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The Globalization of Corporate Finance in Developing Countries

CORPORATIONS BASED IN DEVELOPing countries are raising vast sums of capital on global markets on an unprecedented scale. Indeed, the growing profile of such companies, both public and private, in global investment and finance is a defining feature of the current cycle of capital flows to developing countries. Firms based in developing countries raised $156 billion through international offerings of corporate debt and equity in 2006; syndicated bank loans to such companies reached a record $245 billion; and cross-border mergers and acquisitions (M&A) involving companies from developing countries bidding for foreign targets amounted to $100 billion. The world's top Fortune 500 companies include 40 from the developing world, and the 394 developing-country firms traded on the world's major stock exchanges account for one-third of all global overseas cross-listings.

Developing countries stand to reap substantial benefits from the access their corporations have gained to the world's major financial centers, with their deep and liquid financial resources, broad investor bases, and modern trading platforms. The potential to redirect scarce domestic capital to high-priority purposes, such as rural development and small-scale business, without crowding out the corporate sector is a valuable solution to a trade-off that has bedeviled development for half a century.

Access to international capital markets is far from automatic. Companies qualify by complying with standards for financial accounting, disclosure, and corporate governance mandated by host-country exchanges and regulatory bodies. Most of the firms that have been able to access international capital markets are large, have high growth potential, and come from the banking, infrastructure, and mining industries. Others have established a global presence through trade, investment, or strategic M&A.

This chapter highlights the growing global importance of corporations based in developing countries and the implications of their ascent for development finance. It examines the factors that influence corporations' decisions to pursue external financing and how access to international capital markets affects the cost of capital and the returns on assets. The evidence and analysis presented are based on information gathered from firms about their external financing practices. The data cover nearly every company in the developing world that raised funds on global capital markets between 1990 and 2006 or listed shares on one of the world's major stock exchanges. The key messages are highlighted below.

- *Global borrowing by developing-country firms has surged in recent years and its pattern shifted,* with borrowers originating in emerging Europe and Central Asia now in the forefront. With ample global liquidity and rapid growth in developing countries underpinning growing demand among international investors for developing-country corporate assets, the markets have responded by offering a new generation of credit and equity products designed to finance corporate activity in emerging markets. Since 2002, 422 emerging-market companies have tapped international bond markets at least once, 537 contracted bank loans on the international syndicated market, and 360 raised capital on one of the global major overseas exchanges. Total foreign

capital raised through these instruments reached $1.04 trillion, up from $300 billion in the previous three years.

The home bases of the major borrowers have changed as well. In the early 1990s, East Asian corporations were the major borrowers; from 1997 to 2001, Latin American firms led the way. Since then, firms from emerging Europe and Central Asia, particularly banks, have come to the fore and now account for 39 percent of total external borrowing by corporations in developing countries. Many are borrowing primarily to finance oil and gas and banking operations.

Transactions have also grown in size, with bond financing increasingly common. Large deals have brought greater liquidity to secondary markets and stimulated the development of a market for credit default swaps on emerging corporate debt.

- *The pace of corporate globalization in the developing world is likely to intensify in the medium term, subject to fluctuations in the business cycle and cyclical changes in global financial conditions.* Improved domestic policies and favorable international economic conditions have enhanced the ability of corporations based in developing countries to access international finance. Progressive trade and investment liberalization, competitive pressures, and rapid change in technology are pushing many to build a global presence through M&A, trade, and investment. Cross-border M&A by developing-country multinationals has been on the rise in recent years, increasing from $400 million in 1987 (when these countries accounted for less than 1 percent of global M&A transactions) to almost $100 billion in 2006 (almost 9 percent of global M&A transactions). Emerging-market corporate securities offer substantial opportunities for diversification and growth-related gains to international investors. Official and institutional investors from emerging economies are aware that they are among those who stand to gain; they have been adding corporate assets to their investment portfolios as a way of enhancing long-term financial returns. The state foreign investment corporation recently set up by the Chinese authorities has a broad investment mandate (encompassing energy and natural resources) that could stimulate demand for emerging corporate assets and securities.
- *Concerns are growing that corporate credit spreads may not fully reflect credit quality and that corporations may be underestimating global risk aversion.* With global financial markets operating in recent years with unprecedented liquidity, heightened risk appetite among investors, and a spectrum of new players and actors, the possibility of corporate credit spreads underestimating their long-term equilibrium levels is a real one. Favorable global financial conditions have reduced the cost of external financing to corporations based in developing countries not only directly, through lower international interest rates, but also indirectly, by enhancing their creditworthiness as the value of their collateralizable assets increases. Such factors could encourage excessive corporate borrowing, particularly in the context of weak corporate governance and poor supervision, engendering boom-and-bust cycles, with dire implications for growth and welfare. Excessive corporate borrowing can also limit the government's capacity to issue sovereign debt on international markets.
- *Managing these risks requires a comprehensive response, from the level of the firm to the macroeconomic level.* Credible commitment to capital market development, greater financial transparency, sound exchange rate systems (floating or under the European Monetary System [ERM II]), government regulation, and prudential oversight of banks' foreign currency borrowing can go a long way in most countries toward reducing the likelihood of excessive corporate borrowing and financial instability. For banks, strong monitoring and supervision, including prudential limits on foreign borrowing, are needed to ensure loan quality and the maintenance of adequate capital reserves. Where supervision is less than stringent, risks can be great—and they are rarely confined to the country in which the risky borrower is based. Several countries, particularly in emerging Europe and Central Asia, are now experiencing a credit boom, spearheaded by banks of untested financial health and stamina that have gained access to international credit markets partly because global liquidity is so great and competition in the

international banking industry so intense. Concerns are growing that some of these banks—particularly in Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Russia, and Ukraine—are increasing their foreign exchange exposure to levels that have the potential to jeopardize financial stability.

For nonfinancial corporations, policy makers must create an enabling framework in which businesses can manage risks while building a balanced capital structure that will embrace both local and foreign financing sources. As most firms tapping international debt markets tend to be large and relatively highly leveraged, they raise difficult public policy concerns in the event of an adverse turn in the global financial climate. While corporate decisions to raise capital on overseas markets should be left primarily to market forces, pubic policy has an important role to play in situations in which corporate financial distress could spill over to the banking sector, raising systemic risk. High levels of corporate debt also challenge policy makers and market participants to devise new tools to measure and assess credit risk, market risk, and operational risk within the macroeconomic and regulatory context of developing countries.

- *Good policies reduce the cost of capital*. International investors care about the macroeconomic, political, and institutional settings in which issuing companies operate. Such considerations define the entry and exit points for the cross-country allocation and management of investment portfolios. The econometric analysis conducted for this report finds that a 10 percent reduction in a country's perceived economic risk decreases corporate bond spreads by 52 basis points, while a 10 percent decline in perceived financial risk reduces spreads by 63 basis points—roughly equivalent to a credit-rating upgrade of two notches. The importance of sound macroeconomic management is particularly evident in the impact of higher growth and lower inflation on the spreads available to corporate borrowers. Investments in financial infrastructure to strengthen legal, regulatory, and supervisory institutions for local equity and debt markets also reduce spreads for emerging corporate borrowers.
- *Greater coherence is needed in international standards for cross-border listings and public offerings of securities*. In the years ahead, policy makers in both developed and developing countries will be called upon to simplify the complex international system for cross-border offering and listing of corporate securities. A simpler system would greatly enhance efficiency in the global allocation of capital. Currently, national accounting standards, disclosure rules, corporate governance structures, and enforcement systems associated with equity financing vary widely across countries. Complying with several sets of rules can be costly for firms, raising their cost of capital or deterring them from cross-listing. Market pressures and action by international regulators have brought some degree of convergence in certain areas, notably accounting standards (led by the International Accounting Standards Board). Mutual recognition of national regulations that meet a common minimum standard has also been used, within the European Union and, in certain areas, between the United States and Canada. But the need remains to strike a balance between regulations and market incentives in managing cross-border offerings and listings on major exchanges. The wave of consolidations, mergers, and strategic alliances that have swept the world's major stock exchanges make this need even more acute.

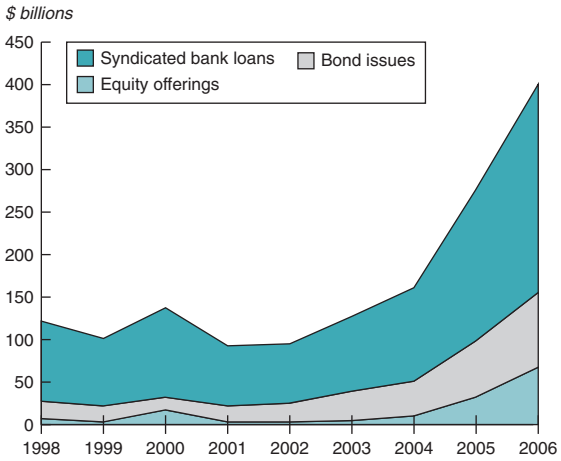
The rapidly evolving corporate sector in emerging economies

The internationalization of corporate finance has followed several distinctive patterns

Mirroring broader global trends, corporate finance in developing countries is taking on an increasingly transnational character. The twin forces of internationalization of business activity and integration of financial markets are pushing companies to minimize their cost of capital by diversifying their funding sources, building a long-term investor base, and increasing their international recognition.

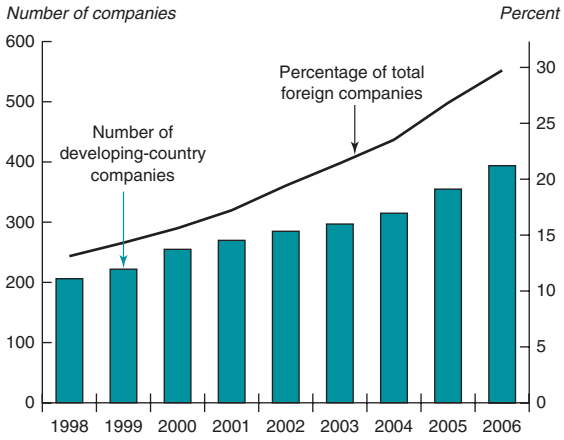
Firms are funding their investment spending, cross-border acquisitions, and operating needs through a mix of local and foreign financing. New capital raised through corporate securities offerings and loans from international bank syndicates

Figure 3.1 Foreign capital raised by developing-country corporations, 1998–2006



Source: World Bank staff estimates based on data from New York Stock Exchange (NYSE), NASDAQ, London Stock Exchange (LSE), Luxembourg Stock Exchange, and Dealogic.

Figure 3.2 Foreign companies listed on major global stock exchanges, 1998–2006



Source: World Bank staff estimates based on data from NYSE, NASDAQ, LSE, Luxembourg Stock Exchange, and the World Federation of Exchanges.

totaled $400 billion in 2006, a threefold increase from 2003 (figure 3.1). Since 2002, 422 companies from developing countries have issued bonds on international markets, 348 of them for the first time. Relatively easy financing conditions in banking markets have raised the number of international syndicated loans to 2,497 since 2002, swelled their volume, and spread loan activity more broadly across countries and regions.

Growing numbers of firms are opting to cross-list their shares on major stock exchanges around the world as a way of inducing foreign investors to trade in their shares, establish an international profile, and preserve their options for meeting future capital needs.[1] Of the 1,574 foreign companies listed on major global stock exchanges in 1998, only 206 (13.1 percent) were based in developing countries. By 2006 that percentage had more than doubled, with 394 (29.7 percent) of the 1,328 foreign companies listed based in the developing world. One-third of all companies now cross-listed on their own and foreign markets come from developing countries (figure 3.2).

Twenty middle-income countries account for most of the participation of developing-country firms in international capital markets, with Brazil, China, India, Mexico, and Russia most heavily represented. With an average per capita income in 2006 of $4,805, these countries accounted for 95 percent of total bond issuance, 85 percent of total bank borrowing, and 95 percent of total equity offerings by developing-country companies (table 3.1). These 20 countries—home to 67 percent of the developing world's population and the source of 78 percent of its GDP—are distinguished by their level of development, growth potential, openness to capital transactions, size and growth of their local equity markets, external financial position, and country risk status. Recent or potential members of the European Union within the group are also under pressure to catch up with their peers. The 20 countries have an aggregate stock market capitalization of $5.3 trillion, 88 percent of the total for the developing world and 10 percent of the total for the entire world. Their 12,557 publicly traded companies represent 95 percent of all those based in developing countries. Substantial foreign exchange reserves, rapid industrial growth, and relatively flexible exchange-rate regimes are other important characteristics that distinguish these countries from the rest of the developing world (table 3.2).

The macroeconomic stances and growth prospects of these 20 countries are largely positive. Nevertheless, several aspects of the participation of their corporations in global capital markets merit careful attention. First, the rapid growth in external debt contracted by firms over the past four years may represent a trend whose potential implications are not yet well understood. Second, as the pattern of corporate external borrowing has shifted

Table 3.1 Capital raised through equity issues, bond issues, and syndicated bank borrowing by firms in selected middle-income countries, 1998–2006

$ millions

Country	Equity issues	Bond issues	Syndicated bank borrowing	Total
Argentina	1,321	6,911	33,719	41,951
Brazil	8,798	56,051	100,226	165,076
Chile	453	11,537	43,749	55,739
China	71,997	14,168	80,304	166,469
Colombia	0	516	9,229	9,744
Egypt, Arab Rep. of	1,134	2,282	19,093	22,508
Hungary	252	7,247	17,817	25,316
India	13,398	8,140	49,441	70,978
Indonesia	4	7,635	18,402	26,041
Iran, Islamic Rep. of	0	0	18,775	18,775
Kazakhstan	902	15,773	19,643	36,319
Lebanon	896	1,645	344	2,885
Malaysia	28	16,633	38,259	54,920
Mexico	5,567	48,012	97,822	151,401
Philippines	134	7,841	20,836	28,811
Poland	1,655	5,684	30,186	37,524
Russian Federation	14,052	63,222	98,522	175,797
South Africa	1,663	14,248	32,396	48,307
Thailand	1,207	3,725	26,711	31,643
Turkey	1,589	9,049	72,432	83,069
Total	**125,051**	**300,318**	**827,905**	**1,253,273**
As percentage of all developing countries	**94.3**	**92.5**	**82.5**	**85.7**

Source: World Bank staff estimates based on data from Dealogic Bondware, Loanware, and Equityware; NYSE; NASDAQ; LSE; and Luxembourg Stock Exchange.

in recent years from East Asia and Latin America to Europe and Central Asia, with significant involvement by local commercial banks in borrowing and intermediation, the importance of regional factors (notably integration within the European Union) and bilateral lending have become prominent. Third, despite much recent improvement in the credit fundamentals of many developing countries, their access to the global corporate bond market remains vulnerable to sudden shifts in investor sentiment and to adverse turns in the global credit cycle. Each of these points is discussed below.

Substantial foreign capital has been raised in the form of debt

Private and state-owned corporations in developing countries have borrowed in international debt markets on an unprecedented scale in the past few years. In 2006 they raised $333 billion through syndicated bank loans and international bond issuance, up sharply from $88 billion in 2002 (table 3.3). Private sector companies accounted for more than 60 percent of total bank borrowing and 75 percent of new bond issuance during 2002–06; they also propelled much of the increase in borrowing. Regionally, firms from emerging Europe and Central Asia stand out, having contracted $135 billion in debt in 2006.

Financial corporations, particularly commercial banks from India, Kazakhstan, Russia, and Turkey, have been at the forefront of what appears to be a major foreign credit boom. Banks have tapped international debt markets to fund their growing domestic loan portfolios and to meet increasing capital adequacy requirements. Faced with competitive pressures and highly liquid markets, international banks have been eager to lend at narrower margins and on longer terms to a wider range of borrowers.

Foreign borrowing by companies in emerging markets has occurred in several distinct phases, mirroring the growth of industrial production in the countries from which companies have borrowed (figure 3.3). Companies from East Asia were the heaviest borrowers in the early 1990s. After the East Asian economic crisis, they were succeeded by companies from Latin America. Between 1997 and 2001, the share of Latin American companies in emerging-market corporate bank lending more than doubled, to an average of 46 percent, from an average of 22 percent between 1990

Table 3.2 Performance indicators of selected developing countries

Growth potential (annual %, 1990–2005)[a]		Local stock market growth (annual %, 2004–06)[b]		Country risk rating, 2000–06[c]		Foreign exchange reserves (change in % of GDP, 1997–2005)[d]	
China	9.7	Ukraine	87.7	Chile	78.6	Equatorial Guinea	64.1
Lebanon	7.6	Egypt, Arab Rep. of	84.3	Malaysia	77.9	Algeria	38.1
Vietnam	7.4	Colombia	65.0	Trinidad and Tobago	76.9	Malaysia	33.3
Myanmar	7.3	Romania	58.3	China	76.1	Yemen, Rep. of	27.3
Cambodia	7.1	Lebanon	51.7	Latvia	75.8	Bosnia and Herzegovina	24.8
Malaysia	6.5	Russian Federation	50.8	Poland	75.3	Solomon Islands	24.0
Maldives	6.5	Venezuela, R.B. de	48.5	Hungary	75.1	China	22.1
Mozambique	6.4	Jordan	45.6	Estonia	75.0	Trinidad and Tobago	20.1
Uganda	6.3	Argentina	43.5	Lithuania	74.7	Russian Federation	19.9
Lao PDR	6.3	Mexico	42.5	Slovak Republic	74.5	Morocco	19.1
Belize	6.0	Indonesia	40.6	Russian Federation	73.7	Ukraine	18.9
India	6.0	Hungary	40.5	Mexico	73.5	São Tomé and Principe	18.3
Chad	5.7	Bulgaria	40.4	Thailand	73.5	Slovak Republic	17.0
Chile	5.6	Estonia	38.8	Croatia	73.4	Honduras	16.7
Yemen, Rep. of	5.6	Peru	36.6	Morocco	73.4	Lebanon	15.2
Bhutan	5.5	Botswana	36.3	Tunisia	73.0	Macedonia, FYR	14.4
Botswana	5.3	Bangladesh	35.0	Costa Rica	73.0	Guinea-Bissau	13.8
Cape Verde	5.2	Ecuador	34.9	Kazakhstan	72.6	Kyrgyz Republic	13.6
Jordan	5.2	Jamaica	34.3	Panama	72.5	Jamaica	13.3
Sudan	5.2	Mauritius	33.4	Jordan	72.3	Cape Verde	13.2
Thailand	5.2	India	32.6	El Salvador	71.2	Congo, Rep. of	11.8
Bangladesh	5.0	South Africa	32.4	Bulgaria	70.9	Croatia	11.6
Panama	5.0	Morroco	31.2	South Africa	70.8	Thailand	11.6
Iran, Islamic Rep. of	5.0	Sri Lanka	30.8	Vietnam	70.3	Uruguay	11.2
Mauritius	4.9	Kenya	29.8	Peru	69.5	Rwanda	11.0
Eritrea	4.9	Latvia	29.3	Guatemala	69.3	India	10.7
Syrian Arab Republic	4.9	Pakistan	29.2	Syrian Arab Republic	69.3	Jordan	10.5
Tunisia	4.9	Côte d'Ivoire	29.0	Jamaica	69.2	Bulgaria	10.2
Sri Lanka	4.9	Brazil	28.6	Uruguay	69.1	Vietnam	9.9
Indonesia	4.8	Poland	27.4	Gabon	69.1	Romania	9.7
Costa Rica	4.7	China	26.8	Iran, Islamic Rep. of	69.0	Cambodia	9.3
Trinidad and Tobago	4.5	Philippines	26.8	Philippines	68.9	Ghana	9.0
Ghana	4.5	Turkey	26.5	Algeria	68.8	Tanzania	8.9
Benin	4.5	Oman	23.7	Ukraine	68.6	Sierra Leone	8.3
Tanzania	4.4	Tunisia	23.5	Azerbaijan	68.4	Barbados	7.9
Mali	4.4	Croatia	23.4	Egypt, Arab Rep. of	68.4	Dominica	7.8
Egypt, Arab Rep. of	4.4	Nigeria	22.9	India	68.1	Papua New Guinea	7.8
Mauritania	4.4	Lithuania	21.8	Romania	67.9	Nepal	7.7
Nepal	4.3	Bahamas	18.0	Dominican Republic	67.9	Nigeria	7.7
Turkey	4.3	Chile	17.7	Gambia, The	67.5	Philippines	7.4
Pakistan	4.3	Namibia	17.4	Bolivia	66.9	Pakistan	7.0
Dominican Republic	4.2	Malaysia	11.6	Brazil	66.8	Grenada	6.7
Burkina Faso	4.0	Trinidad and Tobago	9.3	Yemen, Rep. of	66.7	Paraguay	6.6
Oman	4.0	Ghana	4.4	Mongolia	66.2	Mongolia	6.3
Nigeria	3.9	Thailand	−2.9	Albania	66.2	Angola	6.2
El Salvador	3.9			Argentina	65.8	Sudan	6.0
St. Kitts and Nevis	3.8			Papua New Guinea	64.6	St. Vincent and the Grenadines	5.8
Angola	3.7			Senegal	64.6	Cameroon	5.6
Guinea	3.7			Belarus	64.5	Senegal	5.5
Senegal	3.6			Cameroon	64.3	Mongolia	6.3

Sources: World Bank (various years) and World Bank staff estimates.
a. Average historical growth rate, 1990–2005, based on *WDI*.
b. Based on data from Bloomberg.
c. International Country Risk Guide (ICRG).
d. IMF *IFS*.

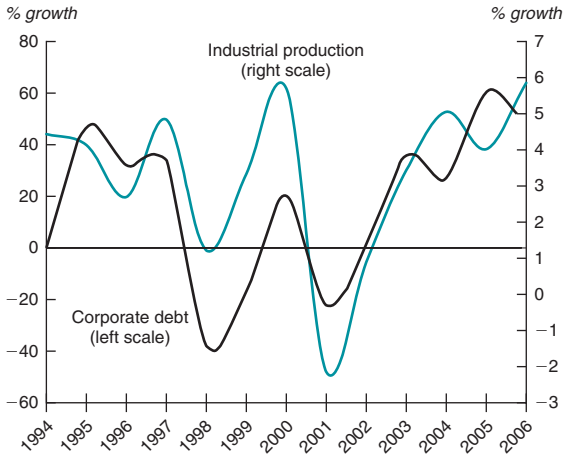
Table 3.3 Foreign debt contracted by developing-country corporations, 1999–2006

$ billions

	1999	2000	2001	2002	2003	2004	2005	2006
Total	91.86	110.29	86.83	87.54	117.58	147.96	237.59	332.92
By instrument								
Bond	19.20	14.78	19.03	21.67	35.95	41.38	65.93	87.70
Bank lending	72.66	95.51	67.80	65.87	81.63	106.58	171.66	245.22
By region								
Latin America and the Caribbean	46.17	54.23	46.87	25.89	36.58	43.45	54.16	86.07
East Asia and Pacific	15.85	20.87	11.38	28.76	31.15	24.80	47.34	47.36
Europe and Central Asia	14.31	22.25	16.10	20.83	28.71	50.55	92.43	134.92
Sub-Saharan Africa	5.52	5.41	6.38	5.13	11.14	9.78	13.69	24.71
Middle East and North Africa	3.42	3.51	2.68	1.92	3.91	7.70	14.54	10.71
South Asia	6.58	3.91	3.37	5.00	6.11	11.58	15.37	29.15
By ownership								
Public	24.73	29.56	25.14	33.21	44.81	50.34	66.35	71.76
Private	67.13	80.73	61.69	54.33	72.78	97.62	171.24	261.16
By sector								
Finance	17.09	23.15	19.94	15.55	20.03	40.99	64.11	102.31
Oil and gas	14.42	25.91	21.92	23.40	30.09	32.47	57.46	54.70
Telecommunications	17.39	17.93	11.38	8.85	9.19	15.33	19.22	31.93
Energy/utilities	16.57	16.66	9.66	11.05	19.52	11.37	14.89	15.92
Construction/building/metal and steel	4.18	5.70	5.08	3.51	6.60	11.73	22.37	35.71
Mining	2.58	2.70	2.88	1.78	2.38	7.04	7.11	7.67
Others	19.62	18.24	15.97	23.41	29.78	29.03	52.43	84.68

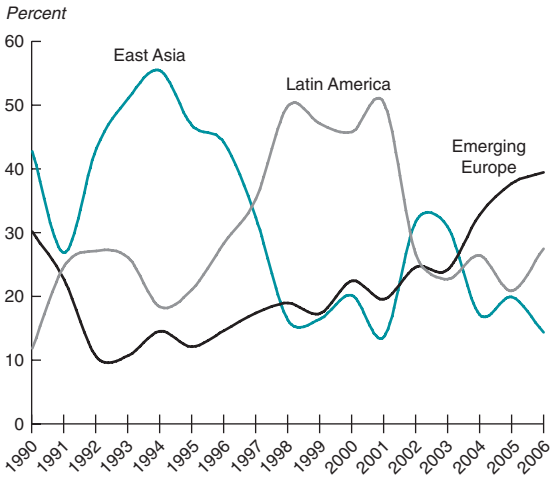
Source: World Bank staff estimates based on Dealogic Loanware and Bondware.

Figure 3.3 Trends in corporate debt and industrial production, 1994–2006



Source: World Bank staff estimates based on data from Dealogic Bondware and Loanware.

Figure 3.4 Foreign borrowing by companies from emerging-market countries, by region, 1990–2006



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

and 1996 (figure 3.4). Most of the financing was in the telecommunication and power sectors. As economic and financial pressures grew in Latin America during 2002 and 2003, corporate borrowing in East Asia picked up, both in absolute terms and as a share of the developing-country total. Since 2003 borrowing has been dominated by companies from emerging Europe, which now account for 39 percent of total foreign borrowing by developing-country firms, up from 19 percent during 1996–2003. Oil and gas and banking were the major destinations of financing.

The financing trends depicted in figures 3.3 and 3.4 followed in part the waves of privatization

Table 3.4 International borrowing by banks in 10 middle-income countries, 2004–06

	Syndicated bank borrowing ($ millions)	Bond issuance ($ millions)	Total borrowing ($ millions)	% of total borrowing	Total borrowing as share of GDP (percent)	Number of banks
Russian Federation	17,029	13,932	30,961	26.3	0.9	51
Turkey	24,014	637	24,651	21.0	2.5	19
Kazakhstan	6,036	3,120	9,156	7.8	5.2	11
India	6,637	1,580	8,217	7.0	0.3	20
Brazil	4,106	3,718	7,824	6.7	0.4	27
Hungary	1,944	4,871	6,815	5.8	1.6	6
Malaysia	3,145	1,475	4,620	3.9	1.0	9
South Africa	3,435	0	3,435	2.9	0.3	6
Chile	2,396	200	2,596	2.2	1.0	8
Romania	1,441	585	2,027	1.7	1.1	4
Total	**70,184**	**30,119**	**100,301**	**85.3**	**0.9**	**161**
All middle-income countries	**83,539**	**34,110**	**117,649**	**100.0**	**0.4**	**295**

Source: World Bank staff calculations based on data from Dealogic Loanware and Bondware.
Note: Ratio of total borrowing to GDP is based on 2004 and 2005 data. It is calculated by dividing the sum of total borrowing in 2004 and 2005 by the sum of GDP in 2004 and 2005.

and private participation in infrastructure in the 1990s and the powerful impact of the European Union on the growth prospects, financing needs, and internationalization of the corporate sector in emerging Europe and Central Asia. Borrowing by banks in Russia and Turkey (which together accounted for just under half of external borrowing by developing-country banks in 2004–06) was more than five times greater than their external borrowing during the 1995–97 surge. As a share of GDP, external borrowing by Kazakhstan's banks was even greater, averaging more than 5 percent of GDP in 2004–06. By contrast, the substantial external borrowing by banks in Brazil and India did not reach 0.5 percent of GDP (table 3.4).

One important feature distinguish firms raising capital in overseas markets from their peers staying at home is firm size. Whether measured by asset size or sales volume, the companies tapping international bond and syndicated loan markets are local leaders. They tend to be larger than their peers by several orders of magnitude: ten times larger, on average, in assets, seven times larger in sales. The difference is statistically significant even after the effect of country size on company size is factored in (box 3.1).

Emerging-market corporations have become substantial bond issuers

The opening of the global corporate bond market to a growing number of private and public companies from Asia, emerging Europe, and Latin America epitomizes the structural change under way in emerging-market finance. By any measure—the volume of new issues, market size, liquidity, distribution, or appeal to a broad range of global investors—interest in bonds issued by firms from emerging-market countries has increased in recent years, embracing issuers with varied credit ratings from the financial, industrial, and infrastructure sectors in many different countries.

Having risen from a modest $2.3 billion in 1990 to $87.7 billion in 2006, corporate bond issuance from emerging economies now greatly exceeds sovereign issuance, in both volume and number of offerings (figures 3.5 and 3.6). The average size of issues rose from about $110 million in the early 1990s to $222 million in 2006. In recent years several companies have floated issues of a size once reserved for sovereign nationals, supranational agencies, and highly rated companies from industrial countries. Larger issues tend to be more liquid, which, in turn, facilitates trading and risk management, further increasing demand.

Bond features have also evolved. Subordinated debt (issued particularly by banks for capital adequacy reasons) is increasingly accepted. There is also less emphasis on negative-pledge clauses in bond covenants, more frequent inclusion of call or put provisions, and fewer third-party guarantees of the issuing company (by a parent company or the government, for example).

Narrower credit spreads are another sign of bond market maturation. Emerging-market

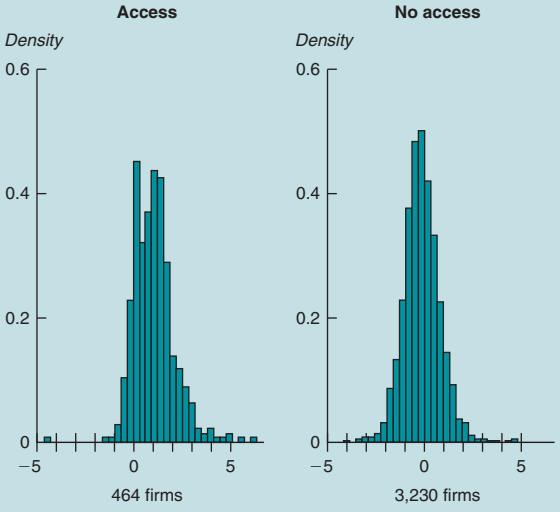
Box 3.1 A profile of developing-country companies that access global financial markets

Among firms based in developing countries, what distinguishes those that borrow in international debt markets? To assess the differences between the "access group" and the "no access group," several leading databases (Dealogic Bondware, Loanware, and Worldscope) were mined for information on their capital structure and borrowing characteristics. One distinguishing characteristic stands out as statistically significant: firm size.

Firms that borrow abroad are significantly larger than those that do not. The differences in total assets and sales are statistically significant according to t-tests for the equality of firm size (measured in millions of U.S. dollars for all firms in the sample). Plotting the frequency distributions of normalized logarithms of size, as shown in the figure below, confirms the finding.

The table below shows the median asset size of firms in 11 countries. The results confirm that firms that borrow abroad are significantly larger than those that raise all of their financing domestically.

Distribution of size of emerging-market corporations that have accessed international debt markets versus those that have not[a]



Source: World Bank staff estimates based on data from Dealogic Bondware, Loanware, and Worldscope.

a. Given the potential for heteroskedasticity, two subsamples were first normalized by subtracting from the natural logarithm of a firm's total assets the logarithm of its home-country mean and dividing the difference by the home country's standard deviation.

Asset size of emerging-market-based corporations based on access to international debt markets

$ millions

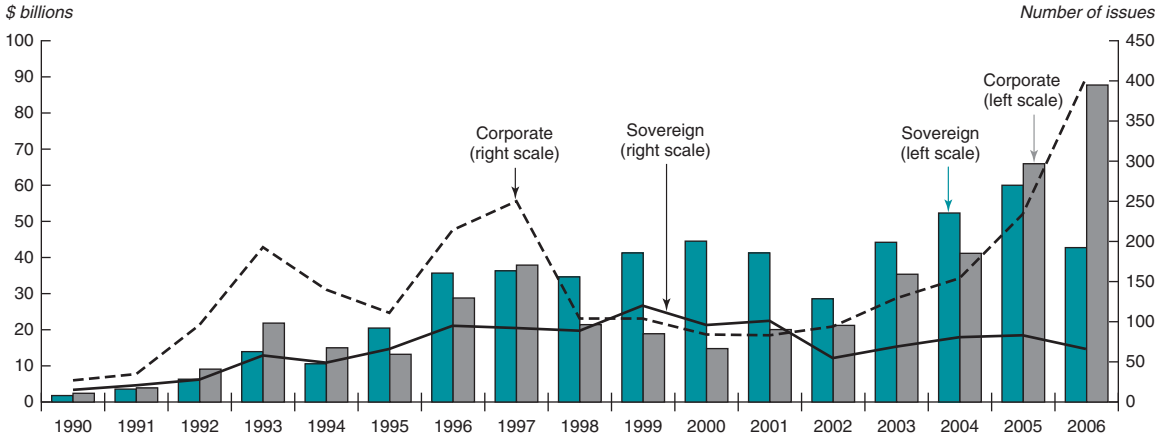
Country	No access	Access
Argentina	78	915
Brazil	466	2,407
Chile	118	1,341
China	180	1,712
India	147	3,143
Indonesia	86	467
Malaysia	54	586
Mexico	344	2,308
Philippines	35	924
Thailand	55	503
Turkey	171	3,102
Number of firms	**3,230**	**464**

Source: World Bank staff estimates based on data from Dealogic Bondware, Loanware, and Worldscope.

corporate bonds carried spreads over comparable U.S. Treasury securities of about 452 basis points in 1999. The average spread narrowed to about 349 basis points in 2006, despite a significant spike in 1997–98 during the East Asian and Russian financial crises (figure 3.7). The narrowing of spreads for investment-grade corporate borrowers (BBB and higher) has driven the overall drop. This effect does not reflect an increase in average credit quality, because the average rating has been consistently in the BB range on the Standard & Poor's scale (Ba2 on the Moody's scale). Spreads for the high-yield segment of the market remain relatively high. Access to international capital markets is more challenging for emerging-market corporate entities than for emerging-market sovereigns because of the higher information barriers and greater market constraints facing corporations (box 3.2).

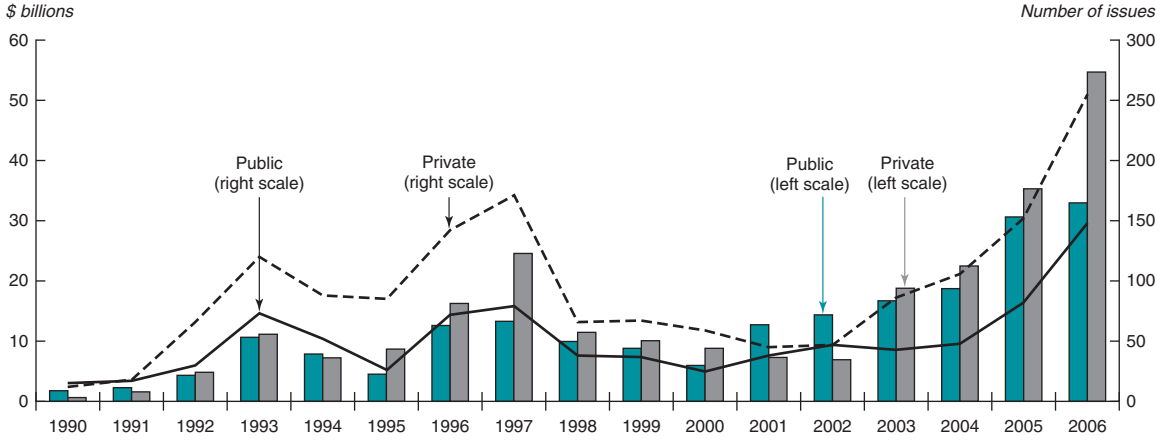
The segments of the global bond markets that best cater to the debt-financing needs of developing-country corporate issuers are the Eurobond market and the foreign U.S. dollar bond market, known as the Yankee 144A market. The

Figure 3.5 International bond issuance by sovereign governments and corporations, 1990–2006



Source: World Bank staff estimates based on data from Dealogic Bondware.

Figure 3.6 International bond issuance by public and private corporations, 1990–2006



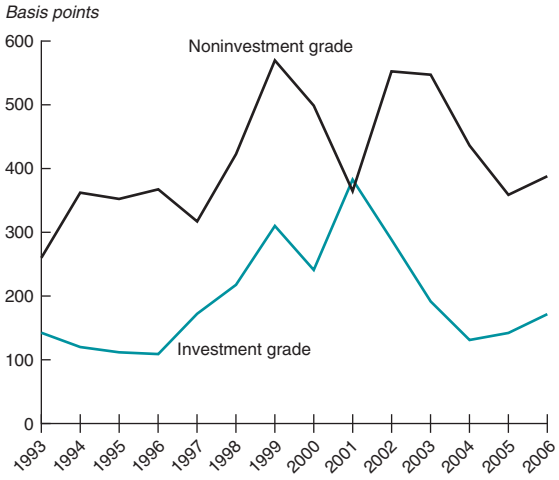
Source: World Bank staff estimates based on data from Dealogic Bondware.

yen-denominated Samurai market has been less appealing to developing-country issuers, except Hungarian and Polish companies, which have been regular issuers in recent years.

Many emerging-market firms have chosen to raise their capital in U.S. markets, where institutional investors (pension funds, insurance companies, and mutual funds) had $24.17 trillion under management at the end of 2004. Firms targeting the U.S. market have opted overwhelmingly to issue under Rule 144A, a federal rule defining a market in which securities are privately placed with qualified institutional investors. Introduced by the U.S. Securities and Exchange Commission in 1990, Rule 144A exempts foreign issuers from certain U.S. disclosure and distribution regulations, including SEC registration and liability under the 1993 Securities Act (Committee on Capital Markets Regulation 2006).

The Eurobond market's flexibility to accommodate both the issuer's choice of currency of denomination and of governing law (British or New York) has been an attractive feature of that market, as is the fact that Eurobonds are not taxed. Their flexibility is of particular relevance to emerging-market issuers domiciled in countries

Figure 3.7 Average spread of emerging-market corporate bonds against U.S. Treasury bonds, by grade, 1993–2006



Source: World Bank staff estimates based on data from Dealogic Bondware.

with different degrees of financial and trade linkages with the major economic poles of Asia, Europe, and the United States. International corporate bonds from emerging economies that have arrived on the market in recent years have increasingly been in the form of combined Eurobond and 144A issues floated in London and New York. Issuing simultaneously in both markets maximizes both investor demand and liquidity in secondary trading, because both tranches become fungible after three months. The significant regulatory differences between Eurobond and 144A markets imply different approaches to the primary distribution of debt securities in registration, disclosure, and possible listing on a major stock exchange.

Euro-denominated international bond issues by emerging-market firms took off in 1998, once the common European currency became a certainty and investors began to switch from other European currencies into the euro. Total issuance grew from $720 million in 1998 to about $15.3 billion in 2006. Euro-denominated issues tend to be somewhat larger on average than similar dollar-denominated bonds (about $250 million versus $200 million in recent years), with similar credit quality at issuance. These issues had been in the BB range but have lately risen to investment grade. The increase in credit quality reflects the preponderance of Eastern European issuers in this segment, whose ratings have risen with those of their countries of origin. As a result, spreads have been typically tighter in the euro segment (84 basis points in 2004 and 141 points in 2005) than in the dollar segment. Average maturities have been comparable.

Credit derivative instruments are finding new applications in connection with emerging-market corporate debt

The growth of emerging-market corporate debt has spawned new applications for credit default swaps (CDSs). As investor demand for emerging-market corporate credit has increased in recent years, trading in CDSs on selected emerging-market reference obligations—primarily well-established companies from Brazil, Mexico, Russia, and Turkey—has expanded, providing a mechanism for transferring risk from banks to capital markets. This new application of credit derivatives to emerging-market debt complements their growing role in the sovereign segment of the market, highlighted in *Global Development Finance 2006*.

As in the case of the sovereign CDS market, emerging-market corporate CDSs are marketed to global investors, particularly hedge funds and insurance companies, that wish to increase their exposure in emerging markets without having to invest directly in the underlying assets. Such investors function, in essence, as sellers of credit protection to other investors and to banks seeking to hedge their credit exposures against specific risks, such as default or a credit downgrade. The market operates on the basis of a contract between the seller and the buyer of protection. The understanding is that the seller will compensate the buyer for specified credit risks in return for periodic premium payments over the term of the contract. The price of a CDS, typically given as a basis point spread, is determined by the demand for and supply of protection against the credit risk of the underlying reference obligation. A widening of CDS spreads is a sign of the market's increasing concern about the reference company's credit quality; a tightening implies market participants' expectation that the company's credit status is improving.

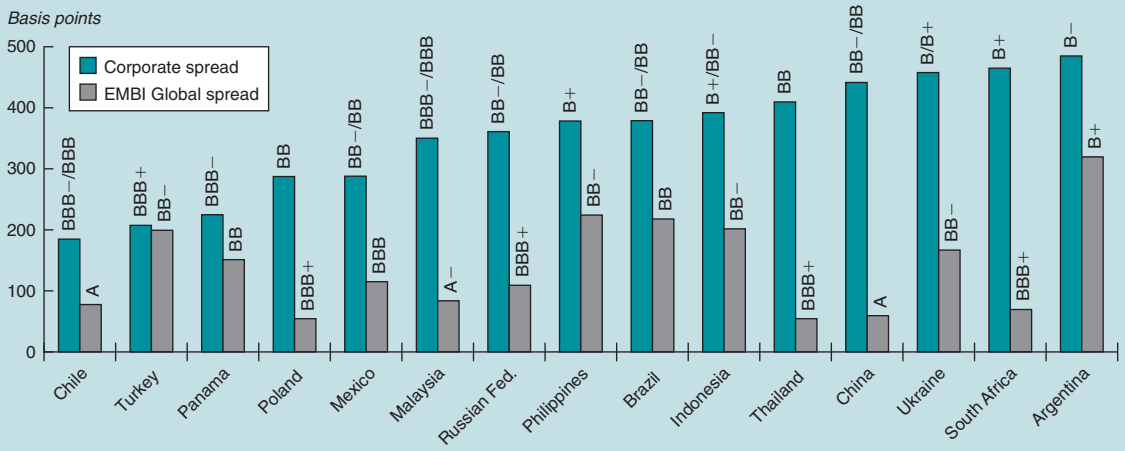
The fastest-growing segment of global derivatives, today's market for CDSs on corporate debt covers an estimated 3,000 firms worldwide. The market has expanded exponentially in recent years,

Box 3.2 The relationship between emerging-market sovereign and corporate bond spreads

Reflecting the influence of several factors, corporate bond spreads tend to be higher than sovereign spreads (see figure below). First, corporate entities face higher information barriers and greater market constraints than do sovereigns. Governments derive advantages from membership in multilateral financial institutions and from the state-centric nature of the international economic order. By contrast, developing-country firms, particularly private ones, stand or fall on their own financial performance, track record, and growth potential.

Second, even locally creditworthy firms may be constrained, for several reasons. Corporate ratings are often subject to sovereign ceilings. Corporate assets are not easily amenable to collateralization in international debt markets. Covenants written into corporate debt documents tend to be more confining than those that apply to sovereign debt. And swap markets for credit derivatives are better developed and more liquid for emerging sovereign names than for corporate names.

Corporate bond spreads vs. EMBI Global sovereign spreads for selected countries, 2006–07



Source: World Bank staff calculations based on Bondware and JPMorgan EMBI Global.
Note: Ratings shown above bars are those of Standard & Poor's.

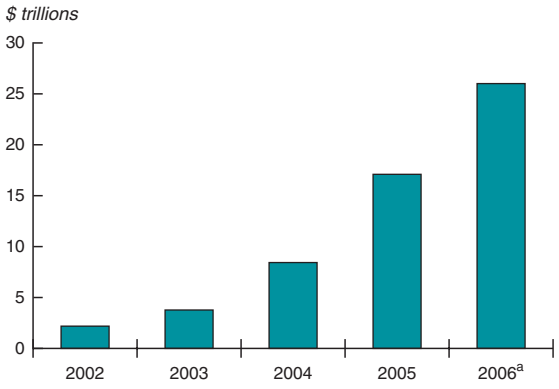
with the notional global value of traded CDSs increasing from $2.2 trillion in 2002 to $26 trillion in 2006 (figure 3.8).

The expansion of trade in CDSs supports the financing efforts of large companies in emerging markets by enabling banks to expand their offering of bilateral or syndicated loans while sharing their credit risk exposure with the rest of the market. CDS spreads provide useful information about the market's assessment of the credit risk of the reference obligations, often moving in tandem with cash bond spreads. And, like cash bond spreads, CDS spreads on blue chip emerging-market companies have been range bound over the past year. After spiking in May–June 2006, they have hovered around 40–60 basis points, closely paralleling spreads on highly rated U.S. companies (figures 3.9 and 3.10).

Factors shaping corporate access to international finance

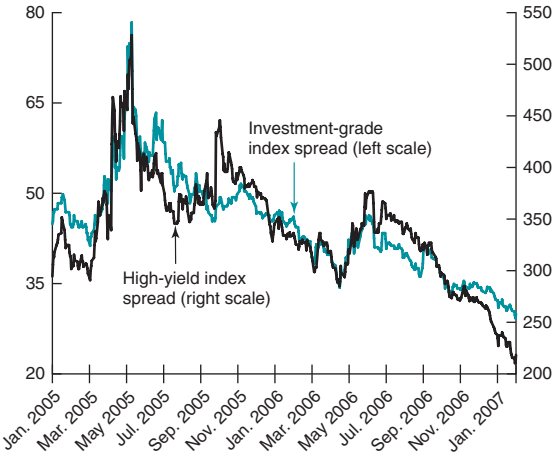
Firms do not enter the international capital markets by accident. They typically do so after a deliberate process of corporate remaking and long-term corporate financial planning. Once the choice is made, access to international capital markets helps the company diversify its source of funds,

Figure 3.8 Notional value of global credit default swaps, 2002–06



Source: International Swaps and Derivatives Association Market Survey, 1987–2006.
a. As of end-June 2006.

Figure 3.10 Spreads on U.S. credit derivative index, 2005–07

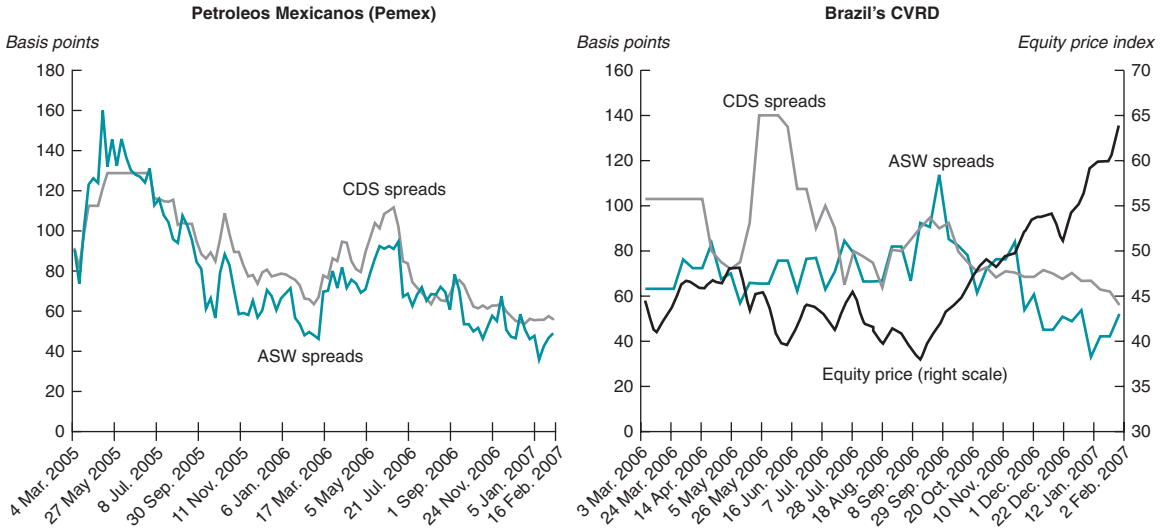


Source: World Bank staff estimates based on JPMorgan Chase.

improve risk management through more sophisticated financing instruments, borrow at longer maturities, gain international visibility, and possibly reduce the cost of capital. Accessing foreign capital markets helps firms reduce dependence on small local capital markets while exposing them to higher standards of accounting, reporting, disclosure, and corporate governance (Coffee 1999, 2002; Stulz 1999; Reese and Weisbach 2002).[2]

Among the developing-country firms that have entered the international capital markets are major global players that have amassed sufficient capital and know-how to contemplate expanding their presence in global markets through investment or M&A. Cemex, for example, is the leading cement company in Mexico; CVRD is Brazil's fourth-largest mining company. Tata Consultancy, Infosys Technologies, and Wipro are among the top Indian providers of business services. In the utilities sector, UES of Russia is ranked 13th. Other nonfinancial corporations in developing countries are major investors in certain countries or regions. Thailand's CP Group, for example, is

Figure 3.9 Five-year spreads on CDSs and ASWs



Source: World Bank (various years) and World Bank staff estimates.
Note: ASW = asset swap.

said to be the largest single foreign investor in China, and América Movil is the largest telecommunications company in Latin America.[3]

These firms increasingly invest in other countries to leverage their advantages and to acquire strategic assets, commonly through M&A. Multinational companies based in developing countries made more than 700 cross-border M&A purchases in 2006, up from just 11 such deals in 1987. These developments have put some of these companies on par with large companies from developed countries (box 3.3).

Box 3.3 Globalization and the growth of transnational companies in the developing world

The rise of developing countries' multinational corporations over the past decade reflects the impact of globalization, including the liberalization of trade and foreign investment flows, the falling cost of transportation and communication, and increased demand for product diversity. As many developing-country governments have eased their policies toward capital outflows, their companies have expanded their operations abroad. Developing countries now boast 15,000 multinational corporations. The foreign assets of the top 50 nonfinancial multinational corporations reached $200 billion in 2006, representing nearly a third of the total assets of all developing country–based multinationals (see table below). These companies employ almost 500,000 people, 16 percent of whom are based abroad. Foreign sales account for some 40 percent of total sales.

Globalization of production and sales may boost growth, as foreign markets provide additional sources of demand, enable firms to capture economies of scale, increase access to finance, and introduce firms to more-efficient technologies and management practices. Most companies in a survey of 200 outward investors from emerging Europe and Central Asia increased exports and improved their financial performance (Sevtlicic and Rojec 2003). In India outward investment enhanced the export performance of small and medium-size manufacturing enterprises compared with those that did not invest abroad (Pradhan 2005). A survey of Chinese multinational corporations indicates that their foreign operations tend to be more profitable than their domestic operations (Yao and He 2005). The 150 largest developing-country multinationals have achieved more rapid growth in assets and sales than domestic economies, although performance varies across countries (see figures on next page).

Firms may invest abroad by acquiring, often through M&A, technology, brands, and distribution networks—a

Industry position of selected southern transnational corporations, 2006

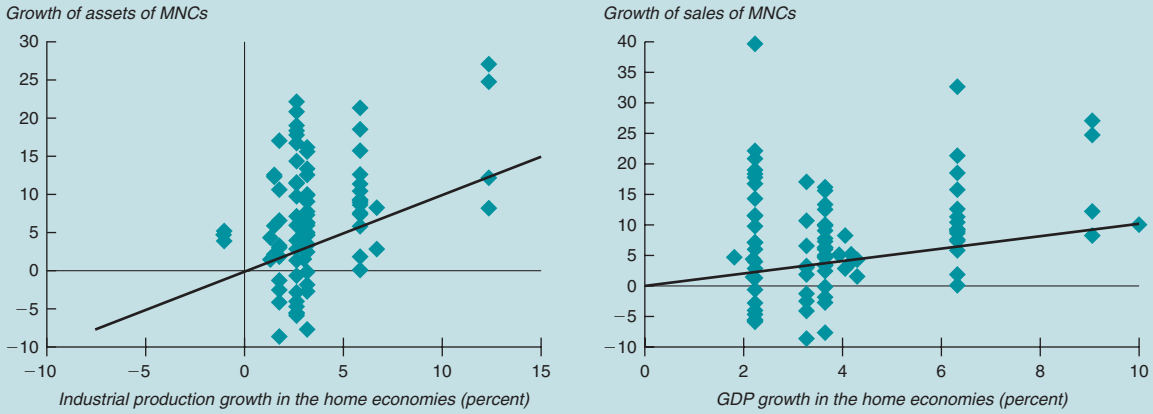
Company	Country	Industry	Rank in the industry	Sales ($ billions)	Profits ($ billions)	Assets ($ billions)	Market value ($ billions)
Embraer	Brazil	Aerospace and defense	14	3.85	0.47	5.23	7.26
ICBC	China	Banking	2	—	—	—	251.10
Tata Consultancy Services	India	Business services	5	2.23	0.45	1.21	18.34
Infosys Technologies	India	Business services	6	1.63	0.43	1.54	17.50
Wipro	India	Business services	9	1.87	0.37	1.64	16.66
Cemex	Mexico	Construction	1	15.33	2.11	26.44	23.82
Orascom Construction	Egypt, Arab Rep. of	Construction	23	1.41	0.18	2.10	8.11
Siam Cement	Thailand	Construction	27	4.95	0.94	6.63	7.42
CVRD	Brazil	Materials	4	10.37	2.43	15.97	53.22
China Shenhua Energy	China	Materials	5	4.74	1.08	13.18	27.51
Norilsk Nickel	Russian Fed.	Materials	17	7.29	1.90	13.63	17.81
Novolipetsk Steel	Russian Fed.	Materials	27	4.70	1.84	5.17	12.05
Gazprom	Russian Fed.	Oil and gas operations	4	36.47	7.24	104.56	184.37
PetroChina	China	Oil and gas operations	5	46.95	12.43	73.68	172.23
Petrobras-Petróleo Brasil	Brazil	Oil and gas operations	9	58.43	10.15	76.64	99.82
China Telecom	China	Telecommunications	15	19.47	3.39	48.53	29.73
América Telecom	Mexico	Telecommunications	22	17.17	1.11	22.85	20.13
UES of Russia	Russian Fed.	Utilities	13	24.52	1.15	40.45	28.00
+NTPC	India	Utilities	19	5.38	1.33	15.45	24.36

Source: Forbes Global 2000 list.
Note: — = not available.

Box 3.3 (*continued*)

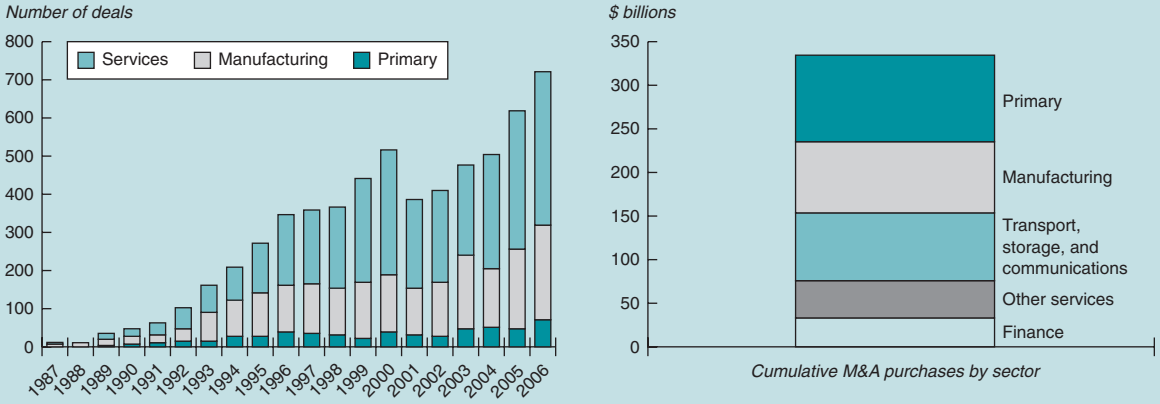
strategy known as *asset-augmentation*. As rapid advances in technology and globalization quickly erode comparative advantages, companies look to takeovers as a path to growth. Recent mega-deals by Cemex and CVRD, as well as the $1.75 billion purchase of IBM's personal computer division by China's Lenovo, are examples of asset-augmenting expansion. Cross-border M&A purchases by developing-country multinationals increased from $400 million in 1987 (when they made up less than 1 percent of global M&A transactions) to almost $100 billion in 2006 (almost 9 percent of global M&A transactions). The services sector accounted for almost half of the $350 billion in M&A purchases between 1987 and 2006 (see figures below).

Growth performance of southern MNCs vis-à-vis their home economies, 1995–2005



Source: World Bank staff calculations based on Worldscope and World Bank databases.

Cross-border mergers and acquisitions by developing-country firms, 1987–2006

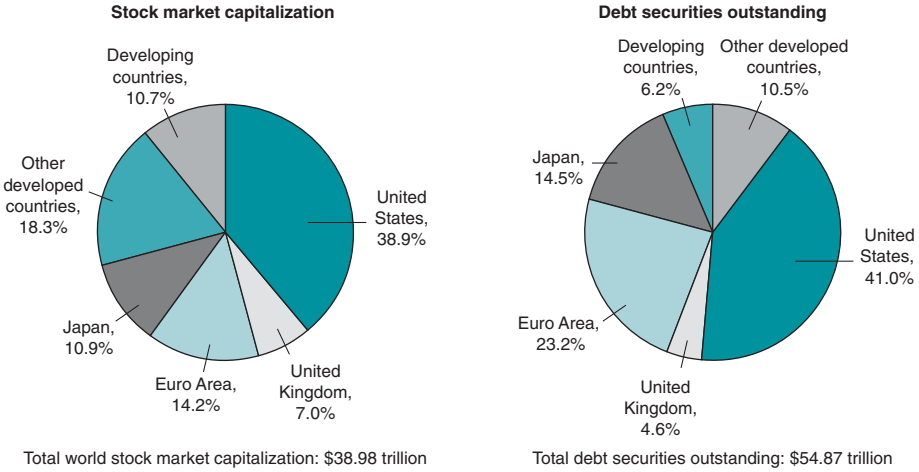


Source: UNCTAD data on cross-border M&As prepared for the World Bank.

The global financial environment consists of competing financial centers and jurisdictions that operate under different national regulatory regimes, accounting standards, and market practices. The United States is by far the largest capital market, accounting for about 40 percent of global equity and debt capital, followed by the euro area, the United Kingdom, and Japan (figure 3.11).

National (and regional) markets differ not only in the rules governing issuance of securities

Figure 3.11 Distribution of global debt and equity capital, 2005



Source: World Bank (various years) and World Bank staff estimates.

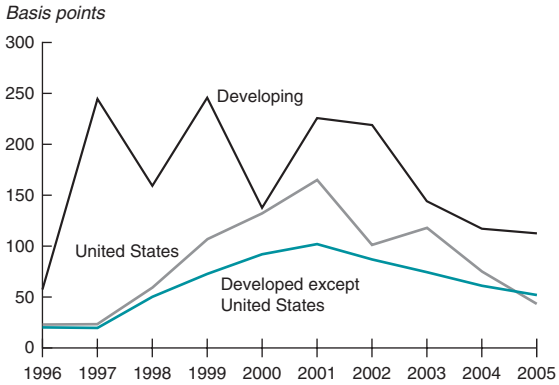
but also in their "home bias," which occurs when investors give too much weight to home securities in their investment choices. Despite significant progress in recent years in the transmission of information across global capital markets (Eun and Shim 1989; Kim 2003; Wongswan 2006), home bias remains an important phenomenon. Recent research suggests that Japan and Spain have the highest home bias in equity markets (88 percent in Japan, 80 percent in Spain), while Canada and the United States have the highest home bias in fixed-income markets (93 percent in Canada, 92 percent in the United States).

Emerging-market companies' engagement in international capital markets has been driven by two structural forces: (a) growing demand from investors seeking higher yields and investment diversification and (b) companies' increasing participation in international business transactions. But a variety of competitive disadvantages and institutional, informational, and economic obstacles continue to hamper emerging-market companies in their ability to access such markets. These include the following:

- high information barriers, which prevent market participants and analysts from developing well-informed views on a company's credit quality and growth potential;
- undeveloped or poorly defined standards of corporate governance, accounting standards, and transparency, which raise the agency costs of raising capital abroad;
- partially closed capital accounts and managed exchange rates, which introduce uncertainty about the flow of funds;
- the vulnerability of corporate earnings and valuations to the local business cycle and associated policy risks; and
- country risk, which may cause investors to require greater risk premiums from companies operating within the country's jurisdiction.

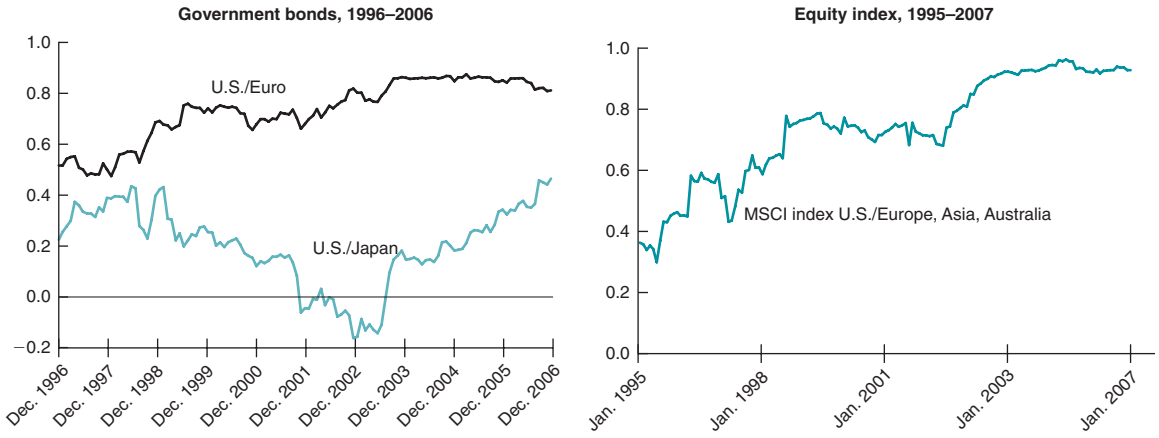
The practical result of these obstacles and disadvantages is an additional financing cost for emerging-market companies, one not borne by their competitors from developed countries (figure 3.12).

Figure 3.12 Spreads on investment-grade corporate bonds from developing and developed countries, 1996–2005



Source: World Bank staff calculations based on data from Dealogic Bondware.

Figure 3.13 Correlation in mature debt and equity markets



Source: World Bank staff calculations of 36-month rolling correlation based on Bloomberg and Morgan Stanley MSCI Barra.

Business cycles in the industrial countries have converged in recent years, and volatility has declined

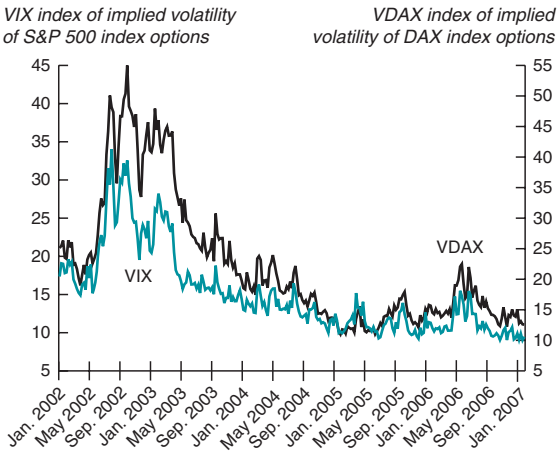
The benefits investors obtain by diversifying across assets and markets in the major developed countries have diminished in recent years, as business cycles have tended to converge, financial volatility has decreased, and rapid transmission of information across markets has consolidated market linkages and integration. The combined impact of these developments has been greater co-movement in national stock and bond markets (figure 3.13).

Along with a generalized moderation of volatility of economic activity, the secular trend toward convergence of business cycles in the G-7 countries has been a defining feature of the macroeconomic landscape in recent years. The "great moderation" of the U.S. economy, in particular, has received a great deal of academic and policy attention (Summers 2005; Kahn, McConnell, and Perez-Quiros 2002; Kim and Nelson 1999). Several factors appear to be at play, including the adoption by major central banks of a uniform approach to the conduct of monetary policy through inflation targeting and enhanced transparency and credibility; lower fiscal deficits in many countries; financial innovations, including risk-based loan pricing and securitization, which have made firms and households less sensitive to income fluctuations; and, in the case of Europe, the increased policy discipline associated with EU accession and the broader forces prompting regional integration.

The effect of convergence and moderation on the investment opportunities open to global investors is difficult to measure. It is possible to argue that the growth of the European Union has shrunk the set of investment opportunities in world equity markets, as intra–EU correlations of asset returns have declined. Improvements in monetary policy in major industrial countries have also played a role in advancing convergence in mature bond markets, as the greater predictability of central banks' policy intentions has stabilized inflation expectations and anchored national inflation rates around a narrow band of policy targets.

Financial volatility in mature markets has also declined in recent years (figure 3.14). Two of the key determinants of volatility—risk appetite among investors and macroeconomic stability—have

Figure 3.14 Volatility measures in mature equity markets, 2002–07



Source: JPMorgan Chase.

Table 3.5 Correlation of mature and developing stock market indexes

Monthly rate of return over 2000–06 period

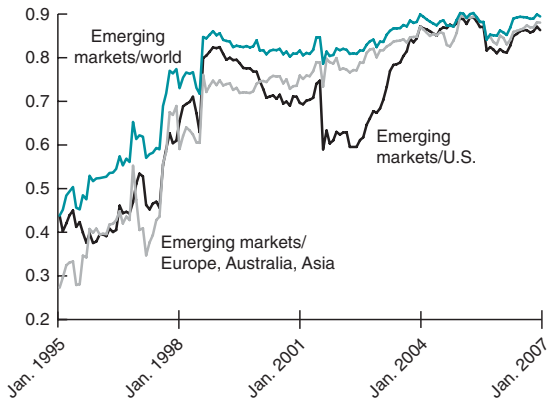
	United States	United Kingdom	Germany	Chile	Malaysia	China	India	Hungary	Russian Fed.	Mexico	Thailand	Brazil	South Africa
United States	1.00	0.85	0.75	0.37	0.22	0.02	0.39	0.39	0.33	0.55	0.41	0.58	0.52
United Kingdom		1.00	0.77	0.36	0.17	−0.06	0.46	0.45	0.38	0.58	0.37	0.55	0.57
Germany			1.00	0.35	0.37	0.17	0.42	0.43	0.29	0.56	0.22	0.54	0.50
Chile				1.00	0.43	0.02	0.33	0.40	0.21	0.28	0.40	0.39	0.35
Malaysia					1.00	0.13	0.32	0.36	0.23	0.34	0.22	0.27	0.22
China						1.00	0.05	0.03	0.18	0.04	−0.08	0.13	0.09
India							1.00	0.73	0.58	0.67	0.32	0.58	0.47
Hungary								1.00	0.61	0.66	0.29	0.63	0.44
Russian Fed.									1.00	0.67	0.33	0.60	0.41
Mexico										1.00	0.37	0.72	0.60
Thailand											1.00	0.49	0.62
Brazil												1.00	0.62
South Africa													1.00

Source: World Bank staff calculations based on data from Bloomberg.

improved with the sustained expansion of the world economy, growing global liquidity, better risk management techniques, and the expansion of markets in risk transfer.[4] Although correlation in stock market returns across mature markets is significantly higher than across emerging markets (table 3.5), correlation of equity returns between emerging and mature markets has increased in recent years (figure 3.15).

Significant recent advances in information and trading technology, the availability of high-frequency financial data, and greater technical capability for analyzing such data have increased the speed with which today's financial markets react to macroeconomic and political news. In the early 19th century, it took almost two months for changes in asset prices in New York, conveyed across the Atlantic in clipper ships, to have an impact in London. Today U.S. macroeconomic announcements are incorporated in German government bond yields and prices in a matter of minutes (Goldberg and Leonard 2003; Sylla, Wilson, and Wright 2005).

Figure 3.15 Correlation of equity returns in emerging markets and world markets, February 1992–January 2007



Source: World Bank staff estimates of 36-month rolling correlation of returns based on Morgan Stanley MSCI Barra.

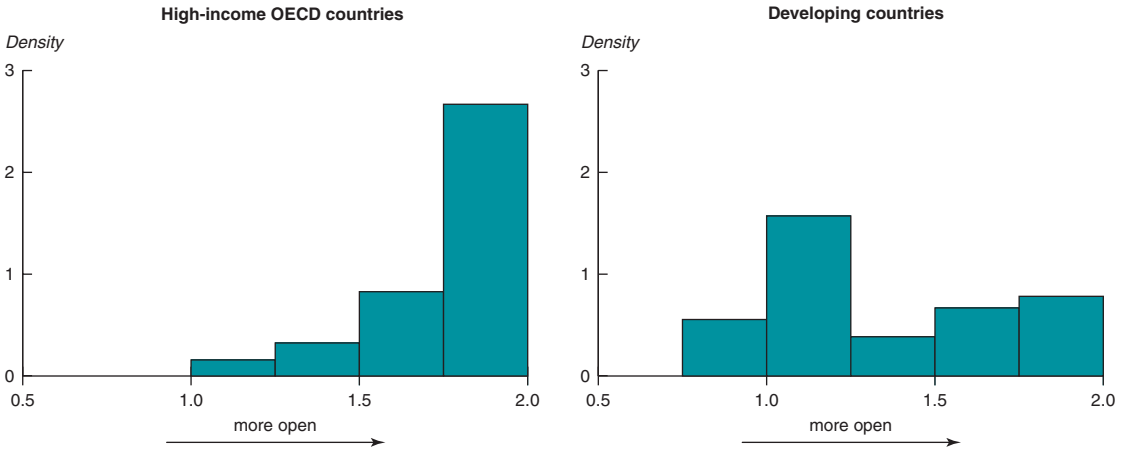
Corporate assets in emerging markets offer diversification and growth-potential gains

Business cycles in developing countries are weakly correlated with those of developed countries, and monetary policies are less weakly aligned across developing countries than across developed countries. There is thus considerable potential for gains from international diversification across developing-country corporate securities.

Despite a significant decline in inflation and a widespread acceleration of growth, developing-country macroeconomic conditions, business cycle dynamics, and growth prospects respond to global conditions in an amplified cyclical fashion. Their capital markets remain segmented, not only because of high informational barriers but also because of the official capital controls that remain in place in many developing countries, which restrict cross-border capital-account transactions (figure 3.16).

Economic, legal, and industrial structures often amplify diversification gains through the differential growth opportunities they offer local firms over the business cycle. As a result, and paradoxically, factors associated with market

Figure 3.16 Capital account openness in developed and developing countries



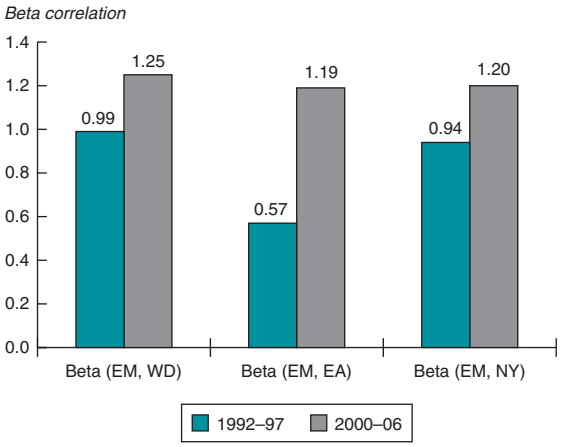
Source: World Bank staff calculations using methodology in Dailami (2000) and using data from IMF (various years).

segmentation may make emerging-market corporate bonds and equities more attractive to global investors. In recent years returns on emerging-market bonds and equities have been superior to comparable returns in mature markets; risks have also been higher. A comparison of the simple correlations between returns in selected developed and emerging equity markets over two periods confirms this observation (figure 3.17 and table 3.6). Repeating the same exercise for selected developed and emerging-market bond returns shows that market integration primarily affects developed-country bonds and that, in relative terms, emerging-market bonds still offer more opportunities for diversification.

Home-country growth prospects and institutional environment matter

Local economic and institutional factors in a firm's home country affect investors' perceptions through two channels. The first channel is corporate

Figure 3.17 Systematic movement of emerging-market equities with world markets



Source: World Bank staff estimates of beta based on returns from the Morgan Stanley MSCI Barra Index.
Note: EM = emerging markets MSCI; WD = MSCI world; EA = MSCI Europe-Australia-Asia; NY = NYSE composite.

Table 3.6 Segmentation of emerging-market equities from world markets

Correlation of selected market indexes, 1992–97 and 2000–06

	MSCI emerging markets		MSCI world		MSCI Europe-Asia-Australia		NYSE composite	
	1992–97	2000–06	1992–97	2000–06	1992–97	2000–06	1992–97	2000–06
MSCI emerging markets	1	1						
MSCI world	0.57	0.85	1	1				
MSCI Europe-Asia-Australia	0.43	0.84	0.92	0.96	1	1		
NYSE composite	0.48	0.75	0.76	0.94	0.46	0.86	1	1

Source: World Bank staff estimates based on data from Morgan Stanley MSCI Barra Index.

Box 3.4 Determinants of emerging corporate bond spreads

In pricing emerging-market corporate bonds, international investors take into account many factors, including the terms, structure, liquidity, origin, and credit risk and marketability of the issues. To analyze market risk perceptions and the importance of issue characteristics, Bank staff specified various linear models of the offerings' at-issue credit spread as a function of offering terms, rating, distribution, currency and jurisdiction, ownership, industry, and various economic, financial, and institutional control variables for each issuer's home country. The choice of specification follows the literature on reduced-form models of credit spreads (Elton and others 2001; Dailami and Hauswald 2003). The data consist of more than 1,200 corporate bonds (denominated in U.S. dollars or euros) issued by corporations from 34 emerging economies between 1990 and 2005. The importance of the various pricing factors and issue characteristics is gauged by their statistical significance. (The underlying methodology, econometric specification, and results are reported in the annex.)

This analysis yields several key findings:

- Because state-owned firms often carry an explicit or implicit government guarantee, their bonds are priced with lower spreads (about 45 basis points on average) than those of private companies from the same country. A third-party guarantee also decreases credit risk, lowering the at-issue spread by about 40 basis points.
- Pure Eurobonds offered only in London and Luxembourg tend to be price about 18–20 basis points higher than fully fungible global bond issues offered simultaneously in the United States, Europe, and Asia.
- Bonds with a U.S. tranche or pure 144A/Regulation S issues targeted at the U.S. institutional market tend to be priced 20–26 basis points higher than global bonds, making them about 2–6 basis points more expensive than comparable pure Eurobonds.
- Unrated bonds come to market at a price that is about 190 basis points higher than AAA–rated bonds. Each decrease in rating increases the at-issue spread of rated bonds by about 19 basis points. Unrated bonds are thus issued at prices that are about 10 notches below AAA.
- The country rating has a greater effect on investor perceptions than the issue rating. A one-notch decrease in the issuer's home-country rating increases the at-issue spread by about 28 basis points. In contrast, a similar decrease in the issue's own rating raises the cost of the issue by just 18 basis points.

Source: World Bank staff.

profitability and cash flow—and hence valuation. They are affected by local economic conditions, including both economywide and firm-specific factors. Systemic factors include the business cycle, aggregate growth performance, the tax regime, and interest rates. Important firm-specific factors include the firm's growth opportunities, the regulations to which it is subject, and the structure and quality of its management and governance. The second channel is the host country's legal, regulatory, and economic infrastructure, which affects the quality and reliability of a firm's disclosure and reporting policy, its transparency to local and foreign investors, and, more generally, the ability of shareholders and bondholders to exercise effective corporate oversight and contract enforcement. Foreign investors must incorporate all of these factors in their decisions.

Analysis of primary bond issuance by the emerging-market corporations that have tapped international capital markets since 1990 confirms the importance of local macroeconomic and institutional factors on corporate credit-risk premiums (box 3.4). Specific bond attributes and the jurisdiction in which bonds are issued and traded are also important factors.

The model results reported in the annex reveal that investors attach considerable importance to the prospects for economic growth in the home country of companies whose securities they are considering: a 1-percentage-point increase in real GDP growth reduces corporate bond spreads by about 7 basis points. But governments should not pursue growth policies at the price of inflation, which international investors clearly view in a negative light: inflation in the home country, which makes the issuer's domestic operations more risky, increases spreads by about five to six basis points.

Borrowers from countries with a well-developed stock market (one with high liquidity,

as measured by the ratio of turnover to GDP) and banking system (as indicated by a high ratio of private credit to GDP) pay significantly less for their external debt. A 10-percentage-point increase in stock market turnover decreases at-issue spreads by 6–8 basis points, while a similar rise in private credit reduces spreads by 10–16 basis points. These results confirm anecdotal evidence and previous findings that local financial development significantly facilitates access to global capital markets for emerging-market firms (Caballero and Krishnamurthy 2003).

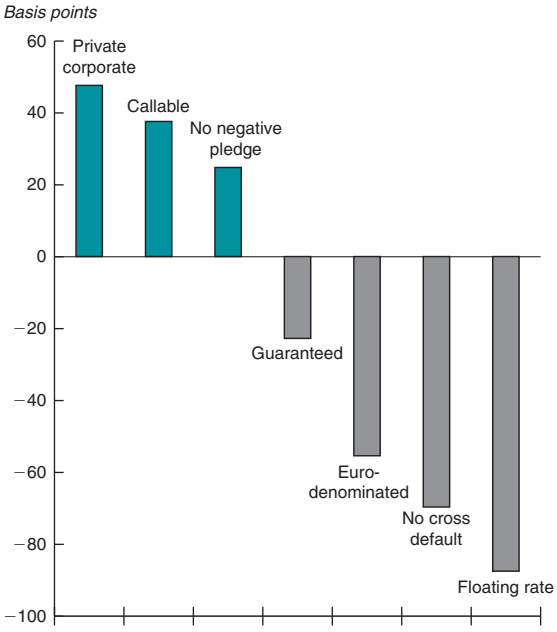
Using the indexes of the International Country Risk Guide to analyze the effect of the home country's economic, financial, and political institutions on the cost of borrowing reveals that a 10-percentage-point increase raises the home country's economic risk index by 52 basis points and its financial risk index by about 63 basis points. These findings add to the extensive empirical evidence suggesting that the quality of institutions is a crucial element underpinning economic and financial development.

Deal structure and security design can lower the cost of bond financing

Spreads on corporate bonds issued by companies based in the same country may show considerable variation. Such variations suggest ways to improve firms' terms of access to global capital markets. Larger offering sizes, for example, reduce the at-issue spread of emerging-market corporate bonds, because large deals offer greater liquidity in secondary trading. The corresponding reduction in spreads can be viewed as the premium investors are willing to pay for more-liquid issues.

Other attributes of issues also affect their cost (figure 3.18). By choosing variable-rate debt (float), issuers can reduce the spread by about 90 basis points, reflecting both the greater risk borne by the issuer and built-in reset provisions for the coupon triggered by covenant violations or rating downgrades. Such reset provisions partially compensate bondholders for increases in credit risk. Call provisions—that is, the ability of issuers to repay early, limiting their interest-rate exposure—increase credit spreads by about 35 basis points, the price of shifting interest-rate risk to bondholders. Euro-denominated issues are priced 55 basis points lower than comparable dollar-denominated issues.

Figure 3.18 Effect of selected characteristics of bond issues on at-issue spreads



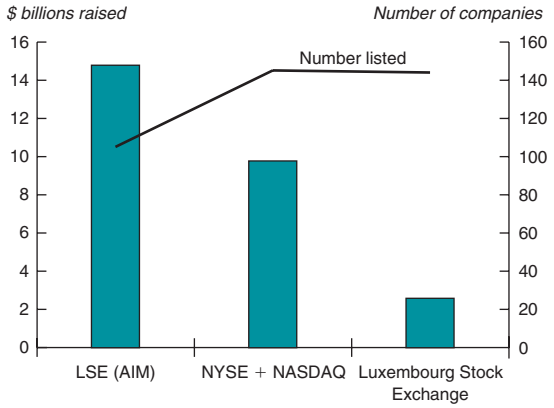
Source: World Bank staff estimates.

Covenant provisions also affect the price of a bond. The explicit exclusion of a negative pledge—a commitment not to grant future creditors better terms—that does not safeguard bondholders' standing in case of default increases a bond's riskiness, raising spreads by up to 25 basis points. The explicit exclusion of cross-default, so that default on another debt obligation does not trigger default on the bond in question, limits bondholders' credit exposure to one particular issue, for which borrowers are rewarded with a decrease in spreads of up to 70 basis points.

Corporate issuers have a choice of markets on which to offer their securities

The decision by emerging-market issuers to offer and sell securities in a particular jurisdiction involves balancing the associated transaction and agency costs with the benefits of liquidity, reputation, investor base, and longer-term business objectives. The main transaction costs are legal and investment banking fees, as well as the costs associated with complying with the jurisdiction's regulatory requirements and standards for disclosure, accounting, and reporting. Accounting standards and practices differ widely across countries, even across industrial countries.[5]

Figure 3.19 Number of listed companies and amount of equity raised on selected stock exchanges, 2006



Source: World Bank staff estimates based on NYSE, NASDAQ, and Luxembourg Stock Exchange data from the World Federation of Exchanges.

With the exception of Chinese corporations, most emerging-market companies have chosen the United States (NYSE and NASDAQ), London (LSE and AIM), or Luxembourg as their preferred destination for listing and offering their shares, raising $27.1 billion in equity capital on these markets in 2006 (figure 3.19). On the contrary, Chinese companies mostly preferred listing their issues on the Hong Kong (China) and Singapore stock exchanges. In 2006 they raised $38.4 billion on the Hong Kong exchange and $2.5 billion on the Singapore exchange, largely through mega-size initial pubic offerings (IPOs) placed by state-owned banks and companies. Proximity seems to have been a key factor in influencing firms' choice of location for listing and offering equity shares, with firms from Latin America migrating largely to the U.S. markets, Eastern European firms to London, and East Asian, particularly Chinese, firms to Hong Kong (China).

The choice of jurisdiction for a bond's underlying debt contract closely corresponds to the issue's type and location. Nearly all 144A offerings, and most issues including a 144A tranche, apply New York law. Issuers often specify a second local jurisdiction, either to satisfy domestic legal and regulatory requirements or because local courts are needed to enforce creditor rights over local assets pledged as security. Pure Eurobonds and some combined Euro-144A issues generally elect U.K. law and London courts. Although some bonds specify other jurisdictions, the preponderance of New York and U.K. law for international bonds stems as much from the substantive law offered by a given jurisdiction as the expertise of the courts that will interpret the debt contracts and the familiarity of lawyers with certain legal regimes.

More than 70 percent of bonds are listed, mainly on the Luxembourg stock exchange (77.1 percent of listed issues). Listing provides official prices for institutional investors, whose investment guidelines often require such marked-to-market valuation. Although Luxembourg has dominated all other markets as a listing location, the Swiss stock exchange has recently started to court international bond listings and cross-listings. However, almost all secondary trading in such issues takes place over the counter, because lead managers often provide liquidity services for up to 18 months (on average about 6 months) by keeping inventory. They act as de facto market makers in the issue.

Prospects and risks

For much of the postwar era, borrowing by governments has been the quintessential feature of financing for development. Having stood for decades at the center of national and international policy concerns, emerging-market sovereign finance has been the subject of a substantial stream of market practice, standards for credit-risk assessment, and international institutional arrangements for debt restructuring and dispute resolution.

The growing importance of cross-border borrowing on capital markets by emerging-market firms since the early years of this century has raised a new set of policy challenges for developing countries and the international economic community, including concerns about corporate foreign debt. Since the East Asian crisis, the majority of emerging-market economies developed more open capital accounts, improved their local capital markets, and significantly reduced their public external debt. Some, such as Argentina, Mexico, Brazil, and Russia, have abandoned fixed or crawling pegs and moved to flexible exchange rates, while new members of the European Union have pegged to the euro under the European Monetary System (ERM II) as part of their euro adoption plan. Such reforms have tended to shift the locus of currency and credit risk

associated with external borrowing from the sovereign to the corporate sector, with important implications for the conduct of public policy.

The pace of globalization of corporations in the developing world is likely to intensify

Improved policies and favorable international economic conditions have allowed corporations based in developing countries to increase their engagement in global investment and finance, a process that is likely to continue over the medium term. The World Bank (2006b) projects that developing countries' share in global output will rise from about one-fifth to almost one-third by 2030 and that developing countries' exports will increase from less than 25 percent of their output to almost 35 percent. Rising incomes and higher export revenues will improve developing countries' creditworthiness, facilitating corporate access to international finance.

The growth of emerging-market multinationals will also support increased borrowing from capital markets. Greater participation by developing-country firms in overseas product markets is also likely to increase their ability to access overseas financial markets. Greater reliance on overseas markets for inputs and revenues will increase multinationals' incentives to diversify the currency composition of their balance sheets, which can be a more efficient approach to coping with exchange rate risk than purchasing derivatives.

Recent participation by emerging-market corporations in international capital markets may also help boost access by smaller corporate players. First-time borrowers can face high costs, because lenders must expend considerable resources in obtaining information. Once these initial expenses are absorbed, the marginal cost of making subsequent loans is lower, reducing financing costs for all borrowers.[6]

Other forces may also reduce firms' future borrowing on international capital markets. Rising incomes in developing countries are likely to be associated with more efficient domestic banking systems and capital markets, allowing firms to rely more on domestic sources of financing. In addition, demographic forces are set to increase savings rates in many developing countries while lowering those in industrial countries, possibly encouraging greater reliance on domestic finance (World Bank 2006b). The link between demographics and savings, and between savings and current-account balances, is uncertain, however. The recent surge in borrowing by developing countries, for example, has taken place in the context of a rising surplus in their current accounts.

The increasing access of developing-country firms to international capital markets over the medium term is likely to be interrupted from time to time, because the growing role of corporations in developing-country borrowing may increase the potential for sporadic crises. Corporations may, for example, borrow excessively, from the standpoint of the economy as a whole, because they do not take into consideration the overall indebtedness of their home country and its potential consequences for volatility in exchange rates and output. Meanwhile, governments have considerable difficulty monitoring corporate exposure, judging the degree of risk involved, and intervening effectively to resolve minor problems of corporate indebtedness before they become major ones. Thus while emerging-market corporations are likely to expand their reliance on international capital over the next few decades, the process could be subject to occasional sharp interruptions of a magnitude and duration that are impossible to predict.

Equally important in shaping the future course of globalization of corporate finance in emerging markets will be how the international community deals with and eventually accommodates internationally active firms. Policy and institutional responses to the East Asian financial crises of the late 1990s have highlighted the need for better risk management and transparency at both the corporate and national levels to avoid excessive corporate foreign borrowing and indebtedness. The market mechanisms, regulatory frameworks, institutional capabilities, and technical expertise needed to provide a safe and secure environment for overseas corporate securities offerings and listings are amply present in the world's major financial centers and jurisdictions. Untested is the ability of the international community to apply those mechanisms, frameworks, capabilities, and expertise in a manner that is well enough coordinated to provide stability to rapidly growing markets.

There is reason for optimism. The Yankee bond market (the foreign segment of the U.S. dollar bond market) came into existence in the early 1900s. The yen-denominated Samurai market was

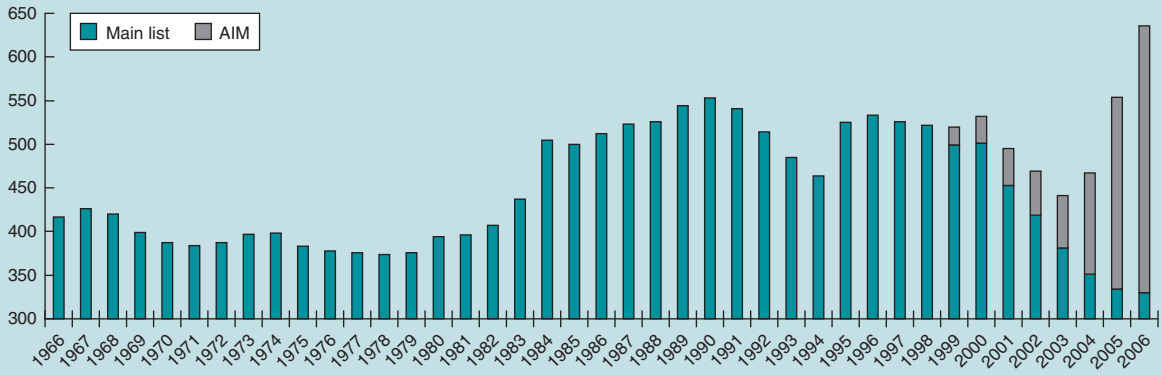
Box 3.5 Foreign company listings on major financial centers continue to grow

The number of foreign companies listed on the world's major exchanges has increased over time, particularly since the 1980s. The trend reflects advances in trading technology, competition among exchanges, and companies' desire to list on major exchanges to boost international recognition and fund future M&A transactions.

The number of foreign companies listed on the LSE increased from 387 in 1970 to 553 in December 1990 to 636 in December 2006 (figure below). The exchange's appeal and trading activity increased during the late 1980s, following the 1986 "Big Bang" deregulation, which abolished minimum commission charges for brokers and replaced the trading floor with a screen-based electronic trading system. In recent years, foreign firms have been drawn in particular to the LSE's Alternative Investment Market (AIM), a market for growing small-cap companies. Set up in 1995, AIM has less stringent regulatory and disclosure requirements than the main list. Transfers from the LSE main list have boosted the tally of listings on AIM.

Foreign companies listed on the LSE, 1966–2006

Number of non-U.K. companies at year-end

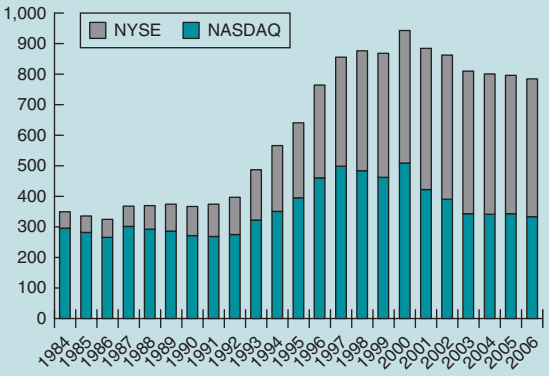


Source: LSE.

The number of foreign firms listed on the New York exchanges increased rapidly during the 1990s, before declining from 943 at the end of 2000 to 784 at the end of 2006 (figure at right). The recent decline largely reflects the impact of more demanding and stringent regulatory requirements and associated costs, as well as delistings of several Latin American firms and their return to home exchanges. The annual tally of foreign companies delisting American Depositary Receipts (ADRs) from the NYSE or the NASDAQ peaked for the 1990–2006 period at 53 in 2005, up from 38 in 2004. Nearly half (24) of the foreign companies delisting ADRs from these two exchanges in 2005 were of British origin; the largest number of delistings in this peak year by developing country-domiciled firms were of Mexican origin (7), followed by firms based in Chile (3).

Foreign companies listed on the NYSE and NASDAQ, 1984–2006

Number of non-U.S. companies at year-end



Source: NYSE.

created in the 1970s, as part of authorities' efforts to manage the large current account surpluses of the time. The Eurobond market has served as the world's most important source of bond capital to sovereign and corporate issuers from both developed and developing countries since 1963.[7] U.S. corporate securities were traded in the 1790s in markets on both sides of the Atlantic. And historically successive waves of privatization, liberalization, and growth spells in the world economy have kept a steady string of firms migrating to major financial centers to list their shares and raise capital (box 3.5).

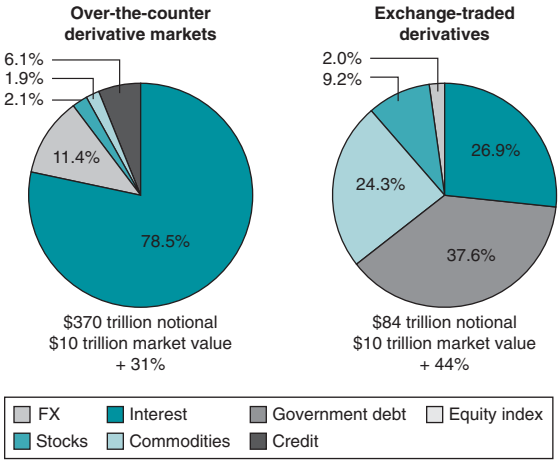
With further domestic reform and the right degree of international cooperation, the outcome of the rapid globalization of corporate finance could be a positive-sum game capable of consolidating trade and growth linkages between developed and developing economies.

For international investors and their intermediaries contemplating investing in emerging-market corporate debt and equity, success will depend on sound risk management based on a nuanced appreciation of the interplay of risks (at the level of the firm, market, and country) in countries with partially open capital accounts, managed floating exchange rate regimes, imperfect capital markets, and standards and practices of corporate governance that may well be unique and still in flux. Shifting from sovereign to corporate debt demands greater attention to the transparency and quality of accounting standards, the credibility of financial reporting, the integrity of corporate governance, and the characteristics of the jurisdiction in which corporate securities are listed and offered.

Corporations in many developing countries need to improve their capacity for risk management

As corporations in emerging markets have increased in size and expanded their international operations, they have increased their exposure to risk. But they have also strengthened their risk management abilities. Many of these corporations have made efforts to hedge against the currency risk they face in financing and production. Like their counterparts in the industrial world, they are increasingly relying on derivatives to manage risks related to foreign exchange, interest rates, credit, and liquidity. More than 90 percent of the world's 500 largest corporations reportedly use derivatives, according to a survey conducted by the International Swaps and Derivatives Association (ISDA 2003). Over-the-counter derivatives are dominated by products designed to protect against fluctuations in interest rates; individual stocks and equity indexes provide the basis for most exchange-traded derivatives (figure 3.20).

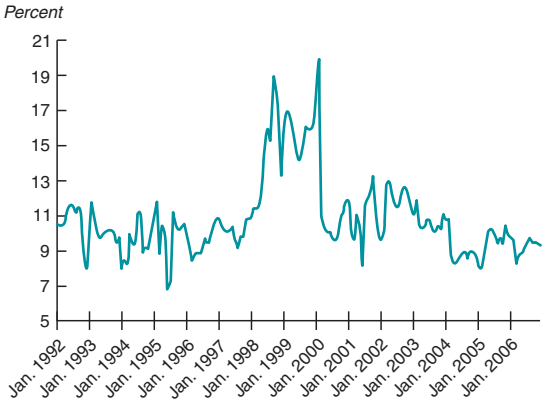
Figure 3.20 Size of global derivative markets, June 2006



Source: Bank for International Settlements and World Federation of Exchanges.

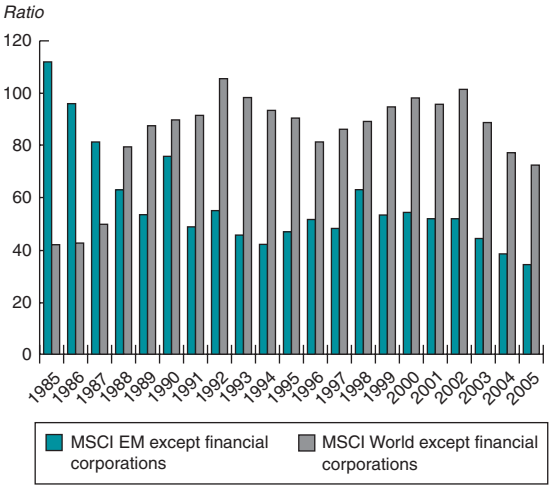
Since the East Asian crisis of 1997–98, emerging-market corporations have taken advantage of favorable international financial conditions to strengthen their ability to deal with unexpected shocks. The decline in corporate credit spreads (from an average of 452 basis points in 1999 to less than 349 basis points in 2006), coupled with low international interest rates, has enabled corporations to build a substantial liquidity cushion. As a result, corporate bond issuance has reached record levels, while the widespread use of interest-rate swaps has substantially reduced interest-rate risk. The average cost of equity declined from more than 18 percent during the East Asian crisis to about 9 percent in 2006 (figure 3.21), average debt-equity ratios in emerging-market corporations declined from more than 60 percent in 1997 to less than 40 percent in 2005 (figure 3.22), and average maturity of new corporate bond issues by nonfinancial companies increased from 6 years in 2000 to 10.3 years in 2006 (figure 3.23).

Figure 3.21 Implied cost of equity in emerging markets, 1992–2006



Source: MSCI, Worldscope, Morgan Stanley Research 2006.

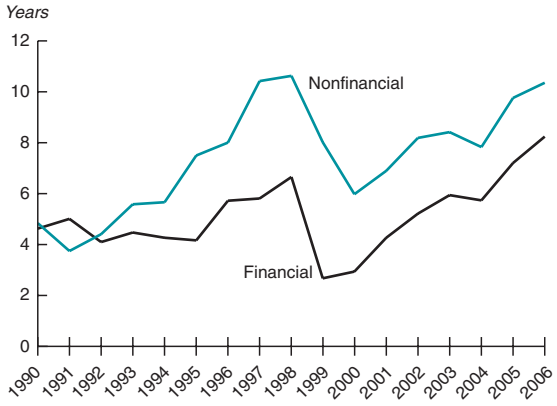
Figure 3.22 Net debt-to-equity ratios for nonfinancial corporations in emerging markets, 1985–2005



Source: MSCI, Worldscope, Morgan Stanley Research 2006.

Despite these improvements, two areas of concern remain that are reminiscent of the position of emerging-market corporations immediately before the East Asian crisis. First, nonfinancial corporations based in emerging markets may have undertaken substantial liabilities denominated in Japanese yen, encouraged by very low interest rates on yen loans in recent years. Data from the Bank for International Settlements indicate that Japanese banks have cross-border claims totaling about $218 billion on foreign nonbank private sector companies (including those from industrial countries), part of which may be carry-trades and part of which may be corporate sector loans in Japanese yen (BIS 2006). Because even a modest appreciation of the yen could significantly weaken corporate balance sheets, debt-equity ratios and the cost of debt financing may be significantly underestimated unless foreign exchange risks have been hedged.

Figure 3.23 Average maturity of issues by financial and nonfinancial corporations, 1990–2006



Source: World Bank staff estimates based on data from Dealogic Bondware.

Second, market participants have raised concerns over weak credit-risk management in emerging-market corporations. Credit risk is often not integrated into an enterprisewide risk management framework, making it difficult to measure, aggregate, and hedge. Liabilities from corporate pension plans may be underestimated, not least because corporate pension managers appear to have taken on high-risk assets in their quest for higher yields and may not fully understand the risk exposure involved in popular credit derivatives. Moreover, credit risk may be substantially underestimated during the current peak of the credit cycle, and emerging-market corporations rarely analyze scenarios in which credit spreads might widen.

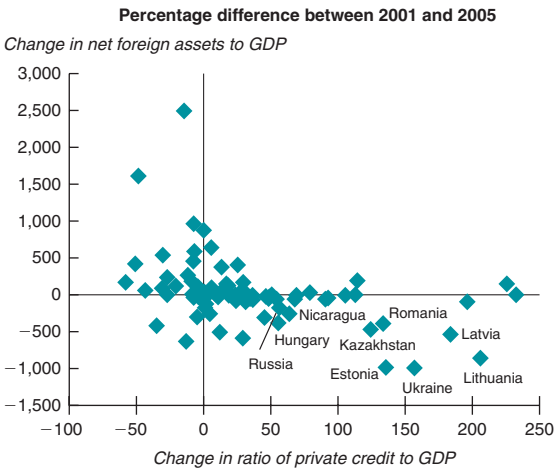
The banking sector's foreign exchange exposure may affect financial stability

The critical role played by banks in domestic monetary systems means that banks' exposure to foreign borrowing warrants special attention from policy makers. Sharp increases in external borrowing by commercial banks may be the result of a normal process of capital deepening in a rapidly growing

developing country or transition economy. Moreover, these increases may be justified by the availability of profitable investments. If the underlying policy and regulatory frameworks promote healthy banking practices, sound credit allocation, and proper risk management, these developments pose little risk. By contrast, external borrowing can pose serious macroeconomic and financial stability risks if banks hold large currency mismatches in their portfolios, maturities are short, or large external inflows fuel a rapid expansion of bank credit to the private sector, particularly for consumer loan and housing finance, without sufficient prudential controls.

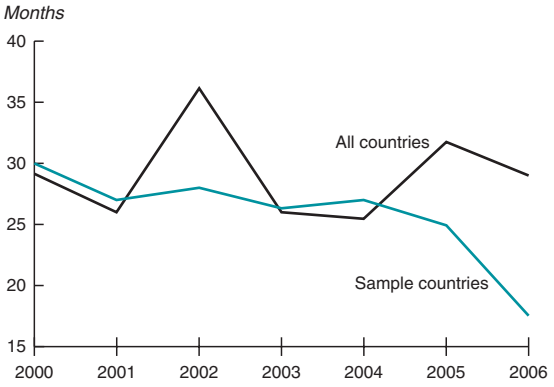
Several countries that have combined large inflows of external capital with a boom in bank lending to the private sector may be vulnerable to such risks.[8] Between 2001 and 2005, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Nicaragua, Romania, Russia, and Ukraine experienced strong growth in private credit accompanied by substantial external borrowing by banks. Both metrics rose by more than 50 percent, and banks' foreign liabilities now exceed their foreign assets (figure 3.24). Moreover, since 2005 the average maturity of the foreign loans contracted in these countries has been significantly shorter than the average across

Figure 3.24 Foreign borrowing by the banking sector and domestic private credit growth in developing countries, 2001–05



Source: IMF *IFS* and World Bank, *World Development Indicators*.
Note: The sample includes all developing countries except offshore banking centers and countries with fewer than five commercial banks. Net foreign assets equal foreign assets minus foreign liabilities of the banking sector as a whole.

Figure 3.25 Average foreign loan maturity contracted by commercial banks in select developing countries, 2000–06



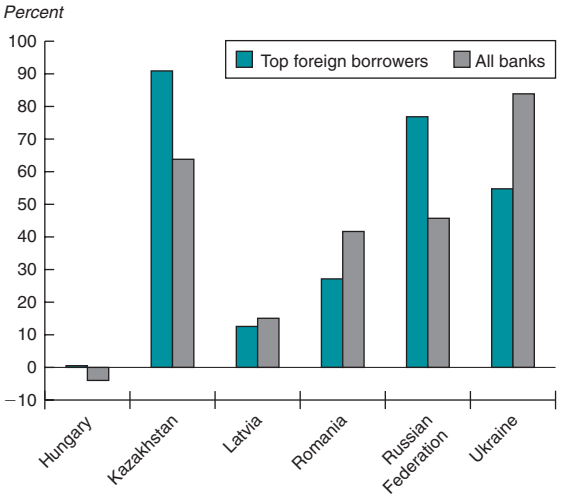
Source: World Bank staff calculations based on Dealogic Loanware.
Note: Sample countries are Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Romania, Russia, and Ukraine. Loans for trade financing are excluded.

developing countries, signaling potential liquidity problems when the credit cycle turns (figure 3.25). Evidence also indicates that in several countries, including Hungary, Russia, and Ukraine, bank loans to households, for consumer and mortgage loans, have increased considerably.

The extent of the risks to domestic financial stability posed by banks that borrow heavily abroad may be best assessed by focusing on the behavior of individual banks in relation to other banks in the same country and in relation to the home countries' overall macroeconomic and growth conditions With some exceptions, the top borrowers in most countries do not appear to be taking on excessive risks.

- Except in Kazakhstan and Russia, the assets of most of the top foreign borrowers did not grow much more rapidly than those of other banks in the country (figure 3.26).
- The asset quality of top foreign borrowers in all of these countries, as measured by the ratio of loan-loss reserves to gross loans, has improved in recent years, and indicators of efficiency and operational performance are in many cases better than those of other banks. However, in all countries except Hungary, the asset quality of the top borrowers is significantly worse than that of other banks (table 3.7).
- Loan growth of the top external borrowers is matched by increased deposits to a larger

Figure 3.26 Asset growth of largest foreign borrowers versus country asset growth, 2005



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

Note: Country asset growth is the average of the growth rates of all commercial banks, savings banks, cooperative banks and medium and long-term credit banks located in the country and reported in Bankscope.

extent than is the case for other banks in the same country, possibly indicating that the top external borrowers are more established banks that inspire greater confidence in depositors.

- In almost all cases, the ratio of equity to total assets is lower for the top borrowers (see table 3.7), placing them in a relatively poor position to cope with a decline in global liquidity. In particular, major external borrowers in Russia score worse than other Russian banks on all vulnerability indicators, although most of the banks that perform poorly in this respect have a relatively low market share.

An agenda for strengthening the transparency of corporate governance

Devising rules to strengthen governance in emerging-market corporations is primarily the responsibility of developing-country governments. But the international community also has a role to play in ensuring the stability of the rapidly evolving international financial system. International financial institutions, international policy bodies, and standard setters in securities, accounting, and other fields are all well placed to promote better corporate governance in emerging markets through their work on the rules governing the issuance of corporate securities in major capital markets, on standards for accounting and reporting, and on regulatory and legal frameworks pertaining to corporate governance.

Globalization may help improve corporate governance, but more coherent capital market rules are needed as well

Developing-country corporations may well improve their governance to some degree simply by competing with corporations that are subject to industrial-country transparency requirements and complying with industrial-country standards to raise capital through overseas listings and IPOs. However, the degree to which industrial-country rules can be extended to improve corporate

Table 3.7 Performance and vulnerability of top foreign borrowers compared with other banks, selected aggregates, 2000–05

	Asset quality		Efficiency and operational				Vulnerability indicators			
	Loan loss reserves/ gross loans	Loan loss provision/ net interest revenue	Net interest margin	Return on average assets	Cost-to-income ratio	Net income/ total assets	Equity/total assets	Interbank ratio	Liquid assets/customer and short-term funding	Other operating income/average assets
Hungary					+		−			
Kazakhstan	−	−		−		−	−			
Latvia	−	−					−	−		+
Romania	−	−		+	+	+		+		
Russian Fed.		−		+	+	+	−	−	−	−
Ukraine	−						−	−		+

Source: World Bank staff calculations based on Bankscope.
Note: + = top borrowers perform significantly better at 10% level; − = top borrowers perform significantly worse.
Each indicator is calculated for each bank in each country (2000–05 averages) and then averaged for the banks included in the list of largest foreign borrowers and other banks in the respective country.

governance elsewhere is limited by the multiplicity of global financial "jurisdictions," each of which presents issuers and investors with a different array of trading rules, investor protections, disclosure and reporting requirements, and methods of complying with international accounting standards.

The U.S. and European capital-market regimes have been subject to separate waves of rule changes in recent years. Designed to strengthen governance, these changes have in some ways pushed the two systems farther apart. In the United States, the Sarbanes-Oxley Act of 2002 imposed a series of requirements aimed at ensuring the independence of boards of directors and assigning clear responsibility for the accuracy of financial statements.[9] In the European Union, national rules have had to be tightened recently to meet EU directives governing prospectuses for securities issuance, disclosure requirements for main-board listings on members' stock exchanges, and the detection and prevention of insider dealing and market manipulation.

A major difference between the two approaches is the wide extraterritorial reach of the U.S. regime. U.S. regulation of investor protection applies not only in the United States but also abroad. In contrast, the European approach sets minimum common standards while recognizing, where possible, the authority of home-market regulators (Coffee 1999).[10]

The European Union has adopted a "comply or explain" principle, under which companies deviating from any provision of the code must explain why they are not embracing best practice in corporate governance (see EU 2006; Arcot, Bruno, and Faure-Grimaud 2007). At the same time, it has sought to encourage convergence and coordination of the national codes of corporate governance of member states. Recognizing the advantages of the European approach, in 2006 the U.S. Committee on Capital Markets Regulation recommended a more principles-based approach to regulation to enhance shareholder rights while reducing overly burdensome regulations and litigation. This may signal progress toward the harmonization of capital-market regulation.[11]

The growth of international norms and standards has helped developing-country governments improve governance

A set of international financial standards and codes was developed in 1999, in response to the widespread weaknesses in financial supervision and corporate governance revealed by the East Asian financial crisis. A joint World Bank–IMF program assesses the observance of standards and codes by member countries; Corporate Governance Country Assessment reports for more than 40 countries are available to the public on the World Bank's Web site. A few countries, such as Pakistan, have adopted mandatory corporate governance guidelines. At least 35 countries have developed voluntary national corporate governance standards ("codes of best practice"). These codes have had a "major impact" on reform in many countries, according to one study (Berg 2007).

Many countries have improved their protection of shareholder rights (notably in procedures for shareholder meetings and recordkeeping) and made significant progress in strengthening the professionalism, independence, and accountability of corporate boards of directors. For example, more than 35 countries have established institutes to train directors or developed detailed guidelines for board members. Many countries are also adopting regulations to increase the transparency of changes in corporate control during takeovers and to provide fair treatment for existing shareholders.[12]

Many concerns nevertheless remain regarding the effectiveness of corporate governance rules in transition economies, developing countries, and many developed countries. When the general enforcement environment is weak, few of the traditional corporate governance mechanisms are effective (Berglof and Claessens 2004). Moreover, although many countries have adopted international financial reporting standards, very few have made progress toward meeting nonfinancial disclosure standards, particularly with regard to ownership, control, and related-party transactions. Much more needs to be done to instill commitment to sound corporate governance at the national and firm levels in many developing countries.

Challenging macroeconomic policy management tasks remain

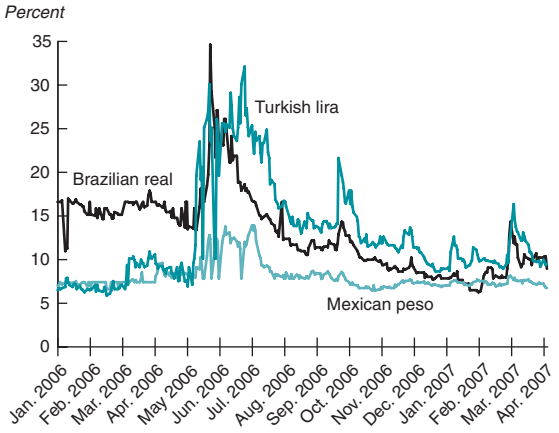
Protecting the benefits of financial globalization for developing countries will require carefully crafted policies, both macroeconomic and regulatory, by governments in the developing world. Recognizing that the process of corporate globalization in developing countries is driven by long-term structural as well as short-term cyclical

factors, governments must focus on managing short-term fluctuations and risks while continuing to play a steady, supportive, and catalytic role.

The key long-term requirement is to sustain, and in some cases extend, the structural changes and institution-building efforts that have made possible the growing involvement of developing-country corporations in global investment and finance. Under way in many countries since the early 1990s, those changes include progress toward a floating exchange rate regime (free or managed) or a peg arrangement (especially in the case of new European Union members), carefully phased easing of capital controls in combination with better governance and stronger domestic regulation, and privatization of public enterprises (World Bank 2006a). Far greater efforts are needed to spur the development of well-regulated and liquid local capital markets and to ensure prudential regulation of foreign borrowing by domestic banks and other regulated entities. Such structural improvements would greatly reduce the likelihood of corporate financial distress and vulnerability while promoting the growth of new market mechanisms and the regulatory capacity needed for effective macroeconomic management of the increasingly open economies of the developing world.

With almost half of developing countries now operating under a floating exchange rate regime, a key task facing policy makers is to find ways to reduce wide swings in local currency. Doing so requires a judicious mix of monetary policy and intervention in foreign exchange markets, tempered by recognition that the level and type of corporate indebtedness carry important monetary and exchange rate implications.[13] Success in stabilizing local-currency fluctuations has been the hallmark of macroeconomic management in several emerging-market countries, including Brazil, Mexico, and Turkey (figure 3.27). In these countries, currency volatility against the U.S. dollar—as measured by one-month implied options on such currencies—declined significantly over the course of 2006 and now compares well with the volatility of the British pound and Swiss franc. Lower currency volatility would help stimulate demand among foreign investors for corporate assets and give companies the confidence they need to commit capital to long-term investment and growth. Policy makers can reinforce that confidence-building effect by steering monetary policy toward price stability, a necessary condition for the smooth operation of market-determined interest rates aligned with international trends, and the adoption of inflation-targeting policies being pursued by a growing number of emerging-market economies.

Figure 3.27 Short-term volatility in emerging market currencies, January 2006–April 2007



Source: Bloomberg and World Bank staff calculations.
Note: Short-term volatility is defined as one-month implied volatility for options on the currency versus the U.S. dollar.

Annex: Econometric Methodology and Estimation of Corporate Bond Spreads

To analyze the determinants of at-issue yield spreads of international bonds offered by corporations located in emerging markets, Bank staff collected data from Bondware on 1,599 U.S. dollar- or euro-denominated offerings in 44 countries between 1990 and 2005. The sample represents a wide cross-section of issues in terms of maturity, amount, seniority, coupon, offering terms and legal provisions, listing, applicable law and jurisdiction, rating, industry, and market segment.

These data were matched against data from a variety of sources on the institutional, legal, financial, and economic development of each issuer's home country by month, quarter, or year. Variables from the World Bank's Financial Structure and Development database and the monthly International Consulting Resources Group (ICRG) country-risk indexes were used to gauge the degree of financial, legal, and institutional development of each issue's home country. Fifteen industry dummies were constructed on the basis of each issuer's two-digit Standard Industrial Classification (SIC) code to control for industry effects. Matching the various data sources leaves 1,206 observations for which full data were available.

The following linear model of emerging-market corporate bond spreads was then specified:

$$S_i = x_i^m \beta^m + x_i^b \beta^b + x_i^f \beta^f + z_i^{econ} \gamma^{econ} + z_i^{fin} \gamma^{fin} + z_i^{ins} \gamma^{ins} + u_i,$$

where S_i is the bond's at-issue credit spread over the yield of a maturity-matched U.S. Treasury security or, in the case of a euro issue, a comparable German Bundesobligation. The term x_i^m represents a set of variables relating to the issue's marketing choice, such as dummy variables for the market segment (Eurobond, 144A issue, global bond); the currency of denomination (U.S. dollars or euros); the applicable law and jurisdiction (New York, U.K., or other governing law); and the listing choice. The term x_i^b represents a set of control variables pertaining to the terms of the issue—namely, the coupon, log(amount), log(maturity), rating, seniority, call or put, common covenant provisions, and guarantees. The term x_i^f represents firm-specific variables, such as private versus public ownership and industry dummies. The model controls for the economic environment of the issuer's home country by including economic indicators (z_i^{econ}: [the log of] per-capita GDP, inflation, real growth); the home country's level of financial development (z_i^{fin}: stock-market capitalization or turnover as a percentage of GDP, private credit as percentage of GDP); and the quality of its legal, political, financial, and economic institutions (z_i^{ins}: the ICRG indexes of economic, financial, and political stability and its subindexes).

Various linear models of the offerings' credit spread at issue over comparable U.S. Treasury or German government debt securities are provided as a function of offering terms, rating, distribution, currency and jurisdiction, industry and ownership variables, and various economic, financial, and institutional control variables for each issuer's home country. All specifications are estimated using ordinary least squares (OLS) with country fixed-effects and clustered standard errors that are adjusted for heteroskedasticity across countries and correlation within countries. In the interest of parsimonious specifications, statistically insignificant control variables have been eliminated (table 3A.1).

Table 3A.1 Regression results of analysis of at-issue corporate bond spreads

Dependent variable	(1)	(2)	(3)	(4)
Bond attribute				
Floating rate note	−87.532	−90.065	−96.123	−90.255
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Euro-denominated	−55.465	−24.481	−23.689	−65.350
	(0.007)***	(0.250)	(0.176)	(0.000)***
Log (maturity)	−1.287	−6.397	−3.699	−2.354
	(0.800)	(0.328)	(0.586)	(0.710)
Log (amount)	−25.444	−23.564	−26.683	−29.634
	(0.002)***	(0.003)***	(0.000)***	(0.000)***
Nonrated issue	191.125	168.340	178.244	197.207
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Issue credit-rating index	19.361	16.852	17.531	18.324
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Private ownership	47.615	45.307	44.583	47.877
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Third-party guarantee	−22.748	−26.307	−24.630	−23.441
	(0.015)**	(0.014)**	(0.012)**	(0.009)***
No negative-pledge clause	24.785	21.779	24.566	6.935
	(0.001)***	(0.106)	(0.045)**	(0.784)
No cross-default clause	−69.673	−65.921	−63.247	−66.153
	(0.002)***	(0.003)***	(0.009)***	(0.062)*
U.S. (N.Y.) law	−15.861	−30.100	−27.652	−6.812
	(0.450)	(0.185)	(0.207)	(0.728)
U.K. law	−22.982	−33.162	−27.077	−15.299
	(0.352)	(0.192)	(0.257)	(0.469)
Eurobond	20.235	20.514	18.723	17.964
	(0.060)*	(0.077)*	(0.079)*	(0.025)**
144A only	−0.496	−4.049	−16.492	9.544
	(0.976)	(0.843)	(0.384)	(0.581)
Macroeconomic variable				
Log (GDP per capita)	212.774	75.806	−153.672	−56.602
	(0.054)*	(0.477)	(0.129)	(0.370)
GDP growth rate	−3.843	−7.256	−5.525	−3.904
	(0.015)**	(0.000)***	(0.002)***	(0.035)**
Log (1 + inflation)	96.637	103.637	104.160	104.100
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Home stock-market turnover/GDP	−79.722	−109.443	−98.186	
	(0.005)***	(0.004)***	(0.003)***	
Private credit/GDP	−97.267	−58.030	−182.505	
	(0.206)	(0.278)	(0.002)***	
Capital/trade flow restrictions			5.253	
			(0.001)***	
External debt as percentage of GDP			1.909	
			(0.090)*	
Institutional indicator				
Country credit-rating index		21.626		
		(0.005)***		
ICRG Composite Risk Index				9.262
				(0.000)***
ICRG Economic Risk Index	5.248			
	(0.000)***			
ICRG Financial Risk Index	6.316			
	(0.000)***			
ICRG Political Risk Index	1.314			
	(0.524)			
Sector				
Banking (SIC 60)	−28.001	−28.793	−33.740	−25.406
	(0.000)***	(0.001)***	(0.000)***	(0.002)***
Telecommunications (SIC 48)	13.483	20.642	28.958	8.123
	(0.217)	(0.077)*	(0.012)**	(0.569)
Chemicals (SIC 28)	60.832	78.341	75.118	65.070
	(0.006)***	(0.006)***	(0.009)***	(0.004)***
Railways (SIC 40)	198.479	186.036	179.946	176.296
	(0.000)***	(0.000)***	(0.000)***	(0.000)***

Table 3A.1 (*Continued*)

Dependent variable	(1)	(2)	(3)	(4)
Year dummy				
1998				65.847
				(0.000)***
1999				130.428
				(0.000)***
2000				61.385
				(0.033)**
2001				103.125
				(0.000)***
2002				165.231
				(0.000)***
2003				162.757
				(0.000)***
2004				94.013
				(0.003)***
2005				48.148
				(0.077)*
Constant	−1,776.928	−481.740	1,287.628	412.311
	(0.042)**	(0.592)	(0.122)	(0.402)
Number of observations	1,211	1,206	1,206	1,310
R-squared	0.629	0.591	0.596	0.662

Source: World Bank staff estimates.
Note: Fixed country effects are not reported; clustered *P*-values (standard errors adjusted for heteroskedasticity across countries and correlation within countries) are shown in parentheses.
* Significant at the 10 percent level.
** Significant at the 5 percent level.
*** Significant at the 1 percent level.

Notes

1. The universe of publicly traded companies is estimated at 41,246 firms in the world's major 50 stock exchanges (members of the World Federation of Exchanges), of which 2,789 are foreign-listed companies.

2. Recent theories have extended Merton's (1987) intuition by arguing that firms can attract investor interest in at least three ways: by improving disclosure practice, by making themselves more familiar, and by committing to good corporate governance.

3. América Movil took advantage of the liquidation of the emerging-market assets of U.S. operators such as AT&T, Bell South, and MCI, gaining more than 100 million subscribers by March 2006. Its Spanish-owned competitor, Telefónica Móviles, has 74 million subscribers.

4. A recent study by the Bank of Italy (2006) provides evidence of a significant reduction in the level of volatility between July 2004 and March 2006 relative to the historical average in both the stock and bond markets of France, Germany, Italy, Japan, Switzerland, the United Kingdom, and the United States.

5. From the perspective of international investors, the most important difference in accounting standards relates to the U.S. Generally Accepted Accounting Principles (GAAP) and the International Financial Reporting Standards (IFRS) adopted by the European Union for application to publicly traded companies as of January 2005. National adoption of IFRSs has been widespread across regions in recent years and the momentum continues. See, for example, Tweedie and Seidenstein (2005). In addition to moves toward an overall trend of convergence of national financial reporting standards, the International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB) have also launched an effort to harmonize differences between IFRSs and the U.S. GAAP. At their political summit meeting on April 30, 2007, European and U.S. leaders agreed to promote conditions for recognition of U.S. GAAP and IFRSs in both jurisdictions without need for reconciliation by 2009 (see the IASB Web site at http://www.iasb.org).

6. Empirical work confirms that developing countries' borrowing costs fall with greater participation in international capital markets. Spreads on sovereign loans fell with continued borrowing (Ozler 1992), and spreads on loans to both public and private borrowers fell with repeated loan commitments (Eichengreen and Mody 2000). However, repeat borrowing has little impact on bond markets, which rely largely on publicly available information (Eichengreen, Kletzer, and Mody 2005).

7. The first Eurobond issue is reported to have been the $15 million bond issuance by Italy's Autostrade in 1963.

8. Several papers examine the potential risks of rapid credit growth in Central and Eastern Europe. See, for example, Enoch and Otker-Robe (2007) and World Bank (2007).

9. These included requirements that the boards of companies listed on a U.S. exchange have a majority of independent directors; have wholly independent committees overseeing auditing, compensation, and nominations of directors; and require the company's chief executive and chief financial officer to sign a statement affirming the accuracy

of financial statements and the effectiveness of internal controls over financial reporting.

10. The EU Prospectus and Market Abuse Directives place greater emphasis on harmonization, however (Scott 2005).

11. The IASB, made up of accountancy bodies in more than 100 countries, publishes international financial reporting standards (IFRS, known until 2001 as "international accounting standards") that have been adopted by more than 90 countries. EU members, Switzerland, and Hong Kong (China), among others, use these standards. The 2005 EU decision to make IFRS binding for all publicly listed European firms is considered the first major standardization. China, India, Japan, and many other countries have begun to make strides toward adopting IFRSs, while the IASB and the U.S. FASB have launched an effort to harmonize differences between IFRS and the U.S. GAAP.

12. Studies have also shown the importance of corporate governance for developing countries' corporations. Higher corporate governance standards are associated with higher company valuation (Black, Jang, and Kim 2006) and growth (La Porta and others 2000; Djankov and others 2006). Moreover, better legal protection at the country level can be a substitute for poor governance at the company level (Klapper and Love 2004; Durnev and Kim 2005).

13. Foreign and local debt are often imperfectly substitutable on the corporate balance sheet, either because adequate currency hedging instruments are not available (or are not used) or because of differences in the degree of flexibility of the two types of financing (foreign debt is harder for firms to restructure than local debt). For these reasons, corporate foreign debt plays a role in the transmission of monetary policy (Bolton and Freixas 2000, 2006).

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