	–23.4	–18.5	3.0	–9.7	–3.9	–14.3	–22.0	4.5
Latin America	–35.1	58.9	–18.4	3.3	3.2	–8.1	–6.0	–8.5	–3.5	7.1
Mature markets (MSCI World)	24.8	25.2	–14.0	–11.2	0.8	–3.8	–5.3	–6.4	–13.1	2.2
U.S., S&P 500	28.6	21.0	–9.1	–6.7	2.3	–2.7	–1.0	–7.8	–11.9	5.9
U.S., Nasdaq	39.6	85.6	–39.3	–12.5	12.4	–13.3	–7.4	–32.7	–25.5	17.4
Europe, Bloomberg Europe 500	18.8	36.9	–7.0	–6.5	4.8	–4.3	–1.9	–5.5	–10.9	4.9
Japan, Nikkei 225	–9.3	36.8	–27.2	–5.9	7.4	–14.4	–9.6	–12.5	–5.7	–0.2

Source: Bloomberg Financial Markets L.P.
[1]Index providers shown in parentheses.

ginally higher than that of a 10-year, U.S. government bond, which has approximately the same duration and which returned 13.2 percent (Box 3.3 describes the link between U.S. interest rates and emerging markets spreads). The return also benefited from the one-time spread tightening in Ecuador and Russia in the wake of their successful debt restructurings.

Emerging market spreads on average (as measured by the EMBI global) narrowed by just one basis point over the course of 2000 (to 735 basis points) and widened by 19 basis points during the first four months of 2001 (Figure 3.6). Unlike in 1999, when the narrowing of spreads occurred across the board, in 2000 only Ecuadorian and Russian spreads tightened significantly—following the announcement of their debt exchanges in February and July, respectively.[7]

The small net movement in spreads masked great volatility throughout 2000 and early 2001. Although some episodes of spread widening appear to have been related to developments in emerging markets—particularly with regard to events in Argentina—mature market developments played a key role in most instances. For example, at times there were striking negative correlations between EMBI global spreads excluding Russia and movements in the U.S. Nasdaq index, as well as with expectations regarding the tightening of U.S. monetary policy (Figure 3.7). The EMBI global spreads were almost the exact mirror image of the Nasdaq during the rotation in and out of technology stocks in the first half of 2000. Concerns about a tightening of U.S. monetary policy helped lower the Nasdaq index in May 2000, and the EMBI spread took another sharp turn up, only to decline as the Nasdaq recovered during the summer as market participants came to believe that the U.S. Federal Reserve tightening cycle had come to an end. In September, spreads turned up sharply once again when poor earnings news pushed the Nasdaq down further and forecasts of higher default rates for U.S. high-yield borrowers led to a loss of market access for those borrowers at the end of September.

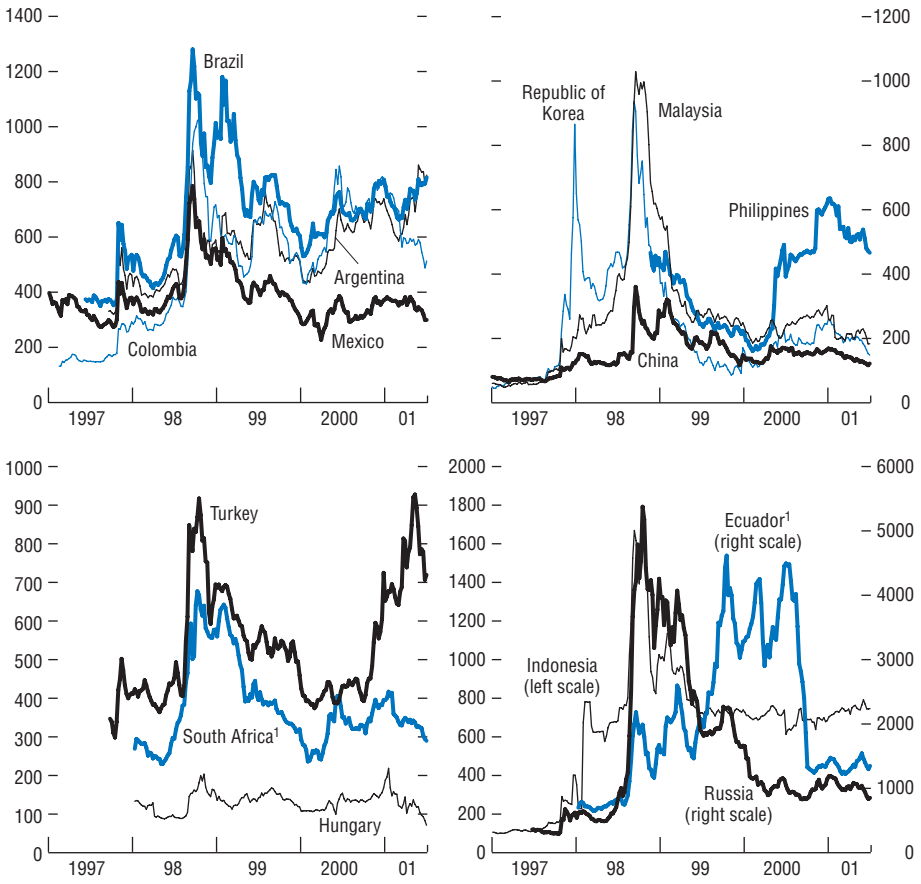
Market participants argue that the close association between EMBI global spreads and the Nasdaq reflects a number of factors. First, emerging market securities are regarded as a relatively risky asset class, and movements in the Nasdaq are seen as providing an indicator of the willingness of investors to take on relatively risky trading positions. A sharp fall in the Nasdaq, for example, is often taken as a signal that risk aversion has increased and traders take positions accordingly (including selling emerging market holdings).[8] Second, "crossover investors" who are judged by a benchmark which excludes emerging markets, but who may choose to opportunistically hold emerging market assets for a pickup in returns, have tended to retreat to their benchmark and hence away from emerging markets during times of volatility (and redemptions from their funds). Furthermore, such investors tend to use Value at Risk, stress testing, and similar models to limit their exposure to risk—and, hence, have tended to reduce riskier positions, including emerging market assets, when asset price volatility increases. Third, some multisector mutual funds may hold both emerging market debt and Nasdaq equity positions, and may reduce one position when the other suffers losses, perhaps to meet redemptions. Likewise, when hedge funds with holdings in both Nasdaq and emerging markets were faced with margin calls after the sharp declines in the Nasdaq, they reportedly sold off emerging market assets as well as other assets to meet these calls. This is not regarded as having been a major factor in 2000, however, because of limited investments of hedge funds in emerging market instruments. Nevertheless, it is important to note that the cor-

[7]The EMBI global spread was adjusted downward by 99 basis points on April 14, 2000, reflecting a change in Russian instruments included in the index following the London Club agreement for Russia.

[8]Additionally, such shifts in position may reflect changes in liquidity preference, particularly changes associated with a tightening of monetary conditions.

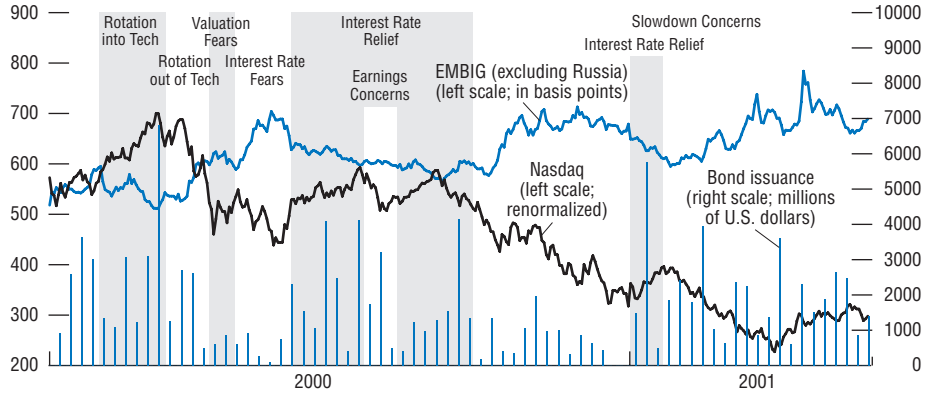
Figure 3.6. Yield Spreads for Selected Emerging Market Eurobonds

(Weekly average, in basis points)



Sources: Bloomberg Financial Markets L.P.; and J.P. Morgan Chase.
[1]EMBI Global Ecuador and South Africa spreads.

Figure 3.7. Emerging Market Bond Issuance, Nasdaq, and EMBI Global Spread



Sources: Bloomberg Financial Markets L.P.; IMF, *Emerging Market Financing,* February 2001; IMF staff estimates; and J.P. Morgan Chase.

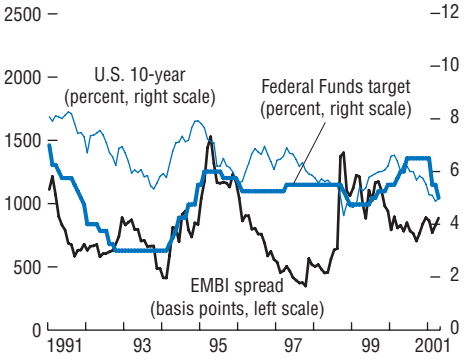
Box 3.3. What Determines Emerging Market Bond Spreads?

Market analysts and academic studies have argued that there are a number of factors that influence emerging market (EM) bond prices and interest rate spreads. These factors can be grouped into domestic and external variables, where the main domestic factors include credit ratings and short-run "technical factors" related to, for example, debt management practices generating large issue amounts or amortizations in a short time period. The more widely discussed external factors are U.S. interest rates, Nasdaq, U.S. high-yield and high-grade interest rates, volatility in various markets (notably stocks), commodity prices, and the investment position of EM funds (which is another "technical factor" on the supply side of funds).

While the linkage between EM interest rate spreads and the Nasdaq are discussed in the main text and Box 3.4 elaborates on the relationship with U.S. high-yield interest rate spreads, this box focuses on U.S. money market and government securities interest rates (but controls for other factors in the statistical analysis).[1] Although it is clear that the *yield* on EMBI follows the yield on 10-year U.S. treasuries, it is less clear how interest rate *spreads* respond to changes in U.S. interest rates.[2] Many market analysts argue that, all else equal, lower U.S. interest rates ease debt service payments for EM borrowers, thereby reducing both the likelihood of default and the corresponding risk premium incorporated into interest rate spreads. Another reason for such a link is that investors seek to enhance the overall return on their portfolios by switching to emerging market debt whenever yields in mature markets fall. However, there may also be cases when falling 10-year U.S. interest rates are associated with increases in EM interest rate spreads, such as when there is a flight to quality or a growth slowdown in mature markets. Flight to quality is a straightforward asset substitution event that would lead to a negative correlation, while the case of a mature market slowdown is more indirect and hinges on spillovers to emerging markets by reduced export opportunities and less revenues to repay foreign-currency-denominated debt.

The behavior of EM interest rate spreads and U.S. interest rates from 1991 to April 2001 is plotted in the first figure, with developments since the start of 2000 enlarged in the second figure. As suggested by the debt service approach, there are several episodes where EM interest rate spreads and the U.S. Federal funds target rate have moved together, such as in the early 1990s prior to the Mexican financial crisis. On the other hand, there was a sharp widening of spreads during the 1998 Russian crisis (supporting the flight to quality argument), which was associated with an easing by the U.S. Federal

EMBI Spreads and U.S. Interest Rates, January 1, 1991–April 18, 2001[1]

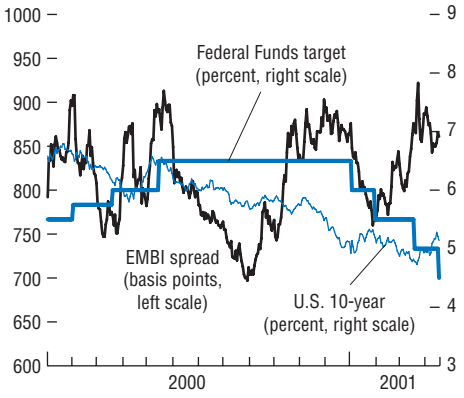


[1]This figure plots U.S. interest rates and EMBI spreads on a monthly basis (the rates in effect on the first day of each month).

[1]The analysis uses EMBI interest rate spreads since they are available over a relatively long time period. Although there are other indices produced by J.P. Morgan Chase that are more relevant in the recent time period, the correlations between the indices are so high that the choice of index does not affect any of the qualitative results presented here.

[2]Although the maturity and duration of the two assets are not the same, the 10-year U.S. treasury is an approximate benchmark for the EMBI, with a maturity that is shorter (10 years rather than 13.6 years for the EMBI on March 30, 2001) but a duration that is longer (around 7.7 years compared to 5 years). The yield on EMBI will thus be approximately equal to the yield on the 10-year U.S. treasury plus the EMBI interest rate spread as reported by J.P. Morgan Chase.

EMBI Spreads and U.S. Interest Rates, January 1, 2000–April 18, 2001



A GARCH Model of Changes in Emerging Market Spreads*

	Coefficient	Z-Statistic	Probability
Constant	–0.80	–3.03	0.00
D(U.S. 10-year yield)	33.49	5.76	0.00
D(U.S. 10-year yield) lagged	15.41	3.01	0.00
D(U.S. 3-month yield)	0.28	0.06	0.96
D(U.S. 3-month yield) lagged	–0.98	–0.16	0.87
Nasdaq return	–0.94	–3.21	0.00
S&P 500 return	–1.02	–1.83	0.07
Dlog(VIX index)	22.61	3.53	0.00
Crises dummy*	184.44	18.93	0.00
D(High-yield spread)	47.29	11.71	0.00
Variance Equation			
Constant	3.02	8.27	0.00
ARCH(1)	0.10	20.33	0.00
GARCH(1)	0.90	237.43	0.00
Dlog(VIX)	291.80	13.42	0.00

*Daily observations from 1991 to April 2001. Adjusted *R*-square equals 0.21. The crises dummy is equal to 1 on the days of large changes in the EMBI during the Mexican, Asian, and Russian crises.

Reserve. The subsequent tightening in EM interest rate spreads was concurrent with a tightening by the U.S. Federal Reserve. Similarly, the interest rate on 10-year U.S. treasuries has appeared to have had a strong positive correlation with EM spreads during some longer periods, which breaks down in periods of emerging markets crisis. For example, the positive relationship apparently disappeared in the last part of the more recent period when concerns about both Turkey and Argentina emerged.

To complement the visual analysis, a GARCH model is estimated, relating changes in EM interest rate spreads to changes in U.S. interest rates (contemporaneously and lagged one day), U.S. stock market returns and volatility,[3] a crises dummy, and changes in U.S. high-yield interest rate spreads.[4] The GARCH model allows the variance to change over time, and the variance is a function of the contemporaneous error term in the regression (ARCH in the table), last period's variance (GARCH), and changes in U.S. stock market volatility (VIX).

The results suggest that a one percentage-point decline in 10-year U.S. treasury rates leads to close to a 50-basis-point compression of EM interest rate spreads. There is little evidence of a link between the short-term U.S. interest rate and EM interest rate spreads, while the U.S. high-yield interest rate spread is significantly positively related to the EM interest rate spread. Moreover, EM interest rate spreads fall with increases in U.S. stock market indices. In addition, the volatility in the U.S. stock market (VIX) is positively associated with increased interest rate spreads on EM debt (see the third figure, and Lehman Brothers, 2001) and the variance equation indicates that VIX is also positively related to the variance of EM interest rate spreads.

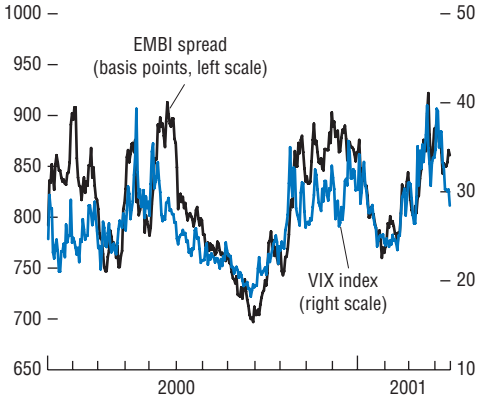
The above regression is associated with two possible shortcomings. One is the forward-looking element of asset prices, which suggests that monetary policy shocks rather than actual

[3]U.S. stock market volatility is measured by the index of implied volatility of the S&P 100 (VIX), which is a consensus volatility derived from at-the-money options on the S&P 100. Note that this measure is a forward-looking volatility and, as such, potentially more informative than volatility measures based on historical data.

[4]The series is in first differences for yields and spreads (indicated by D in table) and in returns for indices due to their nonstationary behavior over the sample period and the lack of cointegration between the nonstationary variables.

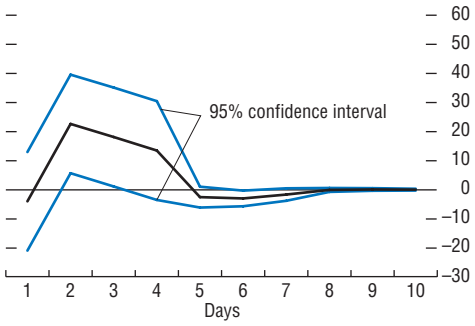
Box 3.3 *(concluded)*

EMBI Spreads and Volatility in Mature Market Equities



Response of EMBI Spreads to an Unforeseen Change in U.S. Rates[1]

(In basis points)



[1]The figure shows changes in EMBI spreads over a ten-day period in response to a surprise one-percentage-point change in the ten-year U.S. treasury rate.

changes in the U.S. rates are of interest. The other shortcoming is the dynamic, rather than static, response of EM bond interest rate spreads to changes in U.S. interest rates (see the asymmetry between short- and long-run effects in Neal and others, 2000). These issues can be addressed by estimating a vector autoregressive (VAR) model and investigating the impulse responses that can be generated from the VAR estimates.[5] The response in EM interest rate spreads to a surprise change in the interest rate on 10-year U.S. treasuries supports the result that increases in the 10-year U.S. treasury rate increases EM interest rate spreads (albeit with a one day lag), with the effect on the same day being negative but not statistically significant. (See the fourth figure.) The magnitude of the response is such that a one-percentage-point increase in the 10-year U.S. treasury rate leads, on average, to a 23-basis-point increase in spreads one day after the shock hits. Since the graph plots the change in spreads, the effect is permanent. The VAR also indicates that positive shocks to the Nasdaq and U.S. high-yield interest rate spreads are associated with statistically significant effects of the expected signs (negative and positive, respectively).

A final issue is the relationship between EM interest rate spreads at various stages of the Federal Reserve's tightening and loosening of monetary policy. In International Monetary Fund (2001), it is shown that moves in the Federal funds target rate only had the expected negative correlation with EM interest rate spreads over the full cycle in three of the last seven cycles. Similar results are obtained if one focuses on the response in spreads in the same day or the five days around actions by the U.S. Federal Reserve. Notably, some of the negative correlations between EM interest rate spreads and cuts in the Federal fund's target rate have been concurrent with rather extreme events in emerging markets (prominently, the Russian crisis and the recent market turbulence in Turkey and Argentina). Looking at large changes in the three-month U.S. treasury rate (which can be used as a proxy for unexpected changes in the Federal fund's target rate), the impact on EM interest rate spreads is again mixed.

[5]An impulse response chart plots the evolution of the dependent variable over several periods (in this case, how the EM interest rate spread changes over 10 days) after a surprise change has occurred in another variable (in this case, an unexpected increase in the interest rate of the 10-year U.S. treasury bond).

relations between the Nasdaq and EMBI global spreads were essentially of a short-term and unstable nature, as shown by the fact that in 2000 the EMBI global gave a total return of 14 percent, compared to a fall in the Nasdaq of 39 percent (Table 3.5).

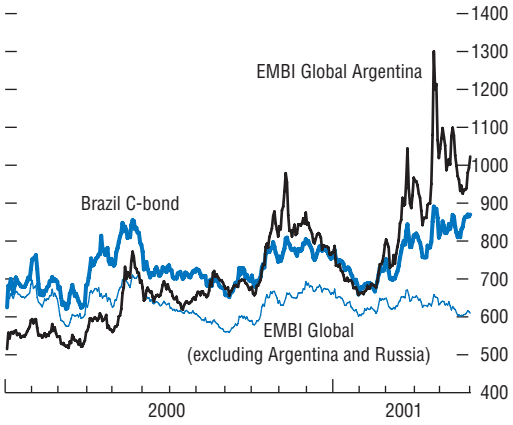
In the fourth quarter of 2000, emerging market developments triggered a widening of spreads. Typically, it was the lower-quality credits with a high weight in the EMBI for which spreads rose the most; many smaller, higher-quality issuers did not see a rise in spreads. In October, political problems in Argentina sparked a loss of investor confidence and spreads on Argentine debt widened by close to 200 basis points (to 979 basis points), along with a widening in the EMBI global (excluding Argentina and Russia) by 44 basis points (Figure 3.8). Arguably, the Argentine difficulties were exacerbated by a loss of market access by U.S. high-yield borrowers in October,[9] where perceptions of declining corporate creditworthiness caused spreads to rise to around 900 basis points at end-2000 (as measured by the B-rated Merrill Lynch High-Yield index)—levels not seen since 1991 (Figure 3.9). (See Box 3.4 for a discussion of the relationship between emerging markets and U.S. high-yield interest spreads.) Later in the fourth quarter, Turkey was forced to ward off a speculative attack on its currency with an interest rate defense that briefly brought repo auction rates at the central bank to an annual 19,000 percent.[10] Owing to Turkey's relatively low weight in the EMBI global spreads index and limited contagion, however, emerging market interest rate spreads did not respond strongly to the Turkish crisis.

Emerging market interest rate spreads temporarily narrowed in January 2001, when both emerging markets and U.S. high-yield bond markets rallied following the 50-basis-point interest rate cut by the U.S. Federal Reserve on

[9]Issues of BB corporate bonds in U.S. markets declined from $7.5 billion in 1999 to $2.5 billion in October 2000.

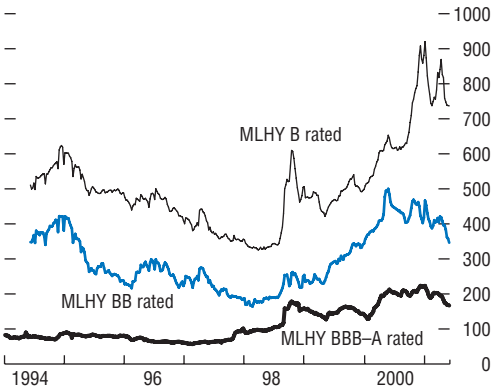
[10]The evolution of the Turkish crisis in November 2000 is described in IMF (2001), p. 8.

Figure 3.8. Emerging Market Spreads: Argentina, Brazil, and EMBI Global
(In basis points)



Sources: Bloomberg Financial Markets L.P.; J.P. Morgan Chase; and IMF staff calculations.

Figure 3.9. Merrill Lynch U.S. Corporate Bond Yield Spreads
(In basis points, weekly average)



Sources: IMF staff calculations based on data from Merrill Lynch and J.P. Morgan Chase.

Box 3.4. Emerging Market vs. U.S. High-Yield Bonds

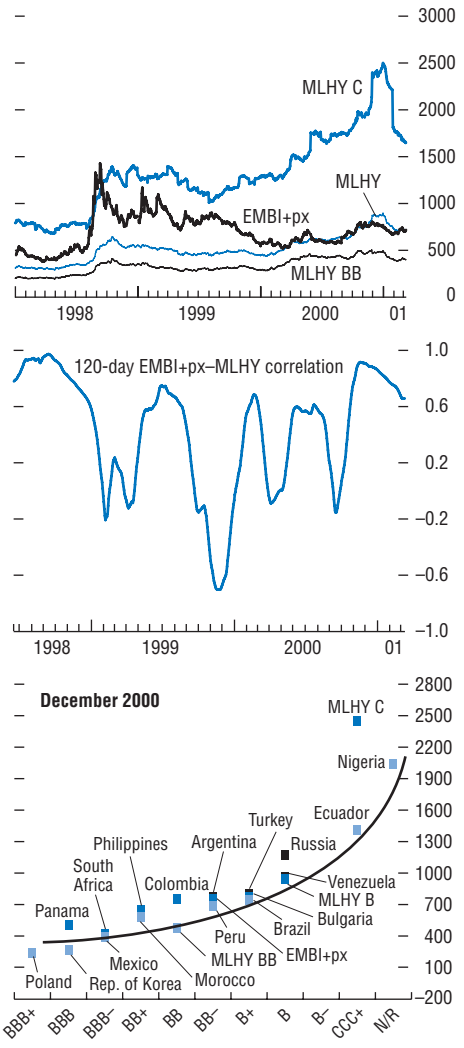
U.S. high-yield corporates and most emerging market borrowers issue below-investment-grade, U.S. dollar-denominated debt. Historically, the relationship between the two asset classes has been loose, although spreads on U.S. high-yield bonds have almost always acted as a lower bound for emerging market debt until last year, when the spread differential between the two debt instruments reached record lows (see the figure).

Market participants emphasize, however, that such a comparison can be misleading because of the difference in credit quality between the two indices. This box, therefore, first compares emerging market sovereign bond spreads to U.S. high-yield corporate spreads on a credit rating-adjusted basis, using market data covering the 1998–2000 period. Second, it examines why emerging market yields are higher than those on comparably rated U.S. subinvestment grade debt. Finally, there is consideration of the investor base for whom these two debt instruments are competing for capital, and the recent relative performance of the two asset classes.

In comparing the performance of emerging market bonds and U.S. high-yield corporates, it is important to differentiate among comparably credit rated instruments. Since the MLHY index[1] has a single-B rating while EMBI+px has a market capitalization weighted average rating of BB– over the period under study, the BB-rated subindex of the MLHY index provides the U.S. high-yield index best comparable to the EMBI+px. On a rating-adjusted basis, spreads on EMBI+px have been consistently higher than those on comparable U.S. corporates, gradually decreasing from their 1998 highs to about 275 basis points at end-2000 (see the figure). Disaggregating the EMBI+px index yields further insights. For instance, BB-rated U.S. high yields had lower spreads than the similarly or better rated emerging market bonds in December 2000. Similarly, B-rated U.S. high yields had equivalent or lower spreads than comparable emerging market bonds. Only in the C-rated segment were emerging market spreads lower, but in the context of record credit deterioration for U.S. high yields (see the figure).

[1]We use Merrill Lynch U.S. High-Yield (MLHY) index and J.P. Morgan EMBI+ spreads excluding collateralized and defaulted issues (EMBI+px) so as not to distort realizable yields.

Emerging Market vs. U.S. High Yield Debt[1]



Sources: Bloomberg Financial Markets L.P.; J.P. Morgan Chase; and IMF staff estimates.

[1]Ratings are averages of S&P and Moody's ratings. EMBI+px is EMBI+ excluding collateralized and defaulted issues and MLHY is Merrill Lynch U.S. High Yield index.

Market participants argue that the higher yield on emerging market bonds over comparably rated U.S. high-yield bonds reflects a number of factors. First, emerging market fixed-income securities have been issued extensively only in the 1990s and therefore have a relatively shorter statistical record, which inhibits analysis of market behavior. Second, there are uncertainties about the debt workout mechanism for dealing with payments difficulties; therefore, market participants assign a greater risk premium to emerging market debt for the uncertainty associated with possible defaults and recovery values. For instance, the prerestructuring experiences of Russia and Ecuador have often been used to estimate an expected recovery value of $17.50 per $100, whereas an extensive corporate default database yields an average default rate of $45. Third, emerging market investors are seen as demanding higher spreads as a compensation for the historically higher volatility of emerging market debt.

Market participants also argue that, in the future, emerging market debt may carry a smaller premium over comparably rated U.S. high-yield instruments. First, European and other "crossover" investors, who are less concerned with marking their portfolio to market and may require less compensation for volatility, will play a more important role. This should help reduce emerging market spreads. Second, while U.S. high-yield bonds, with more than 1,000 borrowers, currently offer more diversification possibilities than emerging market sovereign bonds—with about half of the EMBI+px constituents from Latin America and accounting for two-thirds of market capitalization—the U.S. high-yield market has increasingly been dominated by issues by telecoms and media companies. Issues by this sector now constitute about one-third of the principal amounts and are viewed as vulnerable to a U.S. slowdown. For instance, while the recovery rate of emerging market debt has been higher than expected, some U.S. telecoms companies have had zero recovery values. Third, as investors gain experience analyzing emerging market fundamentals, the premium on emerging market spreads should be reduced given emerging market sovereigns' historically higher upgrade and lower downgrade and default probabilities. Finally, emerging market sovereign bonds should benefit, in the form of lower spreads, from their lower bid-ask spreads and higher trading volume.[2]

Market participants often use the spread differential between U.S. high-yield and emerging market bonds as a signaling device to complement their relative value analysis. A wider spread differential indicates possible investment flows into emerging market bonds as investors are attracted by higher emerging market yields. This may not be true, however, in times of high volatility when both sectors can be avoided by investors as their risk appetite decreases, as in the 1998 Russian crisis and the Long-Term Capital Management (LTCM) debacle or, to a lesser extent, at end-2000.

There are broadly three types of crossover investors that tend to hold both types of debt (see Box 3.5). First, a number of U.S. dedicated, high-yield investors take advantage of their corporate credit expertise by investing in emerging market corporate debt. Second, European and other non-U.S.-based high-yield funds invest in mature market, high-yield corporates as well as in emerging market debt but with a focus on sovereign instruments. Finally, a growing number of investment-grade investors seek diversification benefits by investing a small but important proportion of their assets in emerging market sovereign debt and/or U.S. high-yield debt.

An interesting trend is the grouping of both emerging market and U.S. high-yield bonds in global high-yield indices. These indices track the subinvestment-grade-rated debt of sovereign and corporate issuers denominated in major, mature market currencies or their inclusion in broader bond indices such as the Lehman Brothers Universal index. Similarly, more firms are

[2]In contrast, emerging market high-yield corporate bonds are very illiquid.

Box 3.4 *(concluded)*

grouping their management of high-yield and emerging market debt. Although there are immediate benefits, such as the use of the expertise of both emerging markets and U.S. high-yield teams in relative analysis, some market participants see diminishing returns in joint day-to-day management.

The relative performance of emerging market debt and U.S. high-yield bonds is a key determinant of investor flows in and out of the two asset classes. Over time, correlations between emerging markets and U.S. high-yield spreads have varied widely with an average of 0.39 (see the figure), and analysis shows that a 100-basis-point increase in MLHY spreads will increase EMBI+px spreads by about 60 basis points, when controlling for commodity prices and the Nasdaq (at a 5 percent statistical significance and R^2 of 12 percent).

Historically, emerging market debt has yielded higher returns than U.S. high yields but at the cost of higher volatility. However, the decrease in emerging market volatility from its peak in 1998, combined with significant excess returns in 1999 and 2000, have resulted in higher risk-adjusted returns and higher diversification benefits,[3] thanks to the successful restructurings and improving fundamentals of emerging markets after the 1998 Russian and Brazilian crises. In contrast, U.S. subinvestment grade corporates have issued a record $367 billion in the 1997–99 period and have been plagued by significant credit deterioration, as illustrated by default rates[4] of 5.7 percent in 2000, the highest since 1991 and spreads above the 1,000-basis-point distressed levels for the C-rated segment. Looking forward, the relative attractiveness of emerging market debt could decrease soon if the U.S. high-yield default ratio starts to decline.

[3]As an illustration, calculations show that from 1998 to 2000, EMBI+px has a Sharpe ratio of 0.2 compared to a ratio of –0.5 for MLHY. A U.S. high-grade crossover investor allocating 90 percent of its portfolio to the Salomon Brothers Investment Grade index and 10 percent to the EMBI+px would have had 60 basis points more in excess returns and 10 basis points less in risk, more than a 10 percent allocation to MLHY from 1998 to 2000.

[4]Moody's trailing-twelve-months-percentage-of-issuers default rate.

January 3.[11] The lower U.S. interest rates were accompanied by interest rate cuts in a number of emerging markets, including Brazil. The rally was short-lived, however, as concerns about TMT earnings heightened and the Nasdaq index declined again. The float of the Turkish lira on February 22 and political uncertainties in Argentina in March and April also caused interest rate spreads to widen by 169 basis points, and emerging bond markets effectively closed. Primary markets did not reopen until May 3, with issues by the Jamaican sovereign and Petrobras, the Brazilian oil company.

The market turbulence in Argentina and Turkey during 2000–01 illustrates the respective roles of domestic political and economic developments and of mature market developments, as well as the nature of spillovers present in emerging markets today. For example, the 30 percent decline in the Nasdaq in April and May 2000 spilled over into the Argentine stock market, indirectly pressuring Argentine bond markets by pushing the share of government securities in pension fund portfolios above the statutory limit (as the total value of the portfolios declined in line with stock market valuations).[12] This contributed to the tensions created by the disappointing fiscal and growth performance. Similarly, in October 2000, the sell-off in and closure of high-yield bond markets, and subsequent shift to their benchmark by crossover investors exacerbated funding difficulties for the

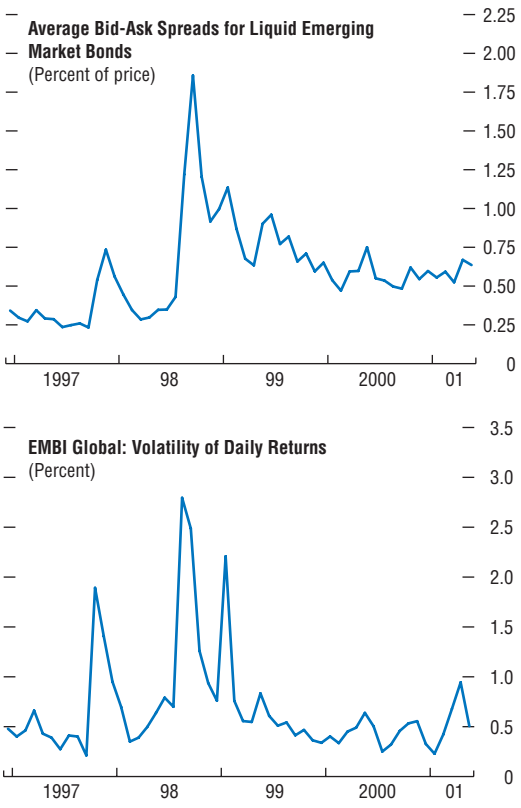
[11]The rallies were helped along by the high cash positions of mutual funds and other investors.
[12]IMF (2000b), p. 7.

sovereign caused by political turmoil. In Turkey, at end-November 2000, foreign investors appear to have been more cautious than usual ahead of the year-end closing of accounts and they reacted more promptly than they might have otherwise to nascent difficulties in Turkey.

There was a modest improvement in liquidity—defined as the level of the bid-ask spread—in emerging bond markets in 2000 (Figure 3.10). This improvement occurred, despite the absence of a reduction in the volatility of daily returns, and has been attributed to the partial reversal of the decline in the number of market-makers in the wake of the Russian crisis. Market participants have, however, expressed concerns about the effect on liquidity of the replacement of large, liquid Brady issues by smaller Eurobond issues. In particular, they have pointed to a noticeable decline in liquidity for emerging market bonds in the first quarter of this year linked to the spike in interest rate volatility, and a contraction in the number of market-makers in emerging market bonds associated with the merger between J.P. Morgan and Chase and the merger between Credit Suisse First Boston and Donaldson Lufkin & Jenrette. Nonetheless, by the standards of a number of their asset classes, emerging market debt remains a relatively liquid asset class—with the average bid-ask spread in the 12 months to May 2001 at about 0.6 percent of average prices. Among the emerging market debt instruments, bonds issued by the Mexican, Brazilian, Argentine, and Russian sovereigns have had the highest trading volumes.

The asset price volatility faced by emerging markets and the on-off nature of their market access have raised concerns about the nature of the investor base for emerging market debt. During the Asian crisis, for example, many observers expressed concerns about the activities of highly leveraged institutions (HLIs) and their role in exacerbating asset price volatility, leading speculative attacks on exchange rates, and generating sudden losses of market access. Whatever their activities in that period, market participants argue that the role of HLIs and, more gen-

Figure 3.10. Bond Market Developments



Sources: Bloomberg Financial Markets L.P.; J.P. Morgan; and IMF staff calculations.

erally, the degree of leverage employed by other investors, have diminished since the Asian crisis (particularly after the Russian crisis). In part, this reflects the closing of several large macro hedge funds, the refocusing of the activities of other hedge funds on mature markets, and a reduction in the capital allocated by investment banks to support the activities of their proprietary trading desks. It is also argued that the class of "dedicated investors"[13] in emerging market instruments is relatively small, and the current investor base is dominated by crossover investors[14] that hold most of their investments in mature markets but may hold a small portion of their assets as emerging market investments if there are sufficiently attractive investment opportunities in these markets (Box 3.5).

However, the benchmarks that are used to judge the performance of the portfolio managers of these crossover investors typically do not include emerging market instruments. As a result, these investors can quickly reduce or eliminate their holdings of emerging market instruments ("return to their benchmarks") if the outlook for emerging markets deteriorates, if more attractive investment opportunities in mature markets become available, or if the volatility of returns increases. With respect to volatility, value at risk considerations may lead managers to close out their emerging market positions (typically viewed as among the most volatile asset classes) in order to reduce the overall volatility of their portfolio returns. This type of investment behavior can provide a channel for the transmission of the effects of developments in mature markets to emerging markets and help explain the on-off nature for emerging market borrowers even in periods where emerging market fundamentals are not changing or even improving. For example, sharp declines in the U.S. Nasdaq index could impose large losses on crossover investors' portfolios that could in time lead them to adopt a more defensive portfolio strategy involving greater holdings of relatively "safe" assets (such as U.S. Treasury securities) and reduced holdings of what are viewed as relatively risky assets (including emerging market bonds and equities). Although such portfolio adjustments would be prudent from the perspective of the fiduciary responsibilities of the portfolio managers, they can sharply limit market access for emerging market borrowers.

Emerging market sovereign and private sector borrowers have been adapting to the on-off nature of market access to international bond markets. Increasingly, the external debt agencies of ministries of finance in emerging markets are headed by or employ staff with extensive experience in investment banking and/or market trading. These individuals have helped design securities' issue programs that quickly exploit any "windows of opportunity" for bond market issues. This behavior is illustrated, for example, by the rapid issuance of emerging market bonds in the first quarter of 2000 during the post-Y2K boom and in January 2001 following the surprise interest rate cut by the U.S. Federal Reserve. There also have been clear efforts to "prefund" the entire year's borrowing requirement as early as possible at the beginning of each year. As already noted, debt exchanges have also been utilized to extend the maturity of external debt and help avoid a bunching of maturities. Moreover, attempts have been made to enter the retail and institutional investor markets for instruments denominated in euros and the Japanese yen when the U.S. dollar market is closed. Finally, as noted earlier, reliance on issues of local currency debt has been growing.

Developments in the Syndicated Loan Market

Another way in which emerging market borrowers sought to mitigate the effects of on-off ac-

[13]These would include mutual funds that invest solely or primarily in emerging market bonds and/or equities as well as the share of institutional investor assets earmarked for emerging market investments, including through benchmarking to the Lehman Universal (Box 3.5).

[14]These would include global mutual funds and accounts, high-yield funds, high-grade funds, hedge funds, and investment bank proprietary trading desks, as well as direct retail and institutional investors (insurance companies and pension funds).

Box 3.5. Investor Base for Emerging Market U.S. Dollar Bonds

The investor base for U.S. dollar-denominated emerging market bonds comprises various types of funds, based in the United States, Europe, and elsewhere. These funds include mutual funds, high-yield funds, global funds, hedge funds, local investors (such as Argentine pension funds), investment bank inventory (holdings by the "Street"), and the so-called core and core-plus funds (described below). In 2000–01, various changes in the composition of this investor base became apparent, with associated implications for the "on-off" nature of market access for emerging market borrowers.

While firm numbers are not available, it is clear that crossover investors dominate by far the emerging market debt asset class. According to a recent Merrill Lynch report[1] on the size and structure of the world bond market, the tradable universe of emerging market debt is $1.6 trillion, of which $500 billion is denominated in major mature market currencies (the remainder being in emerging market local currencies). The bulk of easily tradable bonds is some $300 billion in sovereign debt denominated in U.S. dollars. In addition, there is $100 billion in corporate debt denominated in U.S. dollars, which is illiquid and has become more so in the past two years. The sovereign U.S. dollar debt—the focus of this box—is held by dedicated and nondedicated investors, where the latter are defined as investors whose benchmark contains a zero weight for emerging markets (i.e., the neutral position is zero). These investors constitute the crossover class.

According to market estimates, the dedicated investors (excluding holdings by residents in emerging markets) account for at most some 10 percent of the sovereign debt, with crossover and local investors accounting for the remainder (excluding "Street" holdings).[2] Dedicated investors include U.S.- and non-U.S.-based (retail) mutual funds dedicated to emerging markets, which are estimated to account for $3.5 billion and $4–5 billion, respectively. Dedicated institutional investors operating separately managed accounts are estimated to have a "bucket"—an asset class specified in agreements with fund trustees or plan sponsors—for emerging markets corresponding to up to $20 billion in aggregate.[3] This bucket can be filled by assigning the management to a dedicated manager or, when the entire portfolio is managed by one manager, by setting limits for emerging markets and other asset classes. In practice, the latter often is fulfilled by benchmarking to the Lehman Universal index,[4] thereby blurring the distinction between dedicated and crossover investors.

Crossover investors include global funds and accounts, which are typically multisector bond funds focused heavily on Group of Seven (G-7) borrowers; high-yield funds, benchmarked, for example, against the Merrill Lynch high-yield index—these funds tend to buy emerging market corporates and, to a lesser extent, emerging market sovereigns; a large residual category including hedge fund and proprietary trading desks' holdings, as well as direct retail and institutional investor holdings; and high grade funds, which include the "core" and "core-plus" accounts.

"Core" and "core-plus" accounts, which have recently acquired increasing prominence, are typically benchmarked against the Lehman Aggregate index. Core accounts are, in principle, invested only in U.S. high-grade bonds, in accordance with investment guidelines. In practice, however, in the search for yield, portfolio man-

[1]Merrill Lynch (April 2001).

[2]In contrast, in high yield, mutual funds (which are dedicated funds) account for some 40–50 percent of the total ($500 billion) capitalization.

[3]Dutch pension funds, which constitute one of the biggest defined benefit pension plans in the world by country, were said to have $3 billion in emerging market fixed income.

[4]The Lehman Universal index is a dollar-based bond index weighted predominantly toward investment-grade dollar bonds, but it also includes about a 3 percent allocation for emerging market dollar bonds, and about a 5 percent allocation for the U.S. high-yield sector.

Box 3.5 *(concluded)*

agers often include some high-yield and emerging market bonds. Core-plus accounts formalize this departure from guidelines: they invest in U.S. high-grade bonds and have a zero neutral position in high-yield, emerging market, and nondollar bonds; yet they are permitted by guidelines to invest in these asset classes opportunistically. Typically, a core-plus fund will be a large multisector managed fund in which emerging market holdings may go up to 10 percent.[5]

Over the course of the last year and a half, demand by crossover investors at prevailing yield spreads tended to decline, mostly reflecting the effect of volatility in U.S. dollar markets. First, with high-yield performing poorly, there has been a slowdown in the adoption of the Lehman Universal, thereby retarding the growth in the dedicated investor base. (Interest had been much greater in late 1999 and early 2000, prior to the poor performance in high yield.)[6] Second, dedicated investor funds have faced some redemptions and have increased cash holdings somewhat.[7] Third, volatility in the high-yield market and large outflows from high-yield funds (see the table)—and perceived attractive opportunities there after prices fell sharply in October 2000—have led high-yield funds to retreat to their home market and stay on the sidelines of emerging markets. These funds have tended to "hug" their index and have been wary to take "out-of-benchmark" risk when markets have been volatile. There has also been a general trend of disinvestment out of emerging market corporates, because of their illiquidity in trading. Thus, high-yield crossover investors have become a much less significant influence on emerging market bonds in 2001.[8] Fourth, traders at emerging market proprietary desks have traded the asset class based on developments in the Nasdaq, because the Nasdaq has been seen as the barometer of global risk appetite. The emerging market bonds asset class is then affected because it trades as a high-risk asset class. Also, some hedge funds that held long positions in both Nasdaq and emerging markets have been forced to sell emerging markets on margin. In 2000–01, this was not a very strong effect, however, because of the limited presence of hedge funds in emerging markets. Hedge fund activity in emerging markets remains constrained by the willingness of banks to extend credit to them, although market participants report some rebuilding of hedge funds and proprietary books, although well below the levels of 1998.

One positive structural shift occurred with core-plus accounts. These accounts have gradually increased their holdings of emerging market debt, notably taking on positions in Mexico, which is regarded as investment grade (being so rated by one of the two largest agencies).

The trend toward the adoption of the Universal, which had first started in 1997, has

Net Flows to U.S.-based EM and High-Yield Mutual Funds
(In millions of U.S. dollars)

	2000				2001
	Q1	Q2	Q3	Q4	Q1
EM bond funds	–85	–263	70	–220	–113
EM equity funds	168	–162	–885	–1,121	–2,193
HY bond funds	–2,497	–1,015	–666	–1,615	3,338

Source: American Mutual Funds Group.

[5]There are two investment styles, tactical and strategic, with the latter tending to maintain relatively stable holdings.

[6]Most pension fund mandates issued by trustees or plan sponsors in 2000–01 have been for core-plus managers, not for managers benchmarked against the Lehman Universal, according to market participants active in this sector of the market. As some fund managers point out, however, interest in the Universal could be masked as a search for a dedicated emerging markets manager.

[7]With prices very volatile, there was a perception that one could not afford to hold much cash, for fear of missing a rally. Some market participants indicate that cash allocations in a dedicated emerging market funds would never go above 5–10 percent.

[8]By one market estimate, global high-yield funds were typically holding about 5 percent of their portfolio in emerging market bonds, down from as much as 10 percent several years earlier.

shown a small, steady year-by-year growth of some $1–2 billion. Apparently, a small fraction of accounts (5 percent of accounts by number, in one major asset management company), but a much larger percent of assets (20 percent in that same company), had been benchmarked to the Universal rather than the Aggregate by the end of the first quarter of 2001. However, this shift did not necessarily involve asset reallocation, as accounts had already held high-yield assets prior to the adoption of the Universal.

Another trend is the shift toward management of emerging market assets by a dedicated emerging market portfolio manager, regardless of where the emerging market assets reside by type of fund. Whereas in the past, high-yield and high-grade funds would buy emerging market assets independently, this function is now performed for the pool of funds at some fund management houses. While the amount of dedicated funds might be small, as much as 90 percent of total funds managed by such professionals might be funds from high-yield and multisector bond funds. Thus, crossover flows may be influenced by fund managers who are themselves dedicated emerging market investors. The driving force behind this phenomenon has been the recognition that the set of skills needed to manage emerging market assets is very different from those for managing high-yield corporates assets. It took a series of crises to drive home this lesson.

Local investors, in contrast, have shown a steady increase in their demand for external sovereign debt.[9] In the recent past, this trend was observed in a number of countries, including Argentina, Brazil, Colombia, Kazakhstan, Lebanon, Malaysia, Mexico, Russia, Turkey, and Uruguay. Local institutional holdings of sovereign debt are now substantial.[10]

This trend to greater domestic participation has been driven by the development of the institutional investor base and, most notably in some countries, the pension fund industry, especially in conjunction with regulations restricting the activity of funds. These regulations have made pension funds the captive buyers of government bonds, as discussed in Annex II. In other countries (for instance, Lebanon), domestic commercial banks have been an important part of the investor base, thanks to increasing foreign currency deposits. These developments have imparted some stability to the investor base in the recent crises in Argentina and Turkey, where pension funds and commercial banks, respectively, held on to their external sovereign debt holdings during the countries' crises, thereby avoiding pressuring spreads further.

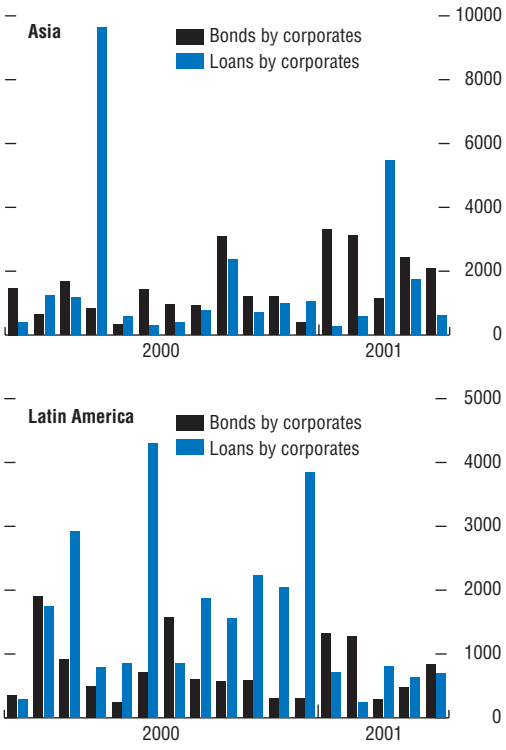
[9]This is a source of bias in the external debt statistics and has led to the coining of the term "fuzzy external debt."

[10]In Argentina, for example, local holdings of external sovereign debt are some $14 billion (Merrill Lynch, April 27, 2001).

cess to the bond market was by recourse to the syndicated loan market. In 2000–01, as in earlier periods, loan issuance picked up when access to international bond markets tightened and banks served as "lenders of next to last resort." Strong liquidity in the loan market in 2000 meant banks could offer inexpensive financing compared to the bond market which, by contrast, was subject to a number of closures.[15] Over the course of the year, corporate borrowing in particular shifted to loans from bonds (Figure 3.11). The last quarter of 2000 was a period when liquidity in emerging market corporate bonds dried up, as high-yield investors retreated to their bench-

[15]The loan market experienced few closures relative to the bond market in 2000, with weekly issues below the previous year's average (and outside the four-week holiday period centered on January 1) only in the third week of January and first week of May 2000. In 2001, loan issues dropped off sharply and loan markets closed for weeks at a time in January, February, and April.

Figure 3.11. Bond Issues and Loans by Asian and Latin American Corporates
(In millions of U.S. dollars)



Source: Capital Data.

marks and high-yield bond issues decelerated following U.S. rate hikes, the Nasdaq decline, and global fixed-income volatility (see above). Issuance was very strong in the fourth quarter when bond markets closed. This was particularly notable in Europe and Latin America, as lending to Turkey remained robust (partly reflecting the Turkish government's introduction of a blanket guarantee of Turkish banks' liabilities) and Latin American countries (including Argentina, with loan supply buoyed by strong oil prices) obtained large financing. The same pattern was observed in a milder form in the second quarter of 2000 for Asia.

In aggregate, loan issuance was buoyant in 2000.[16] Syndicated loan issuance increased by 62 percent in 2000, to $94 billion, or close to the 1997 record of $123 billion (Table 3.3).[17] For the first time since 1997, syndicated lending became in 2000 the largest component of fundraising by emerging markets on international capital markets. The momentum in bank lending was not maintained, however, and lending slowed sharply to $13 billion in the first quarter of 2001.

The increase in bank lending in 2000 was widespread, with bank loans to most emerging market countries (about 60 percent) increasing. Loan growth was strongest in Asia, where loan issuance increased from $24 billion to $56 billion. Taiwan Province of China and Hong Kong SAR dominated loan issuance, as the destination for 56 percent of new bank loans to Asia in 2000. Loan activity was also boosted by some $9.3 billion for acquisition lending for Pacific Century CyberWorks in April 2000. After years of sluggish activity, project financing (highway projects, subway, tunnel, and power business) resumed in Asia, driven by high bank liquidity and the current low cost of funding. Many

[16]Issuance refers here to gross new issues. As noted earlier in the section on Net Private Capital Flows, bank claims, which take account of repayments, were much less strong.

[17]In addition, facilities in hard currency amounted to $29.6 billion, a figure which is also high by historical standards.

projects are funded in large part in local currency.[18]

Turkey was a beneficiary of the strong bank lending in 2000. International banks increased lending to Turkey to $9.5 billion in 2000, following the inception of its stabilization program—an increase of 30 percent from 1999. There was a substantial willingness to lend to Turkish banks, with the major Turkish banks borrowing at only 50 basis points over the London Interbank Offered Rate (LIBOR). The low (20 percent) Basel risk-weight on interbank lending combined with Turkey's improved prospects were seen as contributing to this outcome.

The first quarter of 2001 witnessed a sharp slowdown in bank lending to $13 billion, or less than half the rate of the fourth quarter of 2000. The slowdown was evident in all regions (Table 3.3) and was not driven by any historical seasonality (Annex III). Instead, the lending slowdown appears to have been caused by banks tightening their lending standards in response to developments in mature markets and declining demand amid high liquidity and poor cyclical conditions in local markets. As expected in light of the dramatic events in Turkey, lending to that country slowed in the first quarter. Lending also slowed dramatically to countries in the Western Hemisphere (although not to Argentina), partly reflecting the slower pace of M&A activities and privatization in Brazil. As the source for this data is the capital markets, it excludes interbank loans and also off-balance-sheet positions such as derivatives contracts. Interbank activity is included in the BIS data discussed above (Table 3.2), but that is available only with a lag of one to two quarters.

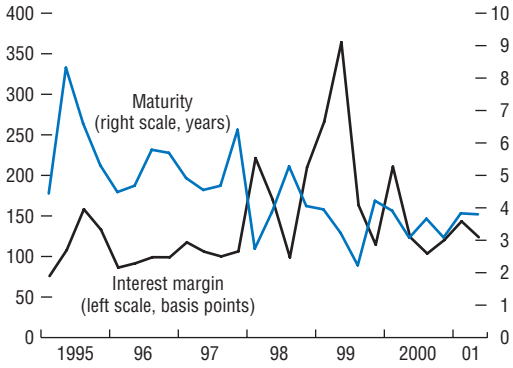
The composition of lending by sector changed somewhat in 2000, with sovereign borrowing remaining relatively stable (with the exception of one large South African loan), and private and other public sector lending growing strongly. Telecoms financing represented a large share of new loans, as in mature markets, in the form of facilities to be used until alternate financing (such as initial public offerings (IPOs)) could be arranged. Telecoms financing, originally believed to be a relatively safe investment because of its short-term nature, illustrates the shift from project to event financing in bank lending. However, the global decline in the telecoms sector in 2000 raised the concern that alternate financing would not be available and that banks would have to roll over these loans. Because of concentrated lending to this sector, this constitutes an important element of risk in bank balance sheets.

In 2000, the buoyant syndicated lending market reflected a variety of factors including the abundant liquidity of banks in mature markets and their underutilization of the internal risk limits to emerging markets; the return of recapitalized Japanese banks to the syndicated loan market when they had few opportunities to lend in Japan; an increase in acquisition borrowing, particularly in the telecoms sector as mergers and acquisitions gathered pace;[19] improved credit quality of oil exporters due to higher oil prices; and increased use of political risk insurance supplied by export credit agencies. In the first quarter of 2001, however, syndicated lending fell sharply and across the board during a global flight to quality in response to global uncertainties, industry specific difficulties, and reduced liquidity in the syndicated loan market due to financial sector consolidation (such as the mergers of J.P. Morgan-Chase and BNP-Paribas). As a result, emerging market borrowers faced increased fees, tighter loan covenants, and strengthened collateral requirements. This tightening of conditions caused many corporates to shift to local currency borrowing.

On balance, interest rate margins on syndicated loans declined moderately over 2000–01 (Figure 3.12). Consistent with the competitive pressures noted above, loan margins declined by over 100 basis points from the first to the third quarter of 2000, and then rose moderately subse-

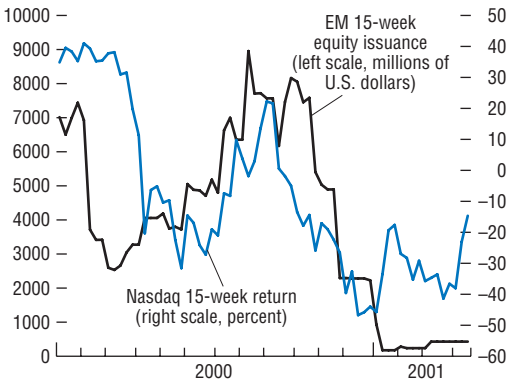
[18]Only the foreign exchange component of this lending is captured by the data in Table 3.3.
[19]This included the $9.3 billion loan to Pacific Century CyberWorks to take over Cable & Wireless HKT.

Figure 3.12. Emerging Markets: Syndicated Loans' Weighted Interest Margins and Maturities



Sources: Capital Data; and IMF staff calculations.

Figure 3.13. Emerging Market Equity Issuance and Nasdaq Returns



Sources: Bloomberg Financial Markets L.P.; Capital Data; and IMF staff calculations.

quently, consistent with a tightening in lending standards in mature markets.[20] The maturities of syndicated loans have continued to decline, and are currently just above three years on average (Figure 3.12). The maturity trend reflects an ongoing shift from project finance to event-driven finance, particularly bridge finance for mergers and acquisition transactions.

Equity Market Developments

Primary Market Developments

Emerging market equity issues increased by 80 percent between 1999 and 2000 and reached the highest level attained in the post-World War II era. Issuance activity was highly concentrated, however, with China accounting for about 50 percent of all new issues during 2000. Chinese privatization issues included IPOs by the Chinese telecoms company China Unicom ($5.7 billion) in the second quarter, and by China Petroleum and Chemical Corporation (Sinopec; $3.5 billion), and China Mobile Ltd. ($6.9 billion) in the fourth quarter. Investor interest in Chinese equities has been driven by a variety of factors: profit-making opportunities associated with China's large domestic market that is still growing rapidly; the "WTO bet"[21]; the attractiveness of jumbo issues to institutional investors because of their liquidity; and the participation of strategic investors in many of the issues (Box 3.6). Excluding China, equity issuance was more limited and was adversely affected by the sharp decline in the U.S. Nasdaq (Figure 3.13) and the poor performance of emerging market indices (see below). Equity issues were minimal in the first quarter of 2001, in step with limited equity issuance in mature equity markets. Since the Nasdaq began its decline in March 2000, there has been a large withdrawal

[20]The data correspond to the weighted interest margin of spreads at issuance and vary according to the average quality of issuer ratings.

[21]The increased likelihood that China would soon join the World Trade Organization (WTO).

Box 3.6. Chinese Jumbo Initial Public Offerings

During 2000, Chinese entities accounted for about half of total international equity issues by emerging markets, with 85 percent of all issues in the last quarter. Without these Chinese IPOs, emerging market primary equity issuance would have come to a grinding halt in the fourth quarter of 2000 and the first quarter of 2001.

In the context of major restructurings and privatizations, five top companies in the energy and the telecoms sectors launched jumbo IPOs, accounting for more than 90 percent of the $22 billion raised by China from January 2000 to the end of the first quarter this year.

Thus far, the Chinese authorities have chosen to spin off the most attractive part of state owned enterprises into subsidiary companies and list shares in Hong Kong SAR and New York. Market participants expect the authorities to adopt a similar model for the possible next major IPO of the State Postal Bureau (China Post).

Foreign investors from Europe, Asia, and the United States have had a strong appetite for Chinese jumbo IPOs, which are considered long-term investments. In fact, market participants often quote the large potential for growth and the windfalls from China's expected access to the World Trade Organization (WTO) as the main reasons for investing in Chinese instruments.

Chinese investment banks are benefiting from these record IPOs. In 2000, China International Capital Corp (CICC) and Bank of China were respectively ranked second and eleventh in terms of Asia-Pacific (except Japan and Australia) equity deals, with about $6 billion and $506 million of the amount issued on their books. Market participants credit their success in attracting mandates to the encouragement of the Chinese authorities and their role in restructuring companies prior to listings.

In the context of difficult conditions in the international markets, a number of the largest Chinese companies that have so far shunned domestic equity markets are expected to tap the local markets in the near to medium term. For instance, according to market participants, top companies SINOPEC (China Petroleum & Chemical Corp.), Huaneng Power International, Petrochina, and China Unicom are considering domestic-investor-only A-share IPOs. Given their large capitalization, such issues should increase the standard of companies listed in local markets, reduce manipulation, and, last but not least, allow Chinese investors to invest in the country's best corporates.

Chinese Jumbo IPOs in 2000 and First Quarter of 2001
(In billions of U.S. dollars)

Petrochina	SINOPEC	CNOOC	China Unicom	China Mobile	Total
2.9	3.5	1.4	5.7	6.9	20.4

Notes: CNOOC is China National Offshore Corp. and SINOPEC is China Petroleum and Chemical Corp.
Sources: Capital Data; and IMF staff calculations.

of IPOs, as well as a growing backlog of unlaunched IPOs.[22]

Market participants have cited a number of reasons for the dearth of equity issues by emerging market entities. First, the window of opportunity for emerging market equity issuance is typically linked to developments in mature markets (Annex III). Weak performance and high asset price volatility in mature markets (such as the Nasdaq) are likely to inhibit emerging market issuers. Second, there is some degree of disillusionment with the emerging market equity asset class because it has yielded negative returns since 1996 (with the exception of 1999)—based on the Morgan Stanley Capital International Emerging Markets Free (MSCI EMF) index. Furthermore, market participants argue that a succession of financial crises and tighter

[22]For Latin American issuers, the backlog had risen to as much as $10 billion.

Table 3.6. Correlation between TMT and non-TMT Returns across Regions[1]

	U.S. TMT	Asia TMT	Latin America TMT	Mexico TMT	U.S. Non-TMT	Asia Non-TMT	Latin America Non-TMT	Mexico Non-TMT	Russia
U.S. TMT	1								
Asia TMT	0.47	1							
Latin America TMT	0.72	0.51	1						
Mexico TMT	0.64	0.49	0.80	1					
U.S. non-TMT	0.41	0.09	0.30	0.32	1				
Asia non-TMT	0.47	0.84	0.58	0.47	0.24	1			
Latin America non-TMT	0.64	0.47	0.81	0.69	0.30	0.53	1		
Mexico non-TMT	0.66	0.41	0.63	0.75	0.35	0.45	0.74	1	
Russia	0.59	0.46	0.45	0.37	0.35	0.43	0.53	0.47	1

Sources: Primark Datastream; and IMF staff estimates.
[1]TMT refers to the technology, media, and telecommunications sector. Correlation of weekly returns from March 2000 to March 2001.

sectoral linkages through the telecoms, media, and technology (TMT) sectors have reduced the diversification benefits of the asset class. The small size of some emerging equity markets—where a few companies can represent a large share of market capitalization—and their lack of liquidity are also discouraging foreign investors. Finally, there is disappointment with the lack of progress in the treatment of minority shareholders and other corporate governance concerns.

Secondary Market Developments

In a sharp reversal of the strong gains in 1999, emerging market equities lost over 30 percent of their value (measured in U.S. dollar terms) in 2000 and a further 2 percent from January through May 8, 2001. As in emerging bond markets, developments were closely linked with those in mature equity markets and, in particular, with the Nasdaq. The declines in emerging market equities were smaller than those on the Nasdaq, which fell about 40 percent in 2000 (Table 3.5). Interestingly, the close links with the Nasdaq reflect not only direct sectoral links on account of the high share of the TMT sector in emerging markets (Table 3.6), but also other indirect links, as described below.

From March to December 2000, emerging market telecoms stocks declined by 44 percent, information technology stocks fell by 47 percent, and the overall index dropped 33 percent. Non-TMT sectors performed better in relative terms, with a 20 percent decline for the energy and industry subsectors, and 27 percent for the financial subsector. The decline in stock prices over the course of 2000 was larger in Asia (44 percent) than in Latin America (20 percent). This reflects the sectoral composition of the indices, with the Asian index having a larger share in

Table 3.7. Contribution of TMT to Regional Stock Market Declines in the Fourth Quarter of 2000[1]

	Total Quarterly Market Change (From end-third quarter 2000, in percent)	TMT Change (From end-third quarter 2000, in percent)	Contribution of TMT		TMT Share (In percent, as of Sept. 30, 2001)
			(In percentage points)	(As percent of total)	
MSCI U.S.	–8.7	–39.4	–10.8	125	27
MSCI EMF	–13.5	–23.2	–7.7	57	33
Asia	–17.3	–24.9	–10.9	63	44
Latin America	–8.5	–16.7	–4.3	50	26
Europe, Middle East, and Africa	–14.3	–19.6	–5.7	40	29

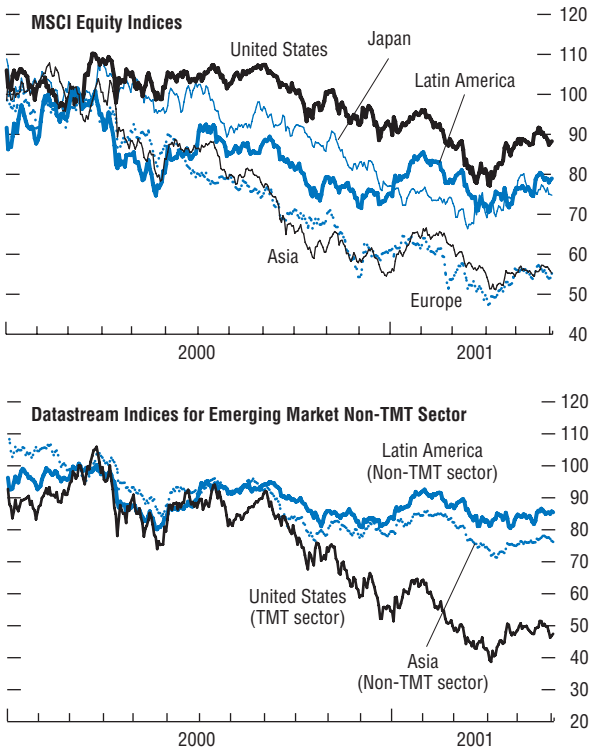
Source: IMF, *Emerging Market Financing, Quarterly Report on Developments and Prospects,* February 13, 2001, p. 10.
[1]TMT refers to the technology, media, and telecommunications sector.

telecoms and information technology shares. Emerging market equities also followed U.S. markets up in early April 2001 and rallied by an amount (around 34 percent) similar to the recovery in the Nasdaq over the following month (Figure 3.14, top panel).

A substantial part, although not all, of the performance of emerging market equity is related to the prices of TMT shares. Those shares receive a significant weight in most local indices, ranging from 26 percent in Latin America to 44 percent in Asia[23] (Table 3.7). However, the effect of Nasdaq went beyond direct sectoral links in 2000 and early 2001. The correlation of emerging market non-TMT equity share prices with TMT equity share prices in the United States was almost as high as the correlation of emerging market TMT equity share prices with TMT equity share prices in the United States (Table 3.6 and Figure 3.14, bottom panel). Market participants have attributed this phenomenon to reduced risk appetite. With Nasdaq declines, global equity investors lost interest in exposure to emerging market equity, which is regarded as a high-risk asset class. Margin calls constitute another very direct channel, whereby losses in Nasdaq get transmitted to emerging market equity, in cases where investors hold both types of assets on margin.

Stock market developments varied across regions in 2000 and the first half of 2001. Political and economic difficulties in some of the Asian countries (e.g., corporate restructuring difficulties in the Republic of Korea and Malaysia and bank problems in Thailand and others) added to the weakness in equity prices and tended to reduce the correlation with U.S. equity price movements over the past year. As a consequence, the link between Latin equity and U.S. equity has been stronger than the link between Asian equity and U.S. equity (see Figure 3.14, top panel). Indeed, Asian equity markets declined sharply in June, when the U.S. and Latin markets were in recovery. This is consis-

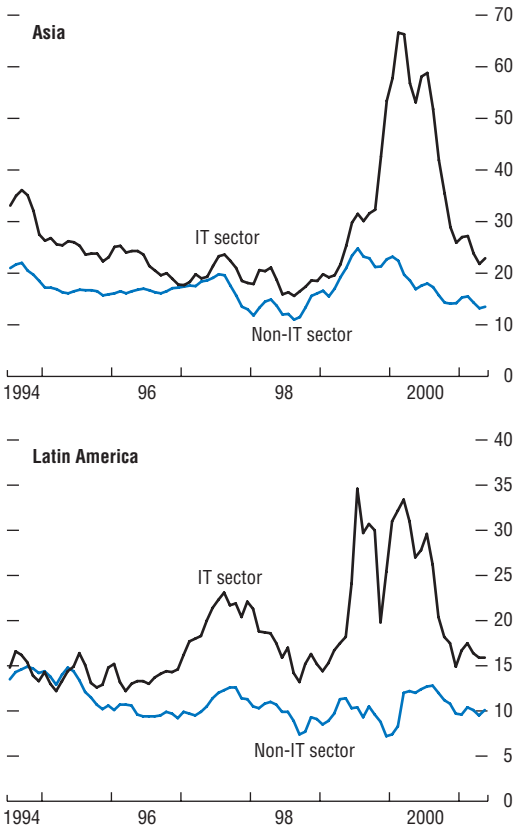
Figure 3.14. Equity Indices for Selected Emerging Market Regions, United States, and Japan
(March 10, 2000 = 100)



Sources: Bloomberg Financial Markets L.P.; and Datastream.

[23]As of end-September 2000.

Figure 3.15. Price-Earnings Ratios for Information Technology (IT) vs. Non-IT Sector



Source: Datastream.

tent with the fact that the weakening in consensus forecasts was somewhat earlier for most Asian countries than for the United States for 2000 (Figure 3.4).

The largest decline in equity prices over the period occurred in Turkey, with investors losing confidence from the summer of 2000 onward, as the pace of reforms under the disinflation program slowed. Prices dropped sharply after the float of the Turkish lira in February 2001, more than erasing the gains of 1999 and returning equity prices to the levels prevailing during the 1998 Russian crisis. Following these declines in equity markets, price-earnings ratios in all regions had almost returned to post-Russian crisis levels in the spring of 2001 (Figure 3.15).

In December 2000, Morgan Stanley Capital International (MSCI) announced that it would shift the MSCI equity index to a "free float" basis. Free float refers to the outstanding stocks of a company, less amounts that are restricted from trading by foreign investors, including amounts that are classified as strategic holdings. This shift is important to emerging stock markets because they typically have low free floats, and because many international investors are benchmarked to the MSCI index. The shift by MSCI to free-float indices is expected, after a phase-in period extending to May 2002, to lead to a reduction in weights for emerging markets from 5.5 percent to around 4 percent. Estimates indicate that—with as much as $2 trillion to $4 trillion benchmarked against the MSCI indices—such a weight change could cause aggregate outflows from emerging markets of $30–$60 billion versus total market valuations of only about $1,009 billion. The changes are to be phased in over a prolonged period, however, and, to some extent, foreign investors have already incorporated the impact of low liquidity in emerging markets by setting portfolio shares allocated to emerging markets below MSCI weights. (Box 3.7 discusses the role of benchmark indices.) Some emerging markets (especially in Asia) have, however, experienced reduced MSCI weights for other reasons, reflecting their poor relative stock market performance.

Box 3.7. Benchmark Indices and the Asset Allocation of Emerging Market Funds

How important are benchmark indices for the asset allocation of emerging market funds? This question is pursued by Disyatat and Gelos (2001),[1] who assess the extent to which two widely used benchmarks, the International Finance Corporation (IFC) and Morgan Stanley Capital International (MSCI) indices, help explain the country asset allocation of individual, dedicated emerging market equity funds between 1996 and 2000 in three different regional groupings: Worldwide Emerging Markets (WEM), East Asia, and Latin America. Actual fund country weights are compared with those of the indices on a monthly basis. Disyatat and Gelos compute three measures of comparison: the root mean squared error (RMSE, the squared root of the average squared difference between actual and predicted weights), the Theil coefficient (which rescales the RMSE so as to bound it between zero and one), and the simple correlation coefficient. In addition, panel regressions of actual on benchmark weights were run for each country separately, with fixed effects for each fund.

Benchmark indices alone explain a substantial fraction of the variation in holdings. The Theil coefficients are quite low and the benchmarks also appear to be highly correlated with the actual weights (see the first table). Turning to the regression results, the R^2 statistics suggest reasonable explanatory power in many cases, although there is substantial variation across countries. The coefficients are positive and significant for most countries in all regional groupings (the second table shows results for the WEM case). This finding reinforces the importance of benchmarks, although it is clear that other factors also play a role in explaining the funds' asset allocation. Note, however, that the analysis does not differentiate between the importance of changes in market capitalizations versus purely technical changes in index compositions.

[1]Disyatat and Gelos (2001),

Benchmark Indices: Overall Fit[1]

	Worldwide Emerging Markets	East Asia	Latin America
RMSE	3.37	7.85	5.44
Theil Coefficient	0.25	0.22	0.12
Correlation	0.79	0.81	0.96

[1]These results are devided by comparing actual weights with those from the corresponding MSCI EMF indices; the lower the Theil index, the higher the accuracy of the model.

How well do simple benchmarks do vis-à-vis a mean-variance optimization model in explaining the funds' portfolio choice? A mean-variance model of asset allocation based on historical returns, in which the utility of the fund manager is tied to excess returns and the volatility of the tracking error with respect to the benchmark index, also helps to predict fund behavior. Judged against each other, however, benchmarks are more informative than the model.

Regressions of Country Weights on Index Weights[1]

Country	Coefficient	*t*-stat	R^2
Argentina	1.23	46.45	0.53
Brazil	1.22	47.61	0.54
Chile	0.66	9.29	0.05
Colombia	0.53	11.12	0.15
Greece	0.63	26.26	0.18
India	0.48	11.83	0.01
Indonesia	1.06	38.37	0.44
Korea, Republic of	0.82	43.91	0.52
Malaysia	0.34	21.76	0.18
Mexico	0.94	23.05	0.19
Pakistan	3.03	23.86	0.13
Philippines	1.72	41.14	0.48
Portugal	0.16	4.35	0.06
South Africa	0.28	5.34	0.00
Taiwan POC	0.64	25.49	0.31
Thailand	0.92	39.55	0.37
Turkey	0.93	23.14	0.15
Venezuela	0.64	12.51	0.08

[1]Panel regression of actual weights on MSCI index weights, with fund fixed effects.

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