Financial Globalization: Gain and Pain for Developing Countries

SERGIO L. SCHMUKLER

The author is a senior economist in the development research group of the World Bank. *This paper was presented at the conference "Rethinking Structural Reform in Latin America," cosponsored by the Federal Reserve Bank of Atlanta and the Inter-American Development Bank. The author thanks David Dollar, Chang-Tai Hsieh, and Rick Mishkin, among others, for helpful comments and Juan Carlos Gozzi Valdez and Marina Halac for excellent research assistance. He also thanks Pablo Zoido-Lobaton for use of some of the material on which they had worked together.*

The recent wave of globalization has generated an intense debate among economists, attracting both strong supporters and opponents. This paper tries to present a balanced view of financial globalization, outlining the benefits and risks that globalization entails for developing countries. The paper revisits the arguments and evidence that can be used in favor of and against globalization as well as the prospects and policy options.

In this paper, financial globalization is understood as the integration of a country's local financial system with international financial markets and institutions. This integration typically requires that governments liberalize the domestic financial sector and the capital account. Integration takes place when liberalized economies experience an increase in cross-country capital movement, including an active participation of local borrowers and lenders in international markets and a widespread use of international financial intermediaries. Although developed countries are the most active participants in the financial globalization process, developing countries (primarily middle-income countries) have also started to participate. This paper focuses on the integration of developing countries with the international financial system.[1]

From a historical perspective, financial globalization is not a new phenomenon, but the depth and breadth of globalization today are unprecedented.[2] Capital flows have existed for a long time.[3] In fact, according to some measures, the extent of capital mobility and capital flows a hundred years ago is comparable to today's. At that time, however, only a few countries and sectors participated in financial globalization. Capital flows tended to follow migration and were generally directed toward supporting trade flows. For the most part, capital flows took the form of bonds, and the flows were of a long-term nature. International investment was dominated by a small number of freestanding companies, and financial intermediation was concentrated in a few family groups. The international system was dominated by the gold standard, in which gold backed national currencies.

The advent of the First World War represented the first blow to this wave of financial globalization, which was followed by a period of instability and crises ultimately leading to the Great Depression and the Second World War. After these events, governments reversed financial globalization, imposing capital controls to regain monetary policy autonomy. Capital flows reached a historic low during the 1950s and 1960s. The international system was dominated by the Bretton Woods system of fixed but adjustable exchange rates, limited capital mobility, and autonomous monetary policies.

As Mundell (2000) argues, the 1970s witnessed the beginning of a new era in the international financial system. As a result of the oil shock and the

breakup of the Bretton Woods system, a new wave of globalization began. The oil shock provided international banks with fresh funds to invest in developing countries. These funds were used mainly to finance public debt in the form of syndicated loans. With the disintegration of the Bretton Woods system of fixed exchange rates, countries were able to open up to greater capital mobility while keeping the autonomy of their monetary policies. The capital inflows of the 1970s and early 1980s to developing countries preceded the debt crisis that started in Mexico in 1982. To solve the debt crisis of the 1980s, Brady bonds were created, which led to the subsequent development of bond markets for emerging economies.

Although developed countries are the most active participants in the financial globalization process, developing countries (primarily middle-income countries) have also started to participate.

Deregulation, privatization, and advances in technology made foreign direct investment (FDI) and equity investments in emerging markets more attractive to firms and households in developed countries. The 1990s witnessed an investment boom in FDI and portfolio flows to emerging markets.

Today, despite the perception of increasing financial globalization, the international financial system is far from being perfectly integrated.[4] There is evidence of persistent capital market segmentation, home country bias, and correlation between domestic savings and investment.[5] The recent deregulation of financial systems, the technological advances in financial services, and the increased diversity in the channels of financial globalization make a return to the past more costly and therefore more difficult.[6] Financial globalization is unlikely to be reversed, particularly for partially integrated economies, although the possibility of a reversal still exists.

The potential benefits of financial globalization will likely lead to a more financially interconnected world and a deeper degree of financial integration of developing countries with international financial markets. Arguably, the main benefit of financial globalization for developing countries is the development of their financial system, which involves more complete, deeper, more stable, and better-regulated financial markets. As discussed in Levine (2001), a better-functioning financial system with more credit is key because it fosters economic growth.[7] There are two main channels through which financial globalization promotes financial development. First, financial globalization implies that a new type of capital and more capital is available to developing countries. Among other things, new and more capital allows countries to better smooth consumption, deepens financial markets, and increases the degree of market discipline. Second, financial globalization leads to a better financial infrastructure, which mitigates information asymmetries and, as a consequence, reduces problems such as adverse selection and moral hazard.

Financial globalization can also carry some risks. These risks are more likely to appear in the short run, when countries open up. One well-known risk is that globalization can be related to financial crises. The crises in Asia and Russia in 1997–98, Brazil in 1999, Ecuador in 2000, Turkey in 2001, Argentina in 2001, and Uruguay in 2002 are some examples that captured worldwide interest. There are various links between globalization and crises. If the right financial infrastructure is not in place or is not put in place during integration, liberalization followed by capital inflows can debilitate the health of the local financial system. If market fundamentals deteriorate, speculative attacks will occur with capital outflows from both domestic and foreign investors. For successful integration, economic fundamentals need to be and remain strong, and local markets need to be properly regulated and supervised. The need for strong fundamentals is key since, other things being equal, financial globalization tends to intensify a country's sensitivities to foreign shocks. Moreover, international market imperfections, such as herding, panics, and boom-bust cycles, and the fluctuating nature of capital flows can lead to crises and contagion, even in countries with good economic fundamentals. Another risk of globalization is the segmentation that it can create between those able to participate in the global financial system and those that need to rely on domestic financial sectors.

The net benefit of financial globalization for developing countries can be large despite the risks. But globalization also poses new challenges for policymakers. One main challenge is to manage financial globalization so that countries can take full advantage of the opportunities it generates while minimizing the risks it implies. This management is important because financial globalization is likely to deepen over time, led by its potential benefits. Another challenge of globalization is that, in a more

integrated world, governments are left with fewer policy instruments. Thus, some type of international financial cooperation becomes more important.

This paper discusses the recent developments and main agents of financial globalization and then examines the effects of globalization on the domestic financial sector. The paper also analyzes the potential costs associated with globalization, discusses the net effects, and analyzes the policy options available to deal with financial globalization. The paper concludes with a discussion of the policy implications.

Financial Globalization: Latest Developments and Main Agents

The last thirty years witnessed many changes in financial globalization. New technological advances and the liberalization of the domestic financial sector and the capital account have led to new developments. The main agents driving financial globalization are governments, private investors and borrowers, and financial institutions.

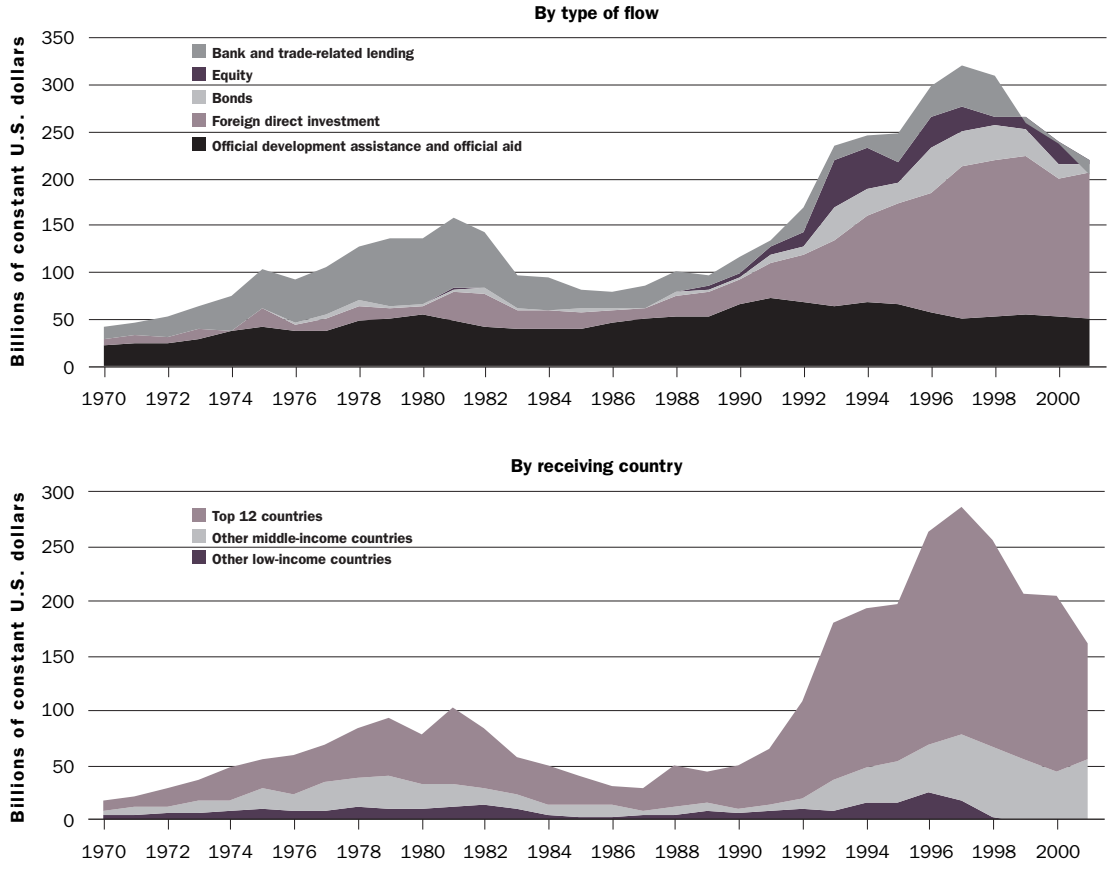
Latest developments in financial globalization. The new nature of capital flows and the increasing use of international financial intermediaries constitute two of the most important developments in financial globalization.

New nature of capital flows. Figure 1 shows that net capital flows to emerging economies have increased sharply since the 1970s. Capital flows went from less than U.S.$41 billion in the 1970s to about U.S.$320 billion in 1997 (in real terms), when they peaked.[8] The composition of capital flows to developing countries changed significantly during this period. The importance of official flows more than halved while private capital flows became the major source of capital for a large number of emerging economies. The composition of private capital flows also changed markedly. FDI grew continuously throughout the 1990s.[9] Mergers and acquisitions, especially the ones resulting from the privatization of public companies, were the most important source of this increase. Net portfolio flows grew from U.S.$0.01 billion in 1970 to U.S.$82 billion in 1996 in real terms. New international mutual funds and pension funds helped channel the equity flows to developing countries. The importance of syndicated bank loans and other private flows decreased steadily in relative terms throughout this period, especially after the 1980s debt crises. Figure 1 also shows the abrupt decline in capital flows to emerging markets following the Asian and Russian crises in 1997–98 and the Argentine crisis in 2001.

1. In this paper, developing countries are all low- and middle-income countries as defined by the World Bank (2000). Emerging markets are middle-income developing countries.
2. Several authors analyze different measures of financial globalization, arguing that there were periods of high financial globalization in the past. Obstfeld and Taylor (1998) present evidence on the share of the current account balance in national income as a proxy for the extent of capital flows. They also present evidence on nominal interest rate differentials and real interest rate dispersion as proxies for the extent of financial market integration and the efficiency and stability of world capital markets. Taylor (1998) presents evidence on the relationship between domestic investment and savings as a proxy for capital mobility. For a review of this literature, see Baldwin and Martin (1999). Bordo, Eichengreen, and Irwin (1999) present a detailed account of the characteristics of the wave of financial globalization before 1914 compared to today's. Collins and Williamson (2001) analyze the price of capital goods in historical perspective.
3. Eichengreen and Sussman (2000) offer a millennium perspective.
4. Frankel argues that "though international financial markets, much like goods markets, have become far more integrated in recent decades, they have traversed less of the distance to perfect integration than is widely believed" (2000, 58).
5. Obstfeld and Rogoff (2000) argue that home country bias, along with other major puzzles in international economics, can be explained by the presence of transaction costs and information asymmetries. Tesar and Werner (1998) present evidence of home country bias, which is decreasing somewhat in developed countries, such as the United States, Japan, and Germany. Okina, Shirakawa, and Shiratsuka (1999) present evidence on several imperfections in global capital markets.
6. Mussa emphasizes the power of new technology and the powerlessness of public policy in the face of the current evolution of financial flows. He argues that public policy "can spur or retard them, but it is unlikely to stop them" (2000, 31). He also claims that the last backlash against globalization was cemented on two world wars and a great depression and affirms that the likelihood of that happening again is low.
7. For more than a century, the importance of capital markets for economic growth has been emphasized. Historically, the literature focused on the role of banks, beginning with the views of Bagehot (1873) and Schumpeter (1912). More recently, empirical works such as King and Levine (1993), Atje and Jovanovic (1993), and Levine and Zervos (1998) have documented the positive link between financial development (represented by different measures) and growth. Several papers have also tried to resolve concerns about causality, including Levine, Loayza, and Beck (2000), Beck and Levine (2002) and, from a microeconomic perspective, Rajan and Zingales (1998) and Demirgüç-Kunt and Maksimovic (1998). The evidence strongly indicates that financial development spurs economic growth.
8. These figures do not account for capital flight, unmeasured flows, and other errors and omissions.
9. Lipsey (1999) argues that FDI has become the most dependable source of foreign investment for developing countries.

FIGURE 1

Net Capital Flows to Developing Countries, 1970–2001



Notes: The first panel plots the evolution of private capital flows and official capital flows. Private capital flows are disaggregated into foreign direct investment, portfolio bond flows, portfolio equity flows, and bank and trade-related flows. The second panel depicts the distribution of private capital flows among developing countries. The top twelve receiving developing countries are China, Brazil, Mexico, South Korea, Argentina, Malaysia, Chile, India, Russian Federation, Thailand, Turkey, and South Africa. The variables included are total private capital flows, foreign direct investment (net inflows in reporting country), portolio investment bonds and equity, bank and trade-related lending, and official development assistance and net official aid. All these variables are deflated using the U.S. GDP deflator; the base year is 1995.

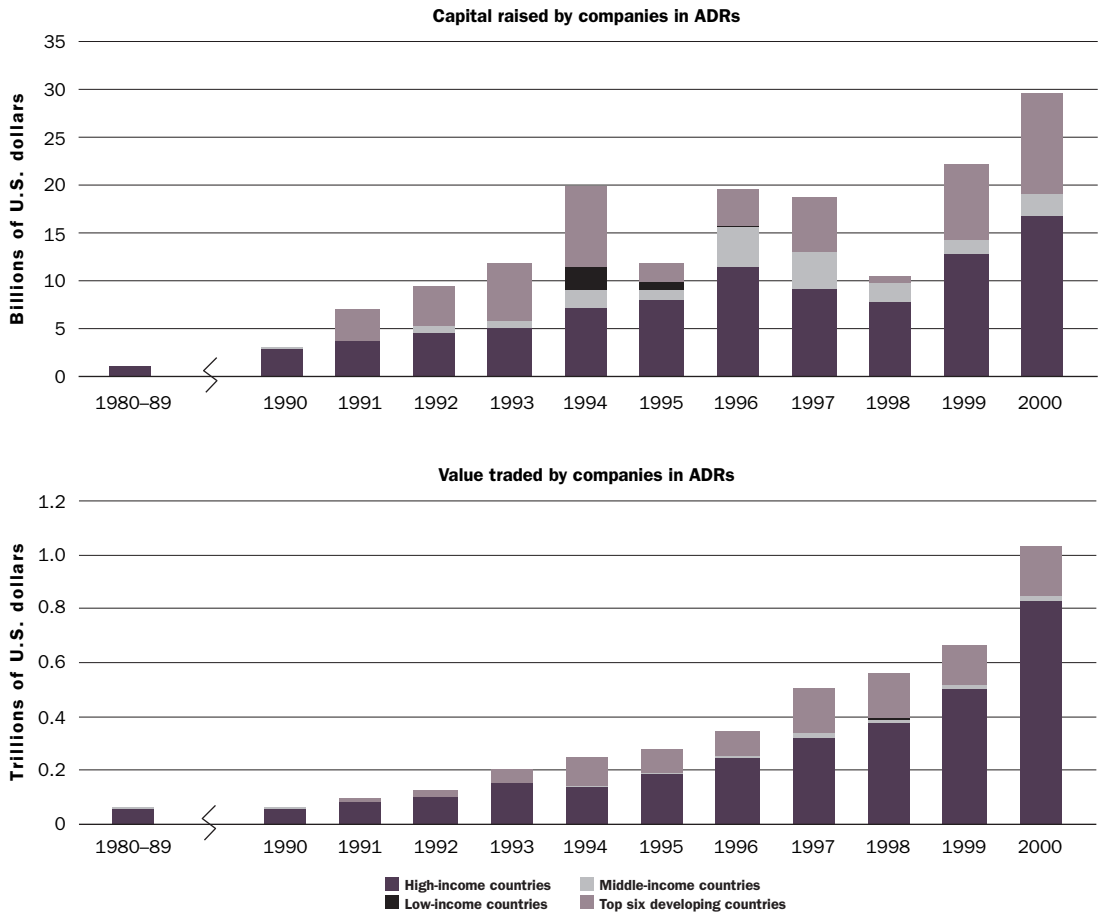
Source: World Bank, World Development Indicators 2003

Even though net private capital flows to developing countries increased in recent years, private capital does not flow to all countries equally. Some countries tend to receive large amounts of inflows while other countries receive little foreign capital. Figure 1 also shows that while flows to developing countries increased in general, the top twelve countries with the highest flows are receiving the overwhelming majority of the net inflows. Moreover, the top twelve countries are the ones that experienced the most rapid growth in private capital flows during the 1990s. As a consequence, the share of flows dedicated to low- and middle-income countries (outside the top twelve) has decreased over time.[10] This pattern is important because if countries benefit from foreign capital, only a small group of countries are the ones benefiting the most. The unequal distribution of capital flows is consistent with the fact that income among developing countries is diverging although the causality is difficult to determine.

Internationalization of financial services. The internationalization of financial services is the use of international financial intermediaries by local borrowers and investors. This internationalization is achieved through two main channels. The first channel is an increased presence of international financial intermediaries, mainly foreign banks, in local markets. The second channel involves the use of international financial intermediaries by local borrowers and investors; these intermediaries are located outside the country. One example of the latter channel is the trading of local shares in major

FIGURE 2

Internationalization of Emerging Stock Markets



Notes: The figures illustrate the amount of equity capital raised by developing countries in international capital markets and the volume traded by developing countries' American depositary receipts (ADRs) during the 1990s. In these figures, the top six developing countries include Argentina, Brazil, China, India, South Korea, and Mexico; these countries were selected in accordance to their total capital raised during the 1980–2000 period. High-income countries include Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan, and the United Kingdom. Middle-income countries include Bahrain, Chile, Colombia, Croatia, the Czech Republic, the Dominican Republic, Egypt, Estonia, Hungary, Jordan, Kazakhstan, Latvia, Lebanon, Lithuania, Malta, Morocco, Papua New Guinea, Peru, the Philippines, Poland, Romania, Russia, the Slovak Republic, South Africa, Sri Lanka, Thailand, Tunisia, Turkey, Uruguay, and Venezuela. Low-income countries include Ghana, Indonesia, Malawi, and Pakistan.

Source: Bank of New York

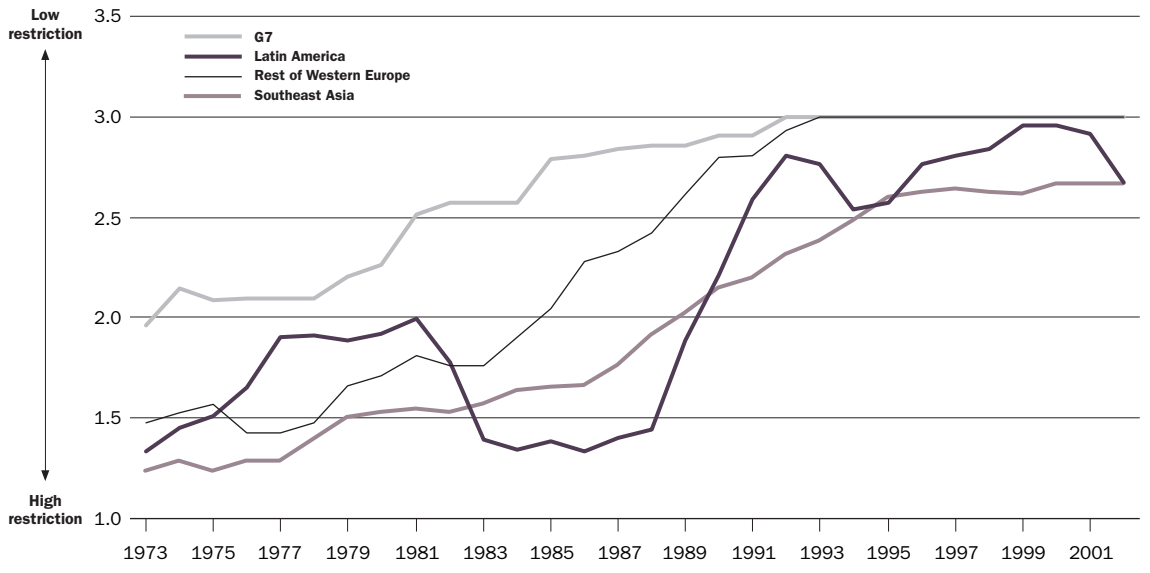
world stock exchanges, mostly in the form of depositary receipts.

Schmukler and Zoido-Lobaton (2001) provide evidence of the internationalization of financial services. For the first channel, they show that the assets and the proportion of assets held by foreign banks increased in East Asia, Eastern Europe, and Latin America between 1994 and 1999. They also show that bond issuance in developing countries increased substantially in 1993 and 1996, years of high capital inflows, while it decreased in 1998, when the East Asian crisis spread to other regions. For the second channel, Figure 2 presents evidence of the increased participation of companies from developing and developed countries in the U.S. equity markets using depositary receipts. Companies from developing countries have been actively participating in the U.S. equity markets since the early 1990s. The data show

10. The share of private capital flows received by the top twelve countries decreased in 2001 as a result of the Argentine crisis and a reduction of international flows, mainly to Brazil and China.

FIGURE 3

Financial Liberalization in Developed and Developing Countries (Index)



Notes: The liberalization index is calculated as the simple average of three indexes (liberalization in the capital account, domestic financial system, and stock market) that range between 1 and 3, where 1 means no liberalization and 3 means full liberalization. These data are then aggregated as the simple average between countries of each region. Figures correspond to annual averages calculated from monthly data.

Source: Kaminsky and Schmukler (2002)

that the top six middle-income countries with the highest participation capture most of the activity among middle-income countries. As argued above in the case of capital flows, this pattern might be creating a divergence among developing countries. If capital raised in international capital markets brings benefits to recipient countries, for example, because the cost of capital is lower or because a longer maturity structure can be achieved, a group of middle-income countries has been benefiting more than other developing nations.

Main agents. There are four main agents of financial globalization: governments, borrowers, investors, and financial institutions. Each of them is helping countries become more financially integrated.

Governments. Governments allow globalization by liberalizing restrictions on the domestic financial sector and the capital account of the balance of payments. In the past, governments used to regulate the domestic financial sector by restricting the allocation of credit through controls on prices and quantities. Governments also imposed several constraints on cross-country capital movements. The list of instruments used to restrict the capital account is rather extensive, including restrictions on foreign exchange transactions, derivative transactions, lending and borrowing activities by banks and corporations, and the participation of foreign investors in the local financial system.

Even though the domestic financial sector and the capital account were heavily regulated for a long time, Kaminsky and Schmukler (2002) show how the restrictions have been lifted over time. Figure 3 presents the evolution of their index of financial liberalization that takes into account restrictions on the domestic financial system, the stock market, and the capital account. The figure illustrates the gradual lifting of restrictions in developed and emerging countries during the last thirty years. The figure shows that developed countries have tended to use more liberal policies than developing countries have. Although there has been a gradual lifting of restrictions over time, there were periods of reversals in which restrictions were reimposed. The most substantial reversals took place in the aftermath of the 1982 debt crisis, in the mid-1990s, and after the Argentine crisis in Latin America.

The literature identifies six main reasons to explain the new wave of liberalization and deregulation by governments of different countries. First, governments found capital controls increasingly costly and difficult to maintain effectively. Second, as Errunza (2001) and the World Bank (2001) argue, policymakers have become increasingly aware that government-

led financial systems and nonmarket approaches have failed. Third, recent crises have heightened the importance of foreign capital to finance government budgets and smooth public consumption and investment. Also, foreign capital has helped governments capitalize banks with problems, conduct corporate restructuring, and manage crises. Fourth, opening up the privatization of public companies to foreign investors has helped increase their receipts. Fifth, although governments can also tax revenue from foreign capital, they might find this harder to do than with other factors of production because of its footloose nature. Sixth, governments have become increasingly convinced of the benefits of a more efficient and robust domestic financial system for growth and stability of the economy and for the diversification of the public and private sectors' investor base.

Borrowers and investors. Borrowers and investors, including households and firms, have also become main agents of financial globalization. By borrowing abroad, firms and individuals can relax their financial constraints to smooth consumption and investment.[11] Firms can expand their financing alternatives by raising funds directly through bonds and equity issues in international markets and thereby reducing the cost of capital, expanding their investor base, and increasing liquidity. As argued by Feldstein (2000), borrowing countries benefit not only from new capital but also, in the case of FDI, from new technology, know-how, management, and employee training.

More financing alternatives help foreign investors overcome direct and indirect investment barriers. International investors, as argued in Obstfeld (1994) and Tesar and Werner (1998), have taken advantage of financial globalization to achieve cross-country risk diversification. If developing countries are to grow faster than developed economies, lenders can expect to obtain higher returns for their investment. As a consequence of the liberalization of financial markets, both institutions and individuals in developed countries can now easily invest in emerging markets through buying shares of international mutual funds (including global, regional, and country funds) as shown in Kaminsky, Lyons, and Schmukler (2001). Investors can also purchase depositary receipts, cross-listed shares of international companies, and international corporate and sovereign bonds in international capital markets.

Financial institutions. Financial institutions, through the internationalization of financial services, are also a major driving force of financial globalization. As discussed by the International Monetary Fund (IMF) (2000), changes at the global level and changes in both developed and developing countries explain the role of financial institutions as a force of globalization.

At a global level, the gains in information technology have diminished the importance of geography, allowing international corporations to service several markets from one location.[12] As discussed in Crockett (2000), the gains in information technology have had three main effects on the financial services industry: (1) They promoted a more intensive use of international financial institutions, (2) they led to a major consolidation and restructuring of the world financial services industry, and (3) they gave rise to global banks and international conglomerates that provide a mix of financial products and services in a broad range of markets and countries, blurring the distinctions between financial institutions and the activities and markets in which they engage. Demographic changes and the increased sophistication of small investors around the world have intensified competition for savings among banks, mutual funds, insurance companies, and pension funds. Households have bypassed bank deposits and securities firms to hold their funds with institutions better able to diversify risks, reduce tax burdens, and take advantage of economies of scale.

For successful integration, economic fundamentals need to be and remain strong, and local markets need to be properly regulated and supervised.

In developed countries, increased competition has led banks and nonbank financial firms to look for expanding their market shares into new businesses and markets, attracting customers from other countries, which allows them to diversify risk. Decreasing costs due to deregulation and technical

11. To the extent that savings from developing countries are invested abroad, these nations can also achieve cross-country risk diversification.
12. The gains in information technology include the reduction in the cost of communications and the increased power of computers, as discussed in Claessens, Glaessner, and Klingebiel (2002).

improvements were accompanied by more competition. Deregulation has meant that banks can enter business that had been off limits (such as securities, insurance, and asset management). Nonbank financial institutions have been slowly competing with traditional banks, offering financial services traditionally provided exclusively by banks, adopting new financial risk calculation methods, and penetrating traditional banking activities in credit markets, such as syndication of loans and bridge loans via new structured financial instruments.

In developing countries, the liberalization of the regulatory systems has opened the door for international firms to participate in local markets. The privatization of public financial institutions has provided foreign banks an opportunity to enter local financial markets. Macroeconomic stabilization, a better business environment, and stronger fundamentals in emerging markets have ensured a more attractive climate for foreign investment.

Financial Globalization and Financial Sector Development

Financial globalization can lead to the development of the financial system. A well-functioning financial sector provides funds to borrowers (households, firms, and governments) that have productive investment opportunities. As discussed in Mishkin (2003), financial systems do not usually operate as desired because lenders confront problems of asymmetric information; lenders know less about the particular project than the borrower. Asymmetric information can lead to adverse selection and moral hazard. Adverse selection means that low-quality borrowers are the ones more likely to seek out funds in the market. Low-quality borrowers are the ones less concerned about paying back a loan. As argued by Stiglitz and Weiss (1981), adverse selection might lead to credit rationing, in the sense that lenders are not willing to lend even at high interest rates; lenders realize that low-quality borrowers are the ones most attracted to high rates. Moral hazard means that, after obtaining the funds, borrowers have incentives to take risky positions or to use the funds in certain ways that are not beneficial to lenders. Thus, borrowers can obtain large gains if their bets pay off and can default otherwise.

One of the primary potential benefits of financial globalization is the development of the financial sector, enhancing the provision of funds for productive investment opportunities. Financial globalization helps improve the functioning of the financial system through two main channels: by increasing the availability of funds and by improving the financial infrastructure, which can reduce the problem of asymmetric information. As a consequence, financial globalization decreases adverse selection and moral hazard, thus enhancing the availability of credit.

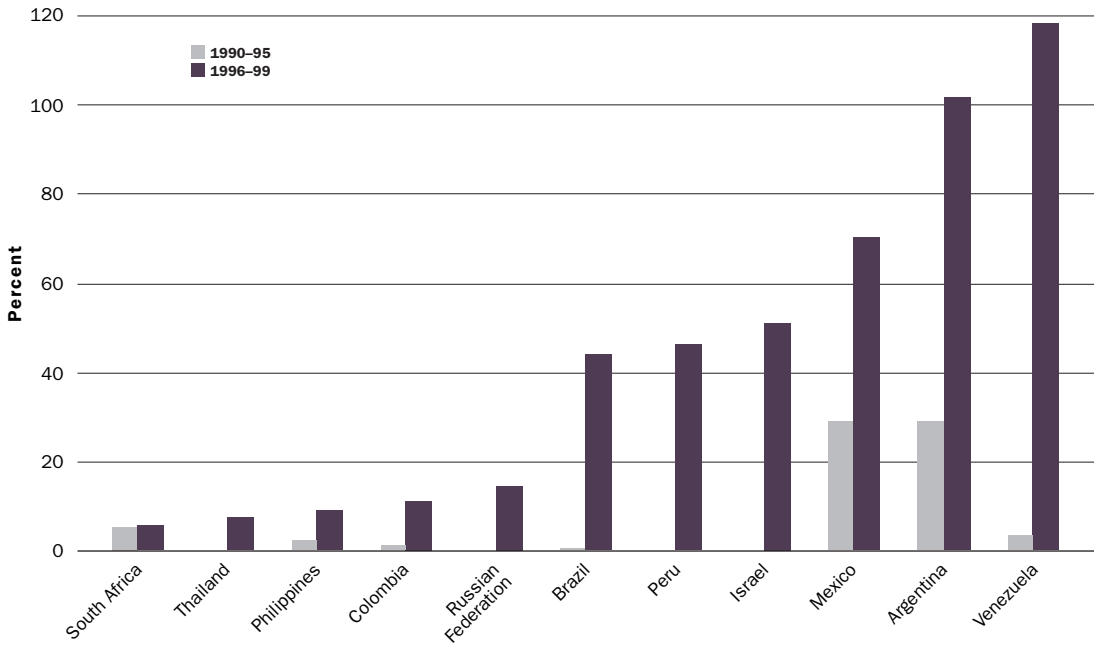
New and more capital is available. As described above, both borrowers and investors have incentives to move funds across countries. In a financially integrated world, funds can flow freely from countries with excess funds to countries where the marginal product of capital is high. In this context, both foreign institutions and individuals might provide capital to developing countries if they expect these countries to grow faster than developed economies. As a consequence, countries can smooth consumption and make investments financed by foreign capital. This flow of capital from developed to developing countries is reflected in the large current account deficits typically observed in many developing nations.

The effects of capital flows on financial development take place because new sources of funds and more capital become available. New sources of funds mean that borrowers not only depend on domestic funds but they can also borrow from foreign countries willing to invest in domestic assets. The capital available from new sources means that market discipline is now stronger both at the macroeconomic level and at the financial sector level, as now local and foreign investors enforce market discipline on private and public borrowers. Foreign capital is particularly effective in imposing this kind of discipline given its footloose nature; foreign capital can more easily shift investment across countries. Domestic capital tends to have more restrictions against investing internationally.

More capital leads to a deepening and increased sophistication of financial markets, including an increase in the sources and uses of financing, and expands the scope of products, instruments, and services available to nationals. As a consequence, borrowers and lenders have more financial opportunities; more assets and liabilities of domestic borrowers and investors become available and transacted. More instruments and investors allow better risk diversification within and across countries. By issuing to global investors, borrowers can lower their cost of capital, in part because international investors are more diversified and, therefore, ready to pay higher prices for domestic equity and bonds. Also, as argued in De la Torre and Schmukler (2003), the shift to a foreign jurisdiction can allow borrowers to lengthen their debt duration because this shift would reduce the overall risk for the investor (for instance, by improving contract enforcement, transparency, and market

FIGURE 4

Share of Trading in International Markets to Local Markets in Selected Countries



Notes: The figure illustrates, for a group of selected countries, the equity trading in international markets relative to the domestic markets. The figure plots the average ratio of ADR trading in New York over the total value traded in the domestic markets for the years 1990–95 and 1996–99.

Source: Bank of New York (for ADRs) and International Financial Corporation, *Emerging Markets Fact Book*, various issues

infrastructures). For a given level of risk appetite, reducing the risk would make room for the investor to increase duration risk. Finally, foreign direct investment brings not only capital but also new technology, know-how, and management and employee training, all of which contribute to increase productivity and foster economic growth.

Thanks in part to the availability of more capital, developing economies have developed their stock and bond markets as well as some of their local financial services industry. Capital markets have developed in the sense that more domestic equity and bonds are issued and traded, but this development does not imply that all domestic financial institutions have become more important. As discussed above, borrowers and investors can just use international financial intermediaries, like stock exchanges and banks, to conduct their financial transactions. In fact, domestic financial institutions can actually shrink as a result of competition with international financial institutions. For example, local banks obtain a lower share of the domestic market. Moreover, as Claessens, Klingebiel, and Schmukler (2002) argue, many stock markets are shrinking as trading moves from domestic markets to major global stock exchanges, as illustrated in Figure 4.

Improvement in the financial infrastructure. Financial globalization tends to improve the financial infrastructure. An improved financial sector infrastructure means that borrowers and lenders operate in a more transparent, competitive, and efficient financial system. In this environment, problems of asymmetric information are minimized and credit is maximized.

In theory, there are different channels through which financial globalization can lead to improvements in the financial sector infrastructure. First, financial globalization can lead to greater competition in the provision of funds, which can generate efficiency gains. Second, the adoption of international accounting standards can increase transparency. Third, the introduction of international financial intermediaries would push the financial sector toward the international frontier. Fourth, Stulz (1999) argues that financial globalization improves corporate governance; new shareholders and potential bidders can lead to a closer monitoring of management. Fifth, Crockett (2000) claims that the increase in the technical capabilities for engaging in precision financing results in a growing completeness of local and global markets. Sixth, Stiglitz (2000) argues that the stringent market discipline imposed by financial

globalization has consequences not only on the macroeconomy but also on the business environment and other institutional factors.

Foreign bank entry is another way through which financial globalization improves the financial infrastructure of developing countries. Mishkin (2003) argues that foreign banks enhance financial development for at least three main reasons. First, foreign banks have more diversified portfolios as they have access to sources of funds from all over the world, which means that they are exposed to less risk and are less affected by negative shocks to the home country economy. Second, foreign entry can lead to the adoption of best practices in the banking industry, particularly in risk management but also in management techniques, which leads to a more efficient banking sector. Third, if foreign banks dominate the banking sector, governments are less likely to bail out banks when they have solvency problems. A lower likelihood of bailouts encourages more prudent behavior by banking institutions, an increased discipline, and a reduction in moral hazard. The World Bank (2001) discusses this topic in greater depth.

Evidence on globalization and financial sector development. The evidence supports the claim that globalization has a positive effect on the development of the financial sector. The evidence can be found in different strands of the literature. There are papers that analyze the aggregate data and papers that use different types of micro data, including firm-level and bank-level information.

Aggregate evidence on stock market liberalization. Using aggregate data, some papers study the effects of stock market liberalization on asset prices and investment. Stock market liberalization might affect asset prices and investment through reductions in the cost of capital because international investors are more diversified and ready to pay higher equity prices. In turn, this reduction in the cost of capital makes some investment projects profitable, as their net present value becomes positive. Focusing on financial liberalization episodes that for the most part took place in the late 1980s and early 1990s, Bekaert and Harvey (2000), Henry (2000), and Kim and Singal (2000) find evidence consistent with the prediction that stock market liberalization increases equity prices and investment. For example, Kim and Singal identify Brazil and the Philippines as countries where liberalization led to higher returns. In the Philippines, after the ousting of Ferdinand Marcos from office in March 1986, restrictions on repatriation of capital and income were lifted. Within twelve months, the excess dollar return increased by about 15 percent (computed as the twelve-month moving average change in the stock market index expressed in U.S. dollars minus the riskless rate based on the three-month Treasury bill rate). The evidence also suggests that there is no increase in the volatility of stock returns.

Country-specific evidence on globalization and financial sector development. Some papers present country-specific evidence on how financial liberalization leads to financial development. Agarwal (2000) analyzes in detail the case of India and argues that primary and secondary capital markets grew significantly in size and liquidity since the beginning of capital market reforms in 1992–93 while volatility of stocks declined. Laurenceson and Chai (1998) challenge the view that the financial sector in China remains unreformed. They present evidence of significant financial liberalization since 1978 from a historical perspective. They then argue that it is this liberalization that has led to considerable deepening of the financial market in China. Another country where financial liberalization and integration with the global markets have resulted in a developed financial sector is Hungary. The World Bank (1999) claims that Hungary is at the front of financial sector reforms among transition countries and today has one of the most developed financial systems in Eastern and Central Europe.

Firm-level evidence. At the firm level, different papers study how the actual participation of firms in international capital markets, mainly through cross-listing, affects firms' equity prices, liquidity, financing structure, and investment. Some papers concentrate on abnormal returns, volatility, cost of capital, and liquidity after companies cross-list their stocks in major world stock exchanges. Other works also look at the impact of the internationalization of some firms on the other firms that remain in the domestic market.

Cross-listing may have both liquidity and signaling effects. The liquidity effect takes place because international markets are more efficient and liquid than domestic markets are. Regarding the signaling effects, cross-listing can be interpreted as evidence of management commitment to higher disclosure and better corporate governance practices. Overall, this literature finds evidence of abnormal returns and lower cost of capital after cross-listings. Moreover, cross-listing is associated with higher liquidity and lower volatility because the company shares are now held by a wider set of investors.

Several papers present evidence on the effect of cross-listing on the cost of capital. Errunza and Miller (2000) document a significant decline in the cost of capital for firms using depositary receipts. Miller (1999) finds positive abnormal returns around the

announcement date of a depositary receipt program. On the other side, Foerster and Karolyi (1999) find that firms cross-listing shares on U.S. exchanges as American depositary receipts (ADRs) earn cumulative abnormal returns during the year before and the year of cross-listing but then incur a loss the year after cross-listing. They find, however, the net effect to be positive. Domowitz, Glen, and Madhavan (1998) argue that the actual effect of cross-listing depends on the quality of intermarket information linkages.[13]

International listing can be interpreted as evidence of management's confidence to meet the minimum listing requirements of the foreign stock exchange, which could improve transparency in the management of the firm. Coffee (2002) argues that the gains that cross-listing produces for firms are mainly explained by the corporate governance or "bonding" hypothesis. Cross-listing may be a bonding mechanism by which firms incorporated in a jurisdiction with weak protection of minority rights or poor enforcement mechanisms can voluntarily subject themselves to higher disclosure standards and stricter enforcement in order to attract investors who would otherwise be reluctant to invest (or who would discount such stocks to reflect the risk of minority expropriation). Reese and Weisbach (2002) find that the weaker the corporate governance framework in the home country, the more likely firms are to cross-list on NYSE or Nasdaq. They argue that listing abroad can be a way for domestic corporations to signal to their investors that they are more willing to protect minority shareholder rights and abide by high transparency standards. Miller and Puthenpurackal (2002) argue that by raising bonds in the United States, corporations certify to act in the interest of investors, lowering their borrowing costs and increasing shareholder wealth. Other papers providing evidence on these signaling mechanisms are Cantale (1996) and Fuerst (1998).

The firm-level evidence has also looked at the effects of firms' participation in international markets on investment and financing ratios. The evidence suggests that the participation in the international capital markets relaxes financing constraints and improves firms' financing opportunities. Lins, Strickland, and Zenner (forthcoming) show that financing constraints (the sensitivity of new investment to internal cash flow) are relaxed when firms from emerging capital markets cross-list using depositary receipts in U.S. equity markets (this relaxation is not true for firms from developed markets). Laeven (2003) finds that financial liberalization affects more small firms than large firms, relaxing their financing constraints.[14] Schmukler and Vesperoni (2003) show that domestic firms that participate in international markets obtain better financing opportunities, being able to issue more debt. Furthermore, they show that by accessing international markets firms increase their long-term debt and extend their debt maturity.

Finally, several papers have studied how the migration by firms to developed-country securities markets affects the securities markets they leave behind in the developing countries. On the one hand, migration and more open markets imply greater information transparency while cross-listing expands the shareholder base. Both should increase domestic market liquidity and volume. On the other hand, cross-listing generates order flow migration, which may adversely affect liquidity in the domestic emerging market. The literature on the subject is, thus, ambivalent.

The new nature of capital flows and the increasing use of international financial intermediaries constitute two of the most important developments in financial globalization.

While several studies from the finance literature argue that migration of firms to international markets generates positive effects, some recent papers have started to find some negative consequences. Moel (2001) finds that ADRs negatively affect investability, liquidity, and the ability of the local market to foster growth, but they might help in raising accounting and disclosure standards. He also finds different effects of ADRs in local markets depending on the region and shows evidence that increasing ADR listings are leading indicators of reduced liquidity and growth in the local market, particularly for Latin America and Africa. Karolyi (forthcoming) measures the dynamics of the growth

13. Even though the effect of cross-listing on the cost of capital is positive, the effect is still small. Stulz (1999) argues that the overall effect is small because markets can anticipate future gains in prices. Stulz also claims that the existing lack of complete integration in world markets can diminish the potential benefits of financial globalization.
14. Gallego and Loayza (2000) analyze similar evidence for the case of Chile.

and expansion of ADRs in emerging equity markets. He finds that ADR expansion adversely affects the size and liquidity of home markets and the pace of international capital flows. Levine and Schmukler (2003) find that internationalization reduces the liquidity of domestic firms through two channels. First, the trading of international firms migrates from domestic to international markets, and the reduction in domestic liquidity of international firms has negative spillover effects on domestic firm liquidity. Second, there is trade diversion within domestic markets as liquidity shifts out of domestic firms and into international firms.

Bank-entry evidence. Clarke et al. (2003) summarize the existing literature on foreign bank entry, analyzing which factors draw foreign banks to a country, which banks expand abroad, and what foreign banks do after they arrive. They also study how the mode of entry (for example, as a branch of its parent or as an independent subsidiary company) affects bank behavior. Martinez Peria, Powell, and Vladkova (2002) study the behavior of international bank lending to Latin America during the 1985–2000 period. They find that banks transmit shocks from their home countries and that changes in their claims on other countries spill over to individual hosts. However, their results suggest that foreign bank lending has become less "indiscriminate" and more responsive to host conditions over time. The responsiveness to the latter becomes less "procyclical" as exposure increases. Also, foreign bank lending reacts more to positive than to negative host shocks and is not significantly curtailed during crises.

Claessens, Demirgüç-Kunt, and Huizinga (2001) and Martinez Peria and Mody (2003) argue that the competitive pressure created by foreign banks led to improvements in banking system efficiency in terms of lower operating costs and smaller margins between lending and deposit interest rates. Demirgüç-Kunt, Levine, and Min (1998) contend that foreign bank entry tends to strengthen emerging markets' financial systems and lower the probability that a banking crisis will occur. Dages, Goldberg, and Kinney (2000) study the case of Argentina and Mexico and conclude that diversity in ownership appears to contribute to greater stability of credit in times of crisis and domestic financial system weakness. But they also argue that bank health, and not ownership per se, is the critical element in the growth, volatility, and cyclicality of bank credit.

Though still very limited, there is also some evidence on the implications of foreign bank entry for lending to small businesses in developing countries. Clarke et al. (forthcoming) use bank level data for Argentina, Chile, Colombia, and Peru during the mid-1990s to examine the impact of foreign bank entry on the share and growth rate of lending to small businesses. They find that, on average, foreign banks in the four countries generally lent less to small businesses (as a share of total lending) than private domestic banks did (at least by end of period). However, the difference appears to be primarily due to the behavior of small foreign banks. In all four cases, small foreign banks lent considerably less to small businesses than small domestic banks did. In contrast, the difference was considerably smaller for large and medium-sized banks. In fact, large foreign banks actually appear to lend more to small businesses (as a share of total lending) than large domestic banks in Chile and Colombia do.[15]

More evidence on the effects of foreign bank entry will shed new light on this relatively new phenomenon. There is as yet only limited evidence as to whether a greater foreign bank presence contributes to a more stable banking system and less volatility in the availability of credit.

Risks and Net Effects of Globalization

Although financial globalization has several potential benefits, it can also carry some risks. The recent stream of financial crises and contagion after countries liberalized their financial systems and became integrated with world financial markets might lead some to suggest that globalization generates financial volatility and crises.

Even though domestic factors tend to be key determinants of crises, there are different channels through which financial globalization can be related to crises. First, when a country liberalizes its financial system, it becomes subject to market discipline exercised by both foreign and domestic investors. When an economy is closed, only domestic investors monitor the economy and react to unsound fundamentals. In open economies, the joint force of domestic and foreign investors might prompt countries to try to achieve sound fundamentals although this process might take a long time.

Second, globalization can also lead to crises if there are imperfections in international financial markets, which can generate bubbles, irrational behavior, herding behavior, speculative attacks, and crashes, among other things. Imperfections in international capital markets can lead to crises even in countries with sound fundamentals. For example, if investors believe that the exchange rate is unsustainable they might speculate against the currency, which can lead to a self-fulfilling balance-of-payments crisis regardless of market fundamentals. This type

of crisis is largely illustrated in the literature following Obstfeld (1986).[16] Imperfections can also deteriorate fundamentals. For example, moral hazard can lead to overborrowing syndromes when economies are liberalized and implicit government guarantees exist, increasing the likelihood of crises, as argued in McKinnon and Pill (1997).[17]

Third, globalization can lead to crises as a result of the importance of external factors, even in countries with sound fundamentals and even in the absence of imperfections in international capital markets. If a country becomes dependent on foreign capital, sudden shifts in foreign capital flows can create financing difficulties and economic downturns. These shifts do not necessarily depend on country fundamentals. Calvo, Leiderman, and Reinhart (1996) argue that external factors are important determinants of capital flows to developing countries. In particular, they find that world interest rates were a significant determinant of capital inflows into Asia and Latin America during the 1990s. Economic cyclical movements in developed countries, a global drive towards diversification of investments in major financial centers, and regional effects tend to be other important global factors. Frankel and Rose (1996) highlight the role that foreign interest rates play in determining the likelihood of financial crises in developing countries.

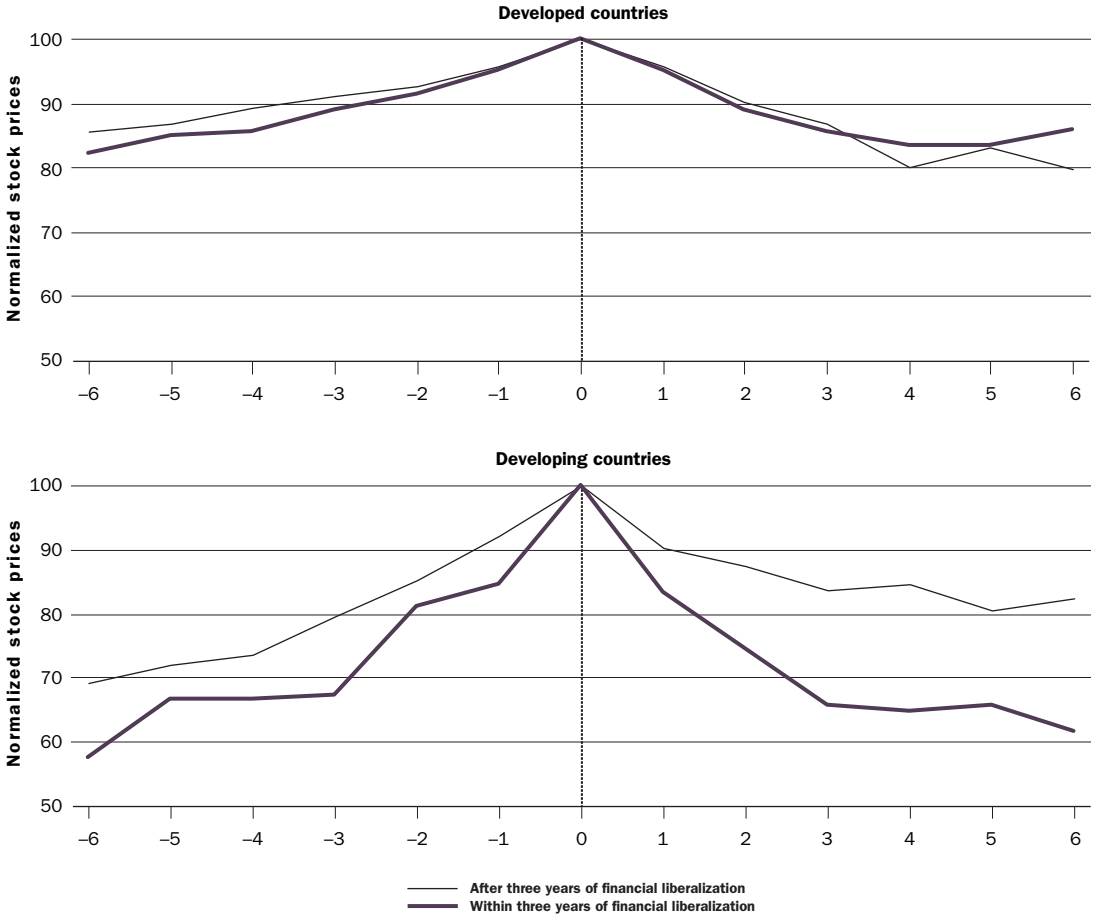
Fourth, financial globalization can also lead to financial crises through contagion, namely by shocks that are transmitted across countries.[18] Three broad channels of contagion have been identified in the literature: real links, financial links, and herding behavior, or "unexplained high correlations." Real links have usually been associated with trade links. When two countries trade among themselves or if they compete in the same external markets, a devaluation of the exchange rate in one country deteriorates the other country's competitive advantage. As a consequence, both countries will likely end up devaluing their currencies to rebalance their external sectors. Financial links exist when two economies are connected through the international financial system. One example of financial links is leveraged institutions facing margin calls. When the value of their collateral falls as a result of a negative shock in one country, leveraged companies need to increase their reserves. Therefore, they sell part of their valuable holdings in the countries that are still unaffected by the initial shock. This mechanism propagates the shock to other economies.[19] Finally, financial markets might transmit shocks across countries as a result of herding behavior or panics. At the root of this herding behavior is asymmetric information. Information is costly, so investors remain uninformed. Therefore, investors try to infer future price changes on the basis of how other markets are reacting. In this context, a change in Thailand's asset prices might be useful information about future changes in Indonesia or Brazil's asset prices. Additionally, in the context of asymmetric information, what the other market participants are doing might convey information that each uninformed investor does not have. This type of reaction leads to herding behavior, panics, and "irrational exuberance."

Evidence on crises and contagion. Though crises can be associated with financial liberalization, the evidence suggests that crises are complex; they are not just the consequence of globalization. The evidence indicates that crises have been a recurrent feature of financial markets for a long time, both in periods of economic integration and in periods of economic disintegration. Bordo et al. (2001) study the frequency, duration, and output impact of crises during the last 120 years and find little indication that crises have grown longer or output losses have become larger.[20] Furthermore, the evidence points

15. Other works on this topic include Bleger and Rozenwurcel (2000), Escudé et al. (2001), and Berger, Klapper, and Udell (2001), which study the case of Argentina and find ambivalent results.
16. Note that self-fulfilling crises can also take place in a closed domestic banking sector, as shown in the literature following Diamond and Dybvig (1983).
17. The arguments that claim that market imperfections are the cause of crises when countries integrate with financial markets imply that imperfections are more prevalent in international markets than in domestic markets. Imperfections in financial markets can exist even in closed countries. If imperfections are more important in domestic markets than in the foreign markets, as one can expect given their degree of development, financial globalization does not have to lead to crises.
18. Dornbusch, Park, and Claessens (2000) survey the literature on contagion. Further references can be found at <www1.worldbank.org/contagion>.
19. Another example of a financial link is the case of open-end mutual funds foreseeing future redemptions after a shock occurs in one country. Mutual funds need to raise cash, and, consequently, they sell assets in third countries.
20. Bordo et al. (2001) compare three distinct historical periods: the gold standard era (1880–1913), the interwar years (1919–39), and the Bretton Woods period (1945–71). They conclude that crises are more frequent today than during the Bretton Woods and the gold standard periods. Today's frequency of crisis is comparable to the interwar years. Even if crises are more frequent, they have not become more severe.

FIGURE 5

Average Boom-Bust Cycles and Financial Liberalization



Notes: The figures show the average boom-bust cycle in financial markets for selected countries. Date 0 is the date of the peak in stock market prices. All stock market indices are normalized to 100 at the peak. Developed countries are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, Denmark, Finland, Ireland, Norway, Portugal, Spain, and Sweden. Developing countries are Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Taiwan, and Thailand. Financial liberalization occurs when countries substantially lift the restrictions on cross-country capital movements.

Source: Kaminsky and Schmukler (2002)

out that there are several causes of financial crises, many of which are related to domestic factors. Frankel and Rose (1996) argue that domestic factors such as slow growth and a boom in domestic credit increase a country's likelihood of experiencing a financial crisis.[21] Also, although both domestic and foreign investors can trigger crises, it is not possible to conclude from the evidence that foreign investors are the main destabilizing group. Frankel and Schmukler (2000) argue that domestic investors seem to be the ones that run first when problems arise, as if they had more information. Foreign investors tend to follow domestic investors.[22]

On the other hand, the evidence on contagion suggests that all the different channels of contagion have played important roles in the transmission of crises. Regarding the trade channel, Eichengreen, Rose, and Wyplosz (1996), Glick and Rose (1999), and Forbes (2004) argue that trade links are important. Trade links tend to make crises more regional. Financial and nonfundamental links are also very important to understanding contagion. Frankel and Schmukler (1998) and Kaminsky and Reinhart (2000) argue that the contagion of Argentina and Brazil from Mexico in 1994 and that of Indonesia from Thailand in 1997–98 are best explained by financial sector linkages among these countries, in

particular banks and international capital markets. Van Rijckeghem and Weder (2000) argue that banking spillovers were particularly relevant in the aftermath of the Mexican and the Asian crises. Kaminsky, Lyons, and Schmukler (2000, 2001) highlight the role of mutual funds and point out that in the aftermath of the Russian default in 1998 Malaysia suffered average mutual funds sales of 30 percent and the Czech Republic of 16 percent. The evidence is also consistent with contagion unrelated to fundamentals, either financial or trade related. Favero and Giavazzi (2000) and Kaminsky and Schmukler (1999) suggest that herding behavior is present, which can be a major driving force of contagion.

Finally, the evidence shows that financial crises are very costly. For example, during the 1973–97 period, there were forty-four crises in developed countries and ninety-five in emerging markets, with average output losses of 6.25 and 9.21 percent of GDP, respectively (see Bordo et al. 2001; Bordo and Eichengreen 2002).[23] Moreover, the literature suggests that crises do not hit all groups of people equally despite the overall negative impact on output. Crises affect disproportionately different ranges of the income distribution, hurting particularly the poor through adverse income and employment shocks, high inflation, relative price changes, and public spending cutbacks.[24] In addition, Halac and Schmukler (2003) show that crises affect inequality through financial transfers among different social groups. They present evidence that large, foreign, and privileged participants of the financial sector obtain important capital gains during crises whereas nonparticipants and small participants of the financial sector bear substantial losses.

Net effects. The previous sections argued that globalization can bring benefits by developing the domestic financial system. But globalization can also be associated with crises and contagion. As discussed in Obstfeld (1998), this link is inescapable in a world of asymmetric information and imperfect contract enforcement. Though many crises are triggered by domestic factors and countries have had crises for a long time (even in periods of low financial integration), globalization can increase the vulnerability of countries to crises. In open economies, countries are subject to the reaction of both domestic and international markets, which can trigger fundamental-based or self-fulfilling crises. Moreover, the cross-country transmission of crises is characteristic of open economies. Completely closed economies should be isolated from foreign shocks. But when a country integrates with the global economy, it becomes exposed to contagion effects of different types and, more generally, to foreign shocks.

Is the link between globalization, crises, and contagion important enough to outweigh the benefits of globalization? The evidence is still very scarce, but it is far from clear that open countries are more volatile and suffer more from crises. The evidence suggests that, in the long run, volatility tends to decrease following liberalization and integration with world markets, probably thanks to the development of the financial sector. The evidence holds even when including crisis episodes, which might be considered particular events.

Any potential increase in volatility tends to occur in the short run, right after liberalization. When countries first liberalize their financial sector, volatility and crises might arise, particularly in countries with vulnerable fundamentals. If the domestic financial sector is not prepared to cope with foreign flows and is not properly regulated and supervised, financial liberalization can lead to domestic crises. This result is shown in Figure 5, which displays the typical boom-bust episode in stock markets. Kaminsky and Schmukler (2002) show that three years after liberalization the cycles in the stock market become less pronounced while they become more pronounced in the aftermath of liberalization.

21. Kaminsky and Reinhart (1999) argue that crises occur mostly because of domestic factors, as the economy enters a recession following a period of prolonged boom in economic activity fueled by expanded credit, capital inflows, and an overvalued currency. Caprio and Klingebiel (1997) stress the importance of both macroeconomic and microeconomic factors in determining banking crises. Burnside, Eichenbaum, and Rebelo (2001) argue that not only typical macroeconomic indicators such as actual deficits but also other factors like large prospective deficits (associated with implicit bailout guarantees to failing banks) can determine crises.
22. Moreover, other papers fail to find that foreign investors add to volatility. For example, Choe, Kho, and Stulz (1999) find no evidence that foreign investors had a destabilizing effect on Korea's stock market between 1996 and 1997. On the other hand, Kim and Wei (2002) find that in Korea foreign investors were more prone to herding behavior than local ones.
23. The fiscal costs of crises are also widely studied, especially in the banking crisis literature. For a sample of forty banking crises, Honohan and Klingebiel (2003) find that governments have spent an average of 6.2 percent of GDP in developed countries and 14.7 percent of GDP in emerging markets in the resolution.
24. See, for example, Baldacci, de Melo, and Inchauste (2002), Ferreira, Prennushi, and Ravallion (1999), and Manuelyan and Walton (1998).

There is also some evidence of the positive impact of financial liberalization on output growth. Bekaert, Harvey, and Lundblad (2002) estimate that output growth has increased about 1 percentage point following liberalization. Although financial liberalizations further financial development, Bekaert, Harvey, and Lundblad show that measures of financial development fail to fully drive out the liberalization effect. Furthermore, Tornell, Westermann, and Martínez (2003) show that financial liberalization leads to higher average long-run growth even though it also leads to occasional crises. This gain in growth is over and above the gain derived from trade liberalization. Tornell, Westermann, and Martínez also show that the growth-enhancing financial deepening that follows liberalization is not a smooth process but takes place through boom-bust cycles. In the presence of severe contract enforceability problems, occasional crises are the price that has to be paid to attain higher growth. The first best alternative would be to improve domestic credit markets by implementing judicial reform. In the absence of such reform, liberalization allows financially constrained firms to attain greater leverage and invest more at the cost of undertaking credit risk. Credit risk creates an environment with high growth and financial fragility.

Policy Options

There are different views on how governments can maximize the benefits of globalization and minimize its risks. As discussed above, one of the most important benefits of financial globalization is the development of the financial sector. This development tends to lead to deeper and less volatile financial markets. But, on the other hand, globalization can also be associated with some costs. The most important one involves a higher sensitivity to crises and contagion. The gains are likely to materialize in the long run, while the costs will tend to be more prevalent in the short run. In all the aspects of globalization, the action or inaction of governments can be important.

Three views on the role of government. In the past, the mood might have favored unfettered capitalism, but the fact that globalization has been associated with crises and contagion has led many economists to believe that some degree of government intervention can be beneficial. Most economists would now agree that financial integration with the rest of the world is beneficial, and only a few would suggest policies that isolate countries. However, the recent experience with crises and contagion has generated large disagreements on how to integrate and on the policy recommendations. There are different views on what governments should do regarding financial integration.

A first view argues that government intervention is at the root of recent crises. This view believes that international capital markets are efficient and developed (or at least international financial markets are more efficient than financial markets in developing countries). Therefore, countries with underdeveloped financial markets would benefit from full financial liberalization, with minimal government intervention. Certain types of government intervention create distortions that can lead to moral hazard and crises. Akerlof and Romer (1993) show that government guarantees can induce firms to go broke at society's expense (looting). They claim that once looting becomes established in one sector, it can distort production in other sectors.

A second view claims that cross-country capital flows should be restricted. According to this view, inefficient international financial markets debilitate the argument for unregulated financial integration. Anomalies such as asymmetric information, moral hazard, asset bubbles, speculative attacks, herding behavior, and contagion are present in international financial markets. So economies open to capital flows suffer the consequences of these imperfections. The recent crises showed that international financial markets punished similarly countries with different fundamentals and policies. Given this evidence, Krugman (1998), Stiglitz (2000), and Tobin (2000) argue that government intervention to restrict cross-country capital movements can be socially beneficial. Moreover, Stiglitz (1999) clamors for developing countries to put some limits on capital inflows to moderate excessive boom-bust patterns in financial markets. Governments can mitigate the cost of volatile capital flows, reducing excessive risk taking and making markets less vulnerable to external shocks, and still pursue integration with international financial markets.

A third view concentrates on risk management. This view focuses on strengthening the domestic financial sector and sequencing financial liberalization and argues that opening a weak domestic financial sector to large capital movements is potentially risky. If the domestic financial sector does not manage risk properly, does not have sufficient reserves and capital, or does not have the right incentives, large capital inflows and outflows can create severe problems in the domestic financial sector. Foreign competition can also debilitate local financial intermediaries. Since financial crises can be very costly, this view proposes an adequate regulation and supervision of the domestic financial system without

distinguishing between foreign capital and domestic capital. Additional proposals include the use of countercyclical fiscal policy, the stability of prices, the active management of reserve requirements, and the implementation of contingent liquidity arrangements. Also, improved prudential regulation and increased market discipline, through more transparency and information, have been recommended as a way to avoid excessive risk taking.

Fewer policy instruments. One of the main consequences of globalization for policymaking is that the number of instruments at the country level diminishes when the economy is integrated. When the domestic financial system integrates with the rest of the world, it is more difficult for countries to monitor and regulate the transactions outside its borders. For example, local authorities are able to regulate the activities of the local subsidiary of an international bank, but it is more difficult to regulate the parent company and subsidiaries in other countries, which can be linked to the local bank. Also, the ability of capital to move freely in and out of the country makes government intervention less effective.

The initial conditions matter. There are more policy options at the domestic level when countries have a low level of financial integration. As countries become more integrated, the need for some kind of international financial cooperation grows.

The rest of the section illustrates, with three examples, how financial globalization influences the policies available to policymakers. These policies have received significant attention in the discussions surrounding crises and financial globalization. The policies discussed below are the ones related to capital controls, risk management, and the choice of monetary and exchange rate regimes.

Capital controls. The proposals on capital controls are designed to reduce the probability or mitigate the effects of sudden shifts in foreign capital. These proposals suggest that international capital flows should be restricted in very particular and judicious ways. Following the classification in Frankel (1999), the main proposals can be divided into four different categories: (1) controls on outflows, which restrict investors to move capital outside the country; (2) controls on aggregate inflows, which are intended to keep capital from flowing into the country rather than restricting the exit of capital once it is in the country; (3) controls on short-term inflows, à la Chile, to avoid the build up of short-term debt; and (4) controls on foreign exchange transactions, or a "Tobin tax," aimed at imposing a small uniform tax on all foreign exchange transactions, regardless of their nature.

There is a very large literature on the effects of capital controls. On the whole the literature is inconclusive about the effects of capital controls. The literature consists primarily of interesting case studies, with little systematic cross-country evidence. Some papers suggest that controls work as expected while others find no controls or negative effects of controls. The evidence suggests that when controls work, they do so on a temporary basis. As time passes, controls become ineffective; market participants find ways to circumvent the controls. A brief review of part of the empirical evidence follows.

The country that has received most of the attention is probably Chile, given the attractiveness of its scheme, which imposed capital controls on short-term inflows through unremunerated reserve requirements. Chile was also widely studied because it systematically put limits to capital flows in both episodes of international capital inflows to emerging markets (1978–81 and 1990–96). The evidence from several studies, including De Gregorio, Edwards, and Valdes (1998), Edwards (1999), Gallego, Hernández, and Schmidt-Hebbel (1999), and Soto (1997), suggests that controls on inflows introduced a wedge between domestic and foreign returns and allowed Chile's central bank to undertake a more independent monetary policy. This finding holds only when external shocks were small. Controls were not effective in preventing spillovers from very large shocks, such as the ones observed in the midst of the Asian crisis in 1997. Even though controls in Chile appear to have shifted the composition or at least the denomination of capital flows to long-term flows, the effects were confined only to the short run. The effectiveness of the controls was reduced over time as investors found ways to circumvent them.

When the domestic financial system integrates with the rest of the world, it is more difficult for countries to monitor and regulate the transactions outside its borders.

The cases of Colombia and Brazil have also attracted some attention. The evidence from the literature is mixed. On the one hand, papers like Cardoso and Goldfajn (1998) for Brazil and Edwards and Khan (1985) for Colombia find that capital account restrictions had some impact on domestic

interest rates. On the other hand, others, such as Garcia and Barcinski (1998), find that controls were ineffective in Brazil.

The experience with capital account controls in Asia has also been analyzed in various studies. The evidence for this region is also mixed. Reisen and Yèches (1993) examine the degree of monetary independence in Korea and Taiwan and find that capital mobility remained roughly constant in the 1980s in the presence of capital controls. These studies, however, are mostly concerned with the degree of capital mobility in episodes of financial repression and do not compare these estimates with those in periods of financial liberalization.

Clear rules and adequate financial disclosure help regulators and market participants monitor corporations, pushing corporations to achieve good practices.

Analyzing the more recent experience in Malaysia, Kaplan and Rodrik (2000) argue that the Malaysian controls were able to segment financial markets and provided room for monetary and financial policies, allowing a speedier recovery from the crisis. They compare the recovery to what would have been possible via a more traditional response to the crisis. Another interesting case is China, which apparently succeeded in remaining isolated from the recent crises although it could not avoid experiencing recent capital outflows.

The number of multicountry studies is much more limited because of the lack of capital control measures across countries. Montiel and Reinhart (1999) construct a database for capital account restrictions of fifteen emerging economies during the 1990s to study the effects of restrictions to capital inflows. They find that controls appear to alter the composition of capital flows in the direction usually intended by these measures, reducing the share of short-term and portfolio flows while increasing that of FDI. Another cross-country study with a new measure of capital account restrictions is Kaminsky and Schmukler (2001), who find that controls work at best temporarily, with the effects diminishing over time.

Risk management. As an alternative to capital controls, some economists have proposed focusing on managing risk by regulating and supervising the financial system, without distinguishing between domestic and foreign capital. When economies are partially integrated with the rest of the world, distinguishing between domestic and foreign capital becomes more difficult, which is why capital controls tend to be ineffective. In this case, governments can benefit by focusing on the stability of the overall financial sector to avoid financial crises or to make crises less costly. If there are imperfections in capital markets, it becomes even more important to avoid excessive risk taking. So the discussion shifts toward risk management.

Governments might want to regulate and supervise financial systems to ensure that the financial sector is managing risk well. Governments might want to avoid large asset-liability mismatches, like unhedged foreign exchange borrowings invested in nontradable sectors and short-term assets for long-term investments, which can leave banks vulnerable to exchange rate depreciations and to interest rate surges. Also, the regulation and supervision should ensure that banks are sufficiently capitalized with appropriate loan classification and adequate loan loss provisions. Transparency for investors and depositors through mandatory public disclosure of audited financial statements will help enforce market discipline. The removal of explicit or implicit government guarantees and sharing risk with investors will decrease the potential for moral hazard. The World Bank (2001) discusses in more detail the regulations of the financial sector in an integrated economy.

The policies toward the financial sector should also be accompanied by the right incentives for sound corporate finance. Clear rules and adequate financial disclosure help regulators and market participants monitor corporations, pushing corporations to achieve good practices. Clear governance rules help prevent insider and group lending not subject to loan evaluation and creditworthiness standards. Developed corporate bond and equity markets help companies obtain external financing, become more transparent, and be subject to market discipline. Claessens, Djankov, and Nenova (2001) argue that the institutional structures that influence corporate behavior help explain financial crises, especially through the link between the corporate sector and weakened financial institutions. In particular, Claessens, Djankov, and Nenova claim that a country's legal origin, the strength of its equity and creditor rights, and the nature of its financial system can account for different degrees of corporate risk taking.

Proper risk management helps avoid and manage crises.[25] First, as a preventive measure, countries with solid financial sectors will probably suffer fewer crises and less pronounced recessions. Second, countries with sound financial sectors will have more flexibility to cope with external shocks and to take corrective measures during a crisis. Countries with a solvent banking sector and low corporate leverage ratios will be able to some extent to raise interest rates to contain speculative attacks on the exchange rate. Countries with large foreign exchange reserves and access to contingent liquidity facilities will be able to inject liquidity into the system, avoiding credit squeezes and bank runs.

The recent experiences with crises and contagion stress the importance of adequate risk management. Kawai, Newfarmer, and Schmukler (2001) argue that one of the most important lessons of the East Asian crisis is that highly leveraged and vulnerable corporate sectors were a key determinant of the depth of the crisis. Currency devaluations suddenly inflated the size of external debt (measured in terms of the domestic currency) and debt service obligations, thereby driving the domestic corporations into financial distress. High interest rates also sharply increased domestic debt service obligations of the corporations. These vulnerabilities affected the banks with exposures to the corporations. Krugman (1999) argues that company balance sheet problems may have a role in causing financial crises. Currency crises lead to an increase in foreign denominated debt, which, combined with declining sales and higher interest rates, weakens the corporate sector and in turn the financial system. Johnson et al. (2000) also show how weak corporate governance might hamper the economy and lead to currency depreciations and recessions.

Can financial liberalization occur without the appropriate risk management in place? This question leads to the issue of sequencing of liberalization. Having a robust financial sector is key for a successful globalization. A standard recommendation on sequencing is to first clean up domestic financial institutions and change government institutions and then deregulate the industry and open up the capital account. But this discussion may be irrelevant if the timing is such that reforms never predate liberalization, with institutional changes happening mostly as a result of financial deregulation. To shed new light on this sequencing debate, Kaminsky and Schmukler (2002) compare the timing of financial liberalization and institutional reforms for a sample of twenty-eight countries. They study the probability that financial liberalization occurs conditional on reforms having already been implemented. The evidence for emerging and mature markets suggests that reforms to institutions occur mostly after liberalization is implemented. These results cast doubts on the notion that governments tend to implement institutional reforms before they start deregulating the financial sector. On the contrary, the evidence suggests that partial liberalization fuels institutional reforms.

There are several reasons that can explain why financial liberalization might prompt institutional reforms. First, as discussed in Rajan and Zingales (2001), well-established firms may oppose reforms that promote financial development because it breeds competition. These firms can even be hurt by financial development because it implies better disclosure rules and enforcement (reducing the importance of these firms' collateral and reputation) and permits newcomers to enter and compete away profits. Also, incumbents may oppose the removal of capital controls as capital can flow away to more attractive destinations, limiting their sources of funds. However, opposition may be weaker in the presence of worldwide abundance of trade and cross-border flows. In these times, free access to international capital markets will allow the largest and best-known domestic firms to tap foreign markets for funds, with the support for financial liberalization becoming stronger. But financial liberalization sows the seeds of destruction of the old protected and inefficient financial sector because foreign and domestic investors (now with access to international capital markets) require better enforcement rules.

Second, as mentioned before, the liberalization and the gradual integration of emerging markets with international financial markets by itself may help to fortify the domestic financial sector. Foreign investors have overall better skills and information and can thus monitor management in ways local investors cannot. Liberalization, moreover, allows firms to access mature capital markets. Firms listing on foreign stock markets are also in the jurisdiction of a superior legal system and have higher disclosure standards. Third, the integration with world markets and institutions tends to speed up the reform process to achieve a resilient financial

25. Dodd (2003) discusses a set of regulatory proposals designed to remedy market imperfections and analyzes how they make financial markets more efficient and less vulnerable to disruptions and distortions. Dodd also assesses the merits of prudential financial market regulations against other policy proposals, including extreme laissez-faire, capital controls, and transactions.

system. Capital markets can help supervise domestic financial institutions, imposing stricter market discipline, increasing transparency and the diffusion of information, and even pushing governments into guaranteeing that their financial systems are well supervised and regulated.

Monetary and exchange rate policy. The choice of exchange rate regime (floating, fixed, or somewhere in between) has been a recurrent question in international monetary economics. Obstfeld and Taylor (2003) argue that the different historical phases of financial globalization can be understood in terms of the impossible trinity.[26] According to this proposition, a country can consistently pursue only two out of the three policy objectives: free capital mobility, a fixed (or highly stable) nominal exchange rate, and an autonomous monetary policy. Obstfeld and Taylor explain that international capital mobility has thus prevailed in periods of political support either for subordinating monetary policy to exchange rate stability (as in the gold standard, 1880–1914) or for giving up exchange rate stability so as to enable monetary policy to pursue domestic objectives (as in the post-Bretton Woods era, 1971–2003). In contrast, when countries attempted simultaneously to target their exchange rates and use monetary policy in pursuit of domestic objectives (for example, to combat the slowdown of economic activity in the interwar period), they had to impose controls to curtail capital movements, as in the interwar (1914–45), and Bretton Woods (1945–71) periods. Frankel, Schmukler, and Serven (2001) argue that after the crises of the 1990s economists have become in favor of corner exchange rate regimes, according to which countries will either firmly fix their exchange rate or follow a flexible regime without precommitments, allowing for free capital movements.

Attacks on currencies can occur whenever confidence is lost even if a country has sound fundamentals. A crisis in a foreign country can rapidly trigger a crisis at home.

By fixing the exchange rate, countries tend to reduce transaction costs and exchange rate risk that can discourage trade and investment. At the same time, a fixed exchange rate has been used as a credible nominal anchor for monetary policy. On the other hand, a flexible exchange rate allows a country to pursue independent monetary policy. A flexible exchange rate allows countries to respond to shocks through changes in the exchange rate and interest rate to avoid going into recession. Under the combination of fixed exchange rates and complete integration of financial markets, monetary policy becomes completely powerless. Any fluctuations in the currency or currencies to which the country fixes its exchange rate will affect the domestic currency. Under a fixed exchange rate regime, other variables need to do the adjusting.

Even though countries can choose a flexible exchange rate regime, some papers have argued that countries are not allowing their exchange rates to move in part because of the high degree of financial globalization. Among others, Calvo and Reinhart (2001, 2002) argue that "fear of floating" prevents countries with de jure flexible regimes from allowing their exchange rates to move freely. According to this view, factors like lack of credibility, exchange rate pass-through, and foreign-currency liabilities prevent countries from pursuing an independent monetary policy, regardless of their announced regime. Therefore, many countries, even if formally floating, are de facto "importing" the monetary policy of major-currency countries, much as those with pegs.

The empirical evidence seems to suggest that countries are not able or do not choose to pursue a completely independent monetary policy. The evidence from recent papers shows that local interest rates exhibit high sensitivity to international rates, regardless of the exchange rate regime. As Frankel, Schmukler, and Serven (2002) show, the transmission from international rates to domestic rates seems to be one in the long run, particularly in the 1990s when countries have integrated. The evidence in Hausmann et al. (1999) and Hausmann, Panizza, and Stein (2000) is consistent with the view that countries do not pursue independent monetary policy in the way that textbooks predict. Hausmann, Panizza, and Stein (2000) show that developing countries float their exchange rates holding large amounts of international reserves.

Even though countries with flexible exchange rate regimes cannot benefit from fully independent monetary policy in integrated countries, they should not be forced to adopt a fixed regime. There are credible ways to adopt a flexible regime if the right monetary institutions are in place and if countries can commit to an inflation targeting policy, as discussed in Bernanke and Mishkin (1997) and Mishkin (2000). In this way, countries may benefit

at least partially from conducting their own monetary policy without giving up credibility.

De la Torre, Levy Yeyati, and Schmukler (2002) add to the debate by squarely putting exchange rate issues in the context of financial globalization. They argue that financial globalization needs to take into account the relation between money (particularly in its role as a store of value), asset and factor price flexibility, and contractual and regulatory institutions. Countries that have the "blessed trinity" (international currency, a flexible exchange rate regime, and a sound contractual and regulatory environment) can integrate successfully into the world financial markets. But developing countries normally display the "unblessed trinity" (weak currency, fear of floating, and a weak institutional framework). De la Torre, Levy Yeyati, and Schmukler define and discuss two alternative avenues for developing countries to safely embrace international financial integration: a "dollar trinity" and a "peso trinity." The premise of the dollar trinity is that the peso will never be a strong store of value and, therefore, countries should formally dollarize, even unilaterally. The premise of the peso trinity is that fear of floating can and should be overcome and, therefore, countries should move to inflation targeting. De la Torre, Levy Yeyati, and Schmukler highlight that strong domestic institutions need to back both the dollar and peso trinity.

In relation to the choice of exchange rate regimes, De la Torre, Levy Yeyati, and Schmukler (2003) study the fall of Argentina's currency board (2001–02) and claim that the advantages of hard pegs have been overstated. They conclude that a one-dimensional emphasis on a pure fixed versus floating dilemma is insufficient and can even be misleading. It would be more productive to focus on the weak currency problem that plagues most emerging economies and on the need to build healthy links between money and financial intermediation while establishing adequate flexibility, including in financial contracting, to facilitate adjustment to shocks. Calvo and Mishkin (2003) also highlight the importance of strengthening institutions. They argue that the choice of exchange rate regime is likely to be of second order importance to the development of good fiscal, financial, and monetary institutions in producing macroeconomic success in emerging market countries. A focus on institutional reforms rather than on the exchange rate regime may encourage emerging market countries to be healthier and less prone to crises.

Conclusions

In the last decades, countries around the world have become more financially integrated, driven by the potential benefits of financial globalization. One of the main benefits of financial globalization is the development of the financial sector. Financial markets become deeper and more sophisticated when they integrate with world markets, increasing the financial alternatives for borrowers and investors. Financial markets operating in a global environment enable international risk diversification and facilitate consumption smoothing. Although financial globalization has several potential benefits, it also poses new challenges. The crises of the 1990s, after many countries liberalized their financial system, have questioned in part the gains of globalization. Countries become exposed to external shocks and crises not only generated in their own country but also from contagion effects. In the initial stages of liberalization, if the right infrastructure is not in place or put in place, financial liberalization can lead to increased risks. Moreover, in a financially integrated economy, policymakers have fewer policy instruments to conduct economic policy.

The recent experiences with financial globalization yield some useful lessons for policymaking.

Countries can benefit from globalization. Countries can benefit from financial globalization and should take advantage of it. Financial liberalization tends to develop the financial system, enhancing the financing opportunities, reducing the cost of capital, and increasing investment and liquidity. At the same time, the evidence does not suggest that financial volatility increases after financial liberalization. It is true that crises have had a very large impact on growth in some countries like Indonesia. But in other cases the recovery has been rapid, as in South Korea and Mexico. Also, it would be hard to argue that economies would have grown as fast as they did if they had remained closed.

Though the potential benefits can be large, we are far from full financial globalization. Even in open countries there is still an important home bias. Given the potential benefits of globalization, there is scope for a much deeper financial globalization and for much larger gains. Many countries are already partially open, and the prospect is for an increased globalization of financial markets. Paradoxically, the increased globalization can reduce the scope for risk diversification because integrated financial markets tend to be more correlated.

26. The concept of an impossible trinity is not new. It dates back, at least, to the work of Mundell in the 1960s.

Importance of sound fundamentals and strong institutions. Sound macroeconomic and financial fundamentals are key in lowering the probability of crises and contagion and in enabling more effective management of crises. Preventing currency and banking crises should be one of the primary objectives of any policymaker because of the high cost of crises. This objective is more important in a world of free capital mobility because both foreign and domestic investors exercise market discipline and because foreign crises might have contagion effects at home. Attacks on currencies can occur whenever confidence is lost even if a country has sound fundamentals. A crisis in a foreign country can rapidly trigger a crisis at home. Weak fundamentals tend to scare investors more easily and make crisis management more difficult. Countries with bad fundamentals—for example, with large fiscal deficits and public debt—have fewer instruments to use in the midst of a crisis. Therefore, countries should focus on key policies that help them prevent and manage crises. These policies include avoiding large current account deficits financed through short-term private capital inflows and large asset-liability currency mismatches.

Improving the contractual and regulatory environment is also important. Better institutions make an emerging country more fit to join in the financial globalization process. In particular, they increase the capacity of the domestic financial system to intermediate prudently large international capital flows. Also, improvements in the contractual and regulatory framework can enhance the access of resident corporations (at least in the case of larger countries and for the larger corporations) to financial services supplied abroad.

Initial conditions matter. Measures to isolate countries (like capital controls) are unlikely to work in the long run. When there were attempts to isolate partially open economies, investors have tended to find ways to avoid the restrictions over time.

The initial conditions matter; the effectiveness of policies relies on the degree of integration with world markets. Countries with a very low degree of integration with world capital markets and with underdeveloped financial markets are more able to delay or reverse the process of financial globalization than countries already partially integrated. A country with a low level of integration should ensure that its financial sector is prepared to cope with open capital markets. If the domestic financial sector does not manage risk properly, does not have sufficient reserves and capital, or does not have the right incentives, large capital inflows and outflows can create severe problems in the domestic financial sector. However, it is not the case that all the conditions need to be met before governments liberalize the financial sector. As the discussion on sequencing shows, the process of integration itself can in some ways help improve the conditions of the domestic financial sector.

When countries develop, more comprehensive policies for risk management will be needed. These measures should try to avoid imperfections in capital markets and the buildup of vulnerabilities. In more open economies, the distinction between foreign and domestic capital becomes increasingly difficult. As the economy becomes integrated with the rest of the world, restraints to capital movements are more difficult to make effective since they can be circumvented easily. Therefore, a more comprehensive approach will be needed to build solid financial economies. This approach involves proper regulation and supervision of the financial system.

Need for international financial cooperation. As economies become more integrated, governments have fewer policy instruments and have to rely more on international financial policies. For example, governments tend to have fewer options about their monetary policy and exchange rate policy. In open economies there is a higher transmission of international interest rates and prices to the domestic economy. Moreover, bank regulation and supervision by one government is more difficult when liabilities and prices are denominated in foreign currency and when the banking sector is part of an international banking system. Also, in the midst of contagious crises, governments tend to lack sufficient resources to stop a currency attack, and individual governments can do little to stop crises being originated in foreign countries. In these cases, international financial coordination can help individual governments achieve their goals.

There are different policies in which there is scope for cooperation. One policy is the timely mobilization of external liquidity of sufficient magnitude to reverse market expectations in a context of sound policies. That liquidity usually comes from the international financial institutions. Given the magnitude of capital flows and the clustering of crises, isolated actions of individual governments or institutions are not sufficient to gain the required confidence. A coordinated action among governments and the international financial institutions is necessary to overcome crises and contagion at both regional and global levels.[27] To minimize potential moral hazard, it would be necessary to involve the private sector so that private international investors share in the costs as a penalty for excessive risk taking.

Another policy that requires international coordination is to build a strong "international financial architecture" to prevent and manage, in a systematic way, financial crises. Even though there are different meanings of this architecture, in general terms it refers to international arrangements for mutual consultation, monitoring/surveillance, and collaboration covering a broad range of subjects of economic policy and possible financing in the event of crisis. The international financial architecture is still under construction. The initiatives under consideration focus on crisis prevention, crisis management, and crisis resolution. The current initiatives include setting international standards for transparency and information dissemination, bank supervision and regulation, disclosure in securities markets, accounting and auditing rules, bankruptcy procedures, and corporate governance. The new initiatives also include private sector involvement in financing packages to complement IMF resources and to discourage moral hazard that could be associated with bailouts.

Main challenge—integrate all countries, sectors, and firms. One of the main challenges of financial globalization is to integrate all sectors and countries that do not participate in the globalization process. Financial globalization can bring about many positive benefits. But not all countries, sectors, or firms have access to global financial markets and services or can take advantage of the benefits induced by globalization. Among developing nations, only some countries, particularly middle-income countries, receive foreign capital. Within each country, investment is concentrated in certain sectors. Selected companies can obtain foreign funds. The lack of participation in the financial globalization process might put countries, sectors, and companies in disadvantageous positions. There is no easy solution on how to integrate them. Future research might shed light on how some countries, sectors, and companies are benefiting from financial globalization while others are being left behind. Furthermore, future research might shed light on how all countries, sectors, and companies might take advantage of the possibilities offered by financial globalization.

27. Ganapolsky and Schmukler (2001) show that during the 1994–95 crisis in Latin America, the agreements of Argentina and Mexico with the international financial community were well received by the markets. These agreements were signed simultaneously by Argentina and Mexico. At that time, all Latin American countries recovered.

REFERENCES

Agarwal, R.N. 2000. Financial integration and capital markets in developing countries: A study of growth volatility and efficiency in the Indian market. Institute of Economic Growth, University Enclave, Delhi, India, Discussion Paper Series 21/2000.

Akerlof, George A., and Paul M. Romer. 1993. Looting: The economic underworld of bankruptcy for profit. *Brookings Papers on Economic Activity*, no. 2:1–73.

Atje, Raymond, and Boyan Jovanovic. 1993. Stock markets and development. *European Economic Review* 37 (April): 632–40.

Bagehot, Walter. 1873. *Lombard Street*. Reprint, Homewood, Ill.: Richard D. Irwin, 1962.

Baldacci, Emanuele, Luiz de Melo, and Gabriela Inchauste. 2002. Financial crises, poverty, and income distribution. International Monetary Fund Working Paper 02/04, January.

Baldwin, Richard E., and Philippe Martin. 1999. Two waves of globalisation: Superficial similarities, fundamental differences. In *Globalization and labor*, edited by Horst Siebert, 3–58. Tübingen, Germany: Mohr Siebeck.

Beck, Thorsten, and Ross Levine. 2002. Stock markets, banks, and growth: Panel evidence. NBER Working Paper 9082, July.

Bekaert, Geert, and Campbell R. Harvey. 2000. Foreign speculators and emerging equity markets. *Journal of Finance* 55 (April): 562–613.

Bekaert, Geert, Campbell R. Harvey, and Christian Lundblad. 2002. Does financial liberalization spur growth? *IMF Seminar Series* 30 (February): 1–51.

Berger, Allen N., Leora F. Klapper, and Gregory F. Udell. 2001. The ability of banks to lend to informationally opaque small businesses. *Journal of Banking and Finance* 25 (December): 2125–392.

Bernanke, Ben S., and Frederic S. Mishkin. 1997. Inflation targeting: A new policy framework for monetary policy? *Journal of Economic Perspectives* 11 (Spring): 97–116.

Bleger, Leonardo, and Guillermo Rozenwurcel. 2000. Financiamiento a las PyMEs y cambio estructural en la Argentina: Un estudio de caso sobre fallas de mercado y problemas de información. *Desarrollo Económico* 40 (April–June): 45–71.

Bordo, Michael D., and Barry Eichengreen. 2002. Crises now and then: What lessons from the last era of financial globalization? NBER Working Paper 8716, January.

Bordo, Michael D., Barry Eichengreen, and Douglas A. Irwin. 1999. Is globalization today really different than globalization a hundred years ago? NBER Working Paper 7195, June. Revised version published in *Brookings Trade Policy Forum 1999*.

Bordo, Michael D., Barry Eichengreen, Daniela Klingebiel, and Maria Soledad Martinez Peria. 2001. Financial crises: Lessons from the last 120 years. *Economic Policy* 16 (April): 51–82.

Burnside, Craig, Martin Eichenbaum, and Sergio Rebelo. 2001. Prospective deficits and the Asian currency crisis. *Journal of Political Economy* 109 (December): 1155–97.

Calvo, Guillermo A., Leonardo Leiderman, and Carmen M. Reinhart. 1996. Inflows of capital to developing countries in the 1990s. *Journal of Economic Perspectives* 10 (Spring): 123–39.

Calvo, Guillermo A., and Frederic S. Mishkin. 2003. The mirage of exchange rate regimes for emerging market countries. NBER Working Paper 9808, June.

Calvo, Guillermo A., and Carmen M. Reinhart. 2001. Fixing for your life. *Brookings Trade Forum 2000*: 1–38.

———. 2002. Fear of floating. *Quarterly Journal of Economics* 117 (May): 379–408.

Cantale, Salvatore. 1996. The choice of a foreign market as a signal. INSEAD, photocopy, August.

Caprio, Gerard, Jr., and Daniela Klingebiel. 1997. Bank insolvency: Bad luck, bad policy, or bad banking? In *Annual World Bank conference on development economics 1996*, 1–26. Washington, D.C.: World Bank.

Cardoso, Eliana A., and Ilan Goldfajn. 1998. Capital flows to Brazil: The endogeneity of capital controls. *IMF Staff Papers* 45 (March): 161–202.

Choe, Hyuk, Bong-Chan Kho, and René M. Stulz. 1999. Do foreign investors destabilize stock markets? The Korean experience in 1997. *Journal of Financial Economics* 54 (October): 227–64.

Claessens, Stijn, Asli Demirgüç-Kunt, and Harry Huizinga. 2001. How does foreign entry affect the domestic banking market? *Journal of Banking and Finance* 25 (May): 891–911.

Claessens, Stijn, Simeon Djankov, and Tatiana Nenova. 2001. Corporate risk around the world. In *Financial crises in emerging markets*, edited by Reuven Glick, Ramon Moreno, and Mark Spiegel, 305–38. Cambridge: Cambridge University Press.

Claessens, Stijn, Thomas Glaessner, and Daniela Klingebiel. 2002. E-finance in emerging markets: Is leapfrogging possible? *Financial Markets, Institutions and Instruments* 11 (February): 1–125.

Claessens, Stijn, Daniela Klingebiel, and Sergio L. Schmukler. 2002. The future of stock markets in emerging economies. In *Brookings-Wharton Papers on Financial Services 2002*, edited by Robert E. Litan and Richard Herring, 167–212. Washington, D.C.: Brookings Institution.

Clarke, George, Robert J. Cull, Maria Soledad Martínez Peria, and Susana M. Sánchez. 2003. Foreign bank entry: Experience, implications for developing countries, and agenda for further research. *World Bank Research Observer* 18 (Spring): 25–59.

———. Forthcoming. Bank lending to small businesses in Latin America: Does bank origin matter? *Journal of Money, Credit, and Banking.*

Coffee, John C., Jr. 2002. Racing towards the top?: The impact of cross-listings and stock market competition on international corporate governance. Columbia Law and Economics Working Paper 205, May.

Collins, Williams J., and Jeffrey G. Williamson. 2001. Capital goods prices and investment, 1870–1950. *Journal of Economic History* 61 (March): 59–94.

Crockett, Andrew. 2000. Commentary: How should financial market regulators respond to the new challenges of global economic integration? In *Global economic integration: Opportunities and challenges*, 121–28, proceedings of a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyo., August 24–26.

Dages, B. Gerard, Linda Goldberg, and Daniel Kinney. 2000. Foreign and domestic bank participation in emerging markets: Lessons from Argentina and Mexico. Federal Reserve Bank of New York *Economic Policy Review* 6 (September): 17–36.

De Gregorio, José, Sebastian Edwards, and Rodrigo Valdes. 1998. Capital controls in Chile: An assessment. Presented at the Inter-American Seminar on Economics, Rio de Janeiro, Brazil.

De la Torre, Augusto, Eduardo Levy Yeyati, and Sergio L. Schmukler. 2002. Financial globalization: Unequal blessings. *International Finance* 5 (Winter): 335–57.

———. 2003. Living and dying with hard pegs: The rise and fall of Argentina's currency board. *Economia* 3 (Spring): 43–99.

De la Torre, Augusto, and Sergio L. Schmukler. 2003. Coping with risk through mismatches: Domestic and international financial contracts for emerging economies. World Bank, photocopy.

Demirgüç-Kunt, Asli, Ross Levine, and Hong G. Min. 1998. Opening to foreign banks: Issues of stability, efficiency, and growth. In *The implications of globalization of world financial markets*, 83–105, proceedings of a Bank of Korea conference.

Demirgüç-Kunt, Asli, and Vojislav Maksimovic. 1998. Law, finance, and firm growth. *Journal of Finance* 53 (December): 2107–37.

Diamond, Douglas W., and Philip H. Dybvig. 1983. Bank runs, deposit insurance, and liquidity. *Journal of Political Economy* 91 (June): 401–19.

Dodd, Randall. 2003. The virtues of prudential regulation of financial markets. Initiative for Policy Dialogue, Columbia University, photocopy.

Domowitz, Ian, Jack Glen, and Ananth Madhavan. 1998. International cross-listing and order flow migration: Evidence from an emerging market. *Journal of Finance* 53 (December): 2001–27.

Dornbusch, Rudiger, Yung C. Park, and Stijn Claessens. 2000. Contagion: Understanding how it spreads. *World Bank Research Observer* 15 (August): 177–97.

Edwards, Sebastian. 1999. How effective are capital controls? *Journal of Economic Perspectives* 4 (Fall): 65–84.

Edwards, Sebastian, and Mohsin S. Khan. 1985. Interest rate determination in developing countries: A conceptual framework. *IMF Staff Papers* 32 (September): 377–403.

Eichengreen, Barry, Andrew K. Rose, and Charles Wyplosz. 1996. Contagious currency crises. *Scandinavian Journal of Economics* 98 (December): 463–84.

Eichengreen, Barry, and Nathan Sussman. 2000. The international monetary system in the (very) long run. International Monetary Fund Working Paper 00/43, March.

Errunza, Vihang R. 2001. Foreign portfolio equity investments, financial liberalization, and economic development. *Review of International Economics* 9 (November): 703–26.

Errunza, Vihang R., and Darius P. Miller. 2000. Market segmentation and the cost of capital in international equity markets. *Journal of Financial and Quantitative Analysis* 35 (December): 577–600.

Escudé, Guillermo, Tamara Burdisso, Marcelo Catena, Laura D'Amato, George McCandless, and Tomás E. Murphy. 2001. Las MIPyMES y el mercado de crédito en la Argentina. Banco Central de la República Argentina, Working Paper 15, July.

Favero, Carlo, and Francesco Giavazzi. 2000. Looking for contagion: Evidence from the ERM. NBER Working Paper 7797, July.

Feldstein, Martin. 2000. Aspects of global economic integration: Outlook for the future. NBER Working Paper 7899, September.

Ferreira, Francisco H.G., Giovanna Prennushi, and Martin Ravallion. 1999. Protecting the poor from macroeconomic shocks: An agenda for action in a crisis and beyond. World Bank Policy Research Working Paper 2160, August.

Foerster, Stephen R., and G. Andrew Karolyi. 1999. The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the United States. *Journal of Finance* 54 (June): 981–1013.

Forbes, Kristin. 2004. The Asian flu and Russian virus: The international transmission of crises in firm-level data. *Journal of International Economics* 63 (May): 59–92.

Frankel, Jeffrey. 1999. Proposals regarding restrictions on capital flows. *African Finance Journal* 1 (May): 92–104.

———. 2000. Globalization of the economy. In *Governance in a Globalizing World*, edited by Joseph S. Nye Jr. and John D. Donahue, 45–71. Washington, D.C.: Brookings Institution Press.

Frankel, Jeffrey, and Andrew K. Rose. 1996. Currency crashes in emerging markets: An empirical treatment. *Journal of International Economics* 41 (November): 351–66.

Frankel, Jeffrey, and Sergio L. Schmukler. 1998. Crisis, contagion, and country funds: Effects on East Asia and Latin America. In *Managing capital flows and exchange rates: Lessons from the Pacific rim*, edited by Reuven Glick, 232–66. Cambridge: Cambridge University Press.

———. 2000. Country funds and asymmetric information. *International Journal of Finance and Economics* 5 (July): 177–95.

Frankel, Jeffrey, Sergio L. Schmukler, and Luis Serven. 2001. Verifiability and the vanishing intermediate exchange rate regime. *Brookings Trade Forum 2000*: 59–123.

———. 2002. Global transmission of interest rates: Monetary independence and currency regime. NBER Working Paper 8828, March.

Fuerst, Oren. 1998. A theoretical analysis of the investor protection regulations argument for global listing of stocks. Yale University School of Management, photocopy.

Gallego, Francisco, Leonardo Hernández, and Klaus Schmidt-Hebbel. 1999. Capital controls in Chile: Effective? Efficient? Endurable? Central Bank of Chile Working Paper 59, April.

Gallego, Francisco, and Norman Loayza. 2000. Financial structure in Chile. Central Bank of Chile, photocopy.

Ganapolsky, Eduardo, and Sergio L. Schmukler. 2001. Crisis management in Argentina during the 1994–95 Mexican crisis: How did markets react? *World Bank Economists' Forum* 1 (April): 3–30.

Garcia, Márcio G.P., and Alexandre Barcinski. 1998. Capital flows to Brazil in the nineties: Macroeconomic aspects and the effectiveness of capital controls. *Quarterly Review of Economics and Finance* 38 (Autumn): 319–57.

Glick, Reuven, and Andrew K. Rose. 1999. Contagion and trade: Why are currency crises regional? *Journal of International Money and Finance* 18 (August): 603–17.

Halac, Marina, and Sergio L. Schmukler. 2003. Distributional effects of crises: The role of financial transfers. World Bank Policy Research Working Paper 3173, October.

Hausmann, Ricardo, Michael Gavin, Carmen Pages-Serra, and Ernesto Stein. 1999. Financial turmoil and the choice of exchange rate regime. Inter-American Development Bank Working Paper 400, March.

Hausmann, Ricardo, Ugo Panizza, and Ernesto Stein. 2000. Why do countries float the way they float? *Journal of Development Economics* 66 (December): 387–414.

Henry, Peter B. 2000. Stock market liberalization, economic reform, and emerging market equity prices. *Journal of Finance* 55 (April): 529–64.

Honohan, Patrick, and Daniela Klingebiel. 2003. The fiscal cost implications of an accommodating approach to banking crises. *Journal of Banking and Finance* 27 (August): 1539–60.

International Monetary Fund (IMF). 2000. *International capital markets*. Washington, D.C.

Johnson, Simon, Peter Boone, Alasdair Breach, and Eric Friedman. 2000. Corporate governance in the Asian financial crisis. *Journal of Financial Economics* 51 (October/November): 141–86.

Kaminsky, Graciela, Richard Lyons, and Sergio L. Schmukler. 2000. Managers, investors, and crises: Mutual fund strategies in emerging markets. NBER Working Paper 7855, August.

———. 2001. Mutual fund investment in emerging markets: An overview. *World Bank Economic Review* 15, no. 2:315–40.

Kaminsky, Graciela, and Carmen M. Reinhart. 1999. The twin crises: Causes of banking and balance of payments problems. *American Economic Review* 89 (June): 473–500.

———. 2000. On crises, contagion, and confusion. *Journal of International Economics* 51 (June): 145–68.

Kaminsky, Graciela, and Sergio L. Schmukler. 1999. What triggers market jitters? A chronicle of the East Asian crisis. *Journal of International Money and Finance* 18 (August): 537–60.

———. 2001. Short- and long-run integration: Do capital controls matter? *Brookings Trade Forum 2000*: 125–78.

———. 2002. Short-run pain, long-run gain: The effects of financial liberalization. World Bank Policy Research Working Paper 2912.

Kaplan, Ethan, and Dani Rodrik. 2000. Did the Malaysian capital controls work? CEPR Working Paper 2754, April.

Karolyi, G. Andrew. Forthcoming. The role of ADRs in the development and integration of emerging equity markets. *Review of Economics and Statistics*.

Kawai, Masahiro, Richard Newfarmer, and Sergio L. Schmukler. 2001. Crisis and contagion in East Asia: Nine lessons. World Bank Policy Research Working Paper 2610, June. Forthcoming in *Eastern Economic Journal*.

Kim, E. Han, and Vijay Singal. 2000. Stock market openings: Experience of emerging economies. *Journal of Business* 73 (January): 25–66.

Kim, Woochan, and Shang-Jin Wei. 2002. Foreign portfolio investors before and during a crisis. *Journal of International Economics* 56 (January): 77–96.

King, Robert G., and Ross Levine. 1993. Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics* 108 (August): 717–37.

Krugman, Paul. 1998. Saving Asia: It's time to get radical. *Fortune* 138 (September 7): 74–80.

———. 1999. Balance sheets, the transfer problem, and financial crises. Massachusetts Institute of Technology, January. <http://web.mit.edu/krugman/www/whatsnew.html> (June 18, 2004).

Laeven, Luc. 2003. Does financial liberalization reduce financing constraints? *Financial Management* 32 (Spring): 5–34.

Laurenceson, James, and J.C.H. Chai. 1998. Financial liberalization and financial depth in China. *Savings and Development* 22, no. 4:393–413.

Levine, Ross. 2001. International financial liberalization and economic growth. *Review of International Economics* 9 (November): 688–702.

Levine, Ross, Norman Loayza, and Thorsten Beck. 2000. Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics* 46 (August): 31–77.

Levine, Ross, and Sergio L. Schmukler. 2003. Migration, spillovers, and trade diversion: The impact of internationalization on stock market liquidity. NBER Working Paper 9614, April.

Levine, Ross, and Sara Zervos. 1998. Stock markets, banks, and economic growth. *American Economic Review* 88 (June): 537–58.

Lins, Karl V., Deon Strickland, and Marc Zenner. Forthcoming. Do non-U.S. firms issue stock on U.S. equity markets to relax capital constraints? *Journal of Financial and Quantitative Analysis*.

Lipsey, Robert E. 1999. The role of foreign direct investment in international capital flows. In *International capital flows*, edited by Martin Feldstein, 307–31. Chicago: University of Chicago Press for the NBER.

Manuelyan, Tamar, and Michael Walton. 1998. Social consequences of the East Asian financial crisis. World Bank, photocopy.

Martinez Peria, Maria Soledad, and Ashoka Mody. 2003. How foreign participation and market concentration impact bank spreads: Evidence from Latin America. World Bank, photocopy.

Martinez Peria, Maria Soledad, Andrew Powell, and Ivanna Vladkova. 2002. Banking on foreigners: The behavior of international bank lending to Latin America, 1985–2000. World Bank Policy Research Working Paper 2893, September.

McKinnon, Ronald I., and Huw Pill. 1997. Credible economic liberalizations and overborrowing. *American Economic Review* 87 (May): 189–93.

Miller, Darius P. 1999. The market reaction to international cross-listings: Evidence from depositary receipts. *Journal of Financial Economics* 51 (January): 103–23.

Miller, Darius P., and John J. Puthenpurackal. 2002. The costs, wealth effects and determinants of international capital raising: Evidence from public Yankee bonds. *Journal of Financial Intermediation* 11 (October): 455–85.

Mishkin, Frederic S. 2000. Inflation targeting in emerging market countries. *American Economic Review* 90 (May): 105–09.

———. 2003. Financial policies and the prevention of financial crises in emerging market countries. In *Economic and financial crises in emerging market countries*, edited by Martin Feldstein, 93–130. Chicago: University of Chicago Press.

Moel, Alberto. 2001. The role of American depositary receipts in the development of emerging markets. *Economia* 2 (Fall): 209–73.

Montiel, Peter, and Carmen M. Reinhart. 1999. Do capital controls influence the volume and composition of capital flows? Evidence from the 1990s. *Journal of International Money and Finance* 18 (August): 619–35.

Mundell, Robert A. 2000. A reconsideration of the twentieth century. *American Economic Review* 90 (June): 327–40.

Mussa, Michael. 2000. Factors driving global economic integration. In *Global economic integration: Opportunities and challenges*, proceedings of a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyo., August 24–26.

Obstfeld, Maurice. 1986. Rational and self-fulfilling balance of payments crises. *American Economic Review* 76 (March): 72–81.

———. 1994. International capital mobility in the 1990s. In *Understanding interdependence: The macroeconomics of the open economy*, edited by Peter B. Kenen, 201–61. Princeton, N.J.: Princeton University Press.

———. 1998. The global capital market: Benefactor or menace? *Journal of Economic Perspectives* 12 (Autumn): 9–30.

Obstfeld, Maurice, and Kenneth Rogoff. 2000. The six major puzzles in international macroeconomics: Is there a common cause? In *NBER Macroeconomics Annual 2000*, edited by Ben S. Bernanke and Kenneth Rogoff. Cambridge, Mass.: MIT Press.

Obstfeld, Maurice, and Alan M. Taylor. 1998. The great depression as a watershed: International capital mobility over the long run. In *The defining moment: The great depression and the American economy in the twentieth century*, edited by Michael D. Bordo, Claudia Goldin, and Eugene N. White, 353–402. Chicago: University of Chicago Press.

———. 2003. Globalization and capital markets. In *Globalization in historical perspective*, edited by Michael D. Bordo, Alan M. Taylor, and Jeffrey G. Williamson, 121–90. Chicago: University of Chicago Press.

Okina, Kunio, Masaaki Shirakawa, and Shigenori Shiratsuka. 1999. Financial market globalization: Present and future. Bank of Japan *Monetary and Economic Studies* 17 (December): 1–40.

Rajan, Raghuram G., and Luigi Zingales. 1998. Financial dependence and growth. *American Economic Review* 88 (June): 559–86.

———. 2001. The great reversals: The politics of financial development in the 20th century. *Journal of Financial Economics* 69 (July): 5–50.

Reese, William A., Jr., and Michael S. Weisbach. 2002. Protection of minority shareholder interests, cross-listing in the United States, and subsequent equity offerings. *Journal of Financial Economics* 66 (October): 65–104.

Reisen, Helmut, and Helene Yèches. 1993. Time-varying estimates on the openness of the capital account in Korea and Taiwan. *Journal of Development Economics* 41 (August): 285–305.

Schmukler, Sergio L., and Esteban Vesperoni. 2003. Financial globalization and debt maturity in emerging economies. World Bank, unpublished paper, August. <www.worldbank.org/research/bios/schmuklerpdfs/schmukler_vesperoni_8242003.pdf> (June 18, 2004).

Schmukler, Sergio L., and Pablo Zoido-Lobaton. 2001. Financial globalization: Benefits, risks, and challenges for emerging economies. Background Paper for the World Bank Policy Research Report *Globalization, growth and poverty*.

Schumpeter, Joseph A. 1912. *Theorie der Wirtschaftlichen Entwicklung*. Leipzig, Germany: Dunker & Humblot. Reprint, *The theory of economic development*. Translated by Redvers Opie. Cambridge, Mass.: Harvard University Press, 1934.

Soto, Claudio. 1997. *Controles a los movimientos de capitales: Evaluación empírica del caso chileno*. Santiago: Banco Central de Chile.

Stiglitz, Joseph E. 1999. Bleak growth for the developing world. *International Herald Tribune*, April 10–11, 6.

———. 2000. Capital market liberalization, economic growth, and instability. *World Development* 28 (June): 1075–86.

Stiglitz, Joseph E., and Andrew Weiss. 1981. Credit rationing in markets with imperfect information. *American Economic Review* 71 (June): 393–410.

Stulz, René M. 1999. Globalization, corporate finance and the cost of capital. *Journal of Applied Corporate Finance* 12 (Fall): 8–25.

Taylor, Alan M. 1998. Argentina and the world capital market: Saving, investment, and international capital mobility in the twentieth century. *Journal of Development Economics* 57 (October): 147–84.

Tesar, Linda L., and Ingrid M. Werner. 1998. The internationalization of securities markets since the 1987 crash. In *Brookings-Wharton Papers on Financial Services*, edited by Robert E. Litan and Anthony M. Santomero, 281–372. Washington, D.C.: Brookings Institution Press.

Tobin, James. 2000. Financial globalization. *World Development* 28 (June): 1101–04.

Tornell, Aaron, Frank Westermann, and Lorenza Martínez. 2003. Liberalization, growth, and financial crises. *Brookings Papers on Economic Activity* 2:1–88.

Van Rijckeghem, Caroline, and Beatrice Weder. 2000. Spillovers through banking centers: A panel data analysis. International Monetary Fund Working Paper 00/88.

World Bank. 1999. *Hungary: On the road to the European Union*. World Bank Country Study.

———. 2000. *World development report 2000/01: Attacking poverty*.

———. 2001. *Finance for growth: Policy choices in a volatile world*. Policy Research Report.