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**GLOBALIZATION: WHAT'S NEW**

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*Capital Flows, Financial Crises, and Public Policy*

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**I**N THIS CHAPTER, I'll lay out the principal facts and controversies surrounding international flows of capital and their attendant risks. I'll review the perspectives of economic historians and economists on the implications of capital mobility, both during the first wave of globalization (prior to World War I) and during the recent wave (since 1980). I'll emphasize changes over time—especially political changes—that have weakened the case for unfettered capital mobility and have made capital flows more controversial among economists today than in the past. Attention focuses on the role of foreign investment in emerging markets—developing economies whose governments have recently chosen the path of privatization, trade liberalization, and deregulation as a formula for promoting progress.

I'll address several key questions, including:

- How have international capital flows changed in quantity and quality over time?
- How and when can capital flows serve as an engine of growth for emerging markets?
- How great are the risks of accessing foreign capital relative to the rewards from doing so?
- Are there identifiable circumstances that improve or worsen the risk/reward tradeoff?
- Might limits on foreign capital flows sometimes be desirable?
- How can the problems associated with capital flows be reduced through improvements in exchange rate policy, monetary policy, fiscal policy, or bank regulatory policy?

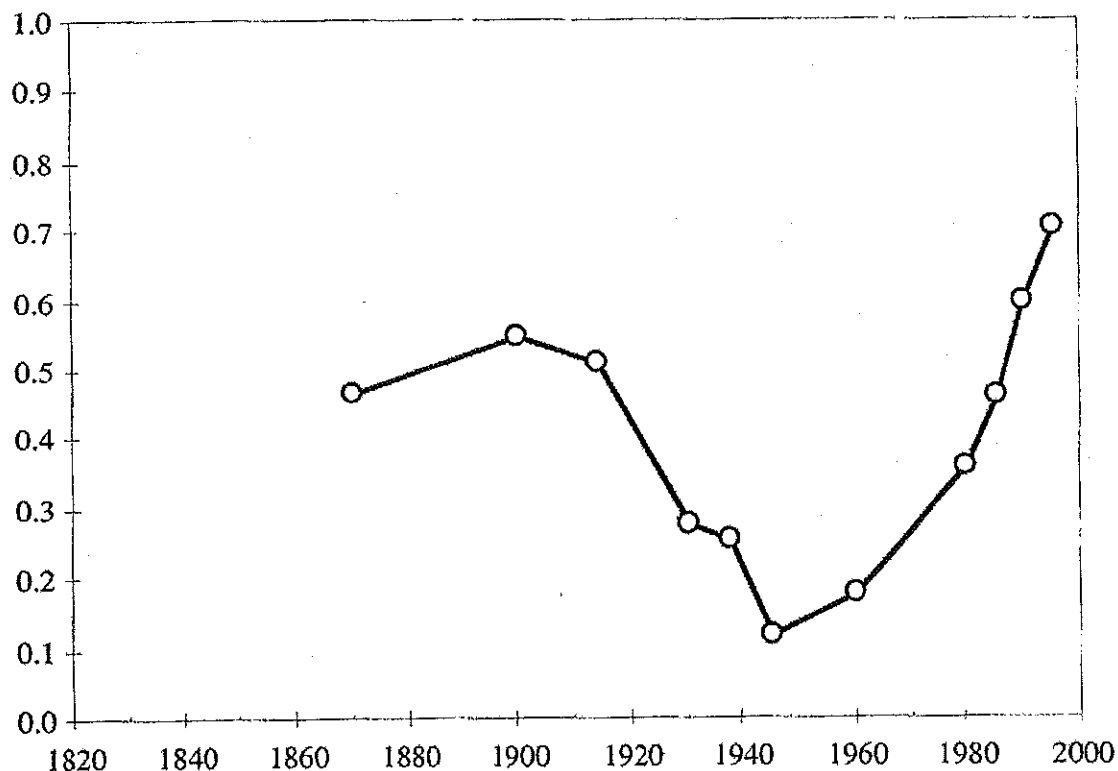


FIGURE 3.1 *International investment as a fraction of GDP since 1870*  
 Source: Obstfeld and Taylor (2003)

### THE CHANGING QUANTITY AND FORM OF INTERNATIONAL CAPITAL FLOWS

Figure 3.1 summarizes the quantity of international investment as a fraction of world GDP since 1870. Capital flows were at high and rising levels relative to GDP in the pre-World War I era, but fell dramatically during World War I, the interwar period, and World War II. Capital flows grew slowly in the immediate post-World War II period, and have accelerated over time. Capital flows relative to GDP reached new all-time highs in recent years.

The form of capital flows has changed over time, as well. Prior to World War I, flows took the form of debt securities. Stock and direct investment were small components of total flows. In this sense, there has been substantial technological progress in international capital flows over time, since it is more difficult to convince distant investors to hold risky equity investments in foreign firms (more on this below). In the pre-World War I era, flows from Great Britain (the primary source of international capital) increasingly were absorbed by private rather than government users, especially when the destination of the capital flow was in North America, South America, and Africa (table 3.1).

TABLE 3.1 *Capital "Created and Called" By Great Britain's  
Capital Market, 1865–1914*

<i>Percentage of Total by Continent Receiving Capital Inflow, and by User Type</i>				
	1865–1869	1885–1889	1910–1914	1865–1914
North America (%)	18.0	24.3	41.0	33.5
Government (%)	1.9	3.5	7.5	28.5
Private (%)	16.1	20.8	33.4	5.0
S.America / Carib. (%)	16.0	34.5	22.0	19.9
Government (%)	10.4	12.2	7.1	7.2
Private (%)	5.5	22.3	14.9	12.8
Asia (%)	24.9	9.6	12.3	14.0
Government (%)	1.9	6.0	6.1	8.3
Private (%)	23.0	3.7	6.1	5.7
Australia and Pacific (%)	11.1	18.2	9.7	11.7
Government (%)	9.3	14.6	8.1	8.9
Private (%)	1.8	3.6	1.7	2.8
Europe (%)	18.9	7.9	9.3	11.1
Government (%)	6.0	4.1	6.1	7.2
Private (%)	13.0	3.8	3.2	3.9
Africa (%)	11.1	5.4	5.8	9.8
Government (%)	9.6	3.4	2.1	5.2
Private (%)	1.5	2.0	3.8	4.6
Total Flows (Million U.K.P.S.)	193.3	207.7	919.7	3,668.6

Source: Davis and Huttenback (1988), pp. 48–49, Davis and Gallman (2001), p.70

Capital outflows from the main suppliers of capital were sometimes very large as a fraction of their domestic savings in the pre–World War I era, and Great Britain, the wealthiest country with the most developed capital market of that era, was the dominant supplier of international capital. Great Britain invested a rising proportion of its domestic savings abroad prior to World War I (table 3.2), and that proportion reached 53.3 percent in the years 1910–1913. In contrast, in the post–World War II era, the net suppliers of capital have been a more diverse group, including Japan and China, which have maintained large current account deficits (capital account surpluses).

The size of capital inflows relative to GDP has varied greatly across countries, as shown in table 3.3, and those patterns have changed over time, reflecting both

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TABLE 3.2 *Foreign Investment as a Percentage of Domestic Savings*  
(at current prices)

	UNITED KINGDOM	GERMANY	FRANCE
1850-54	-12.3	NA	-20.1
1855-59	-30.2	NA	21.6
1860-64	-21.5	-1.4	24.8
1865-69	-32.2	-3.4	25.9
1870-74	38.0	-7.3	29.0
1875-79	16.2	-13.1	18.7
1880-84	33.2	18.3	-1.1
1885-89	46.5	19.3	11.3
1890-94	35.3	12.6	10.0
1895-99	20.7	11.5	23.0
1900-04	11.2	9.0	16.1
1905-09	42.7	7.6	22.0
1910-13	53.3	7.3	12.5

Source: O'Rourke and Williamson (2000), p. 209.

changes over time in countries' needs for foreign capital, and changes in market perceptions of the relative desirability of investing in different countries.

The changing amount of international capital flows reflects changes in rules governing both trade and capital mobility, as well as wartime disruptions. Trade rules are important, since future net commodity exports are the means of repaying foreign capital investments. In recent years, and prior to World War I, the greater extent of free trade, and the relative freedom with which capital was allowed to flow, are reflected in the smaller interest rate differentials between countries, in contrast to the period 1914-1959 (table 3.4). Small interest rate differentials indicate that, at least for sovereign and large corporate borrowers with access to global debt markets, world capital markets have become much more integrated since 1960.

In the past 30 years, an important change has been the increasing willingness of foreign investors to send capital to emerging market economies, in particular. Table 3.5 shows that, in the 1970s, net international capital inflows were only positive for developed economies as a group, and developing countries as a group experienced large net outflows of portfolio capital. As the financial "plumbing" of global capital markets improved, and as emerging market economies increasingly privatized their industry and liberalized their trade, they too

TABLE 3.3 *Size of Capital Flows, Measured By Absolute Value of Current Account as a Percentage of National Income*

<i>(Annual Average Percentages for Selected Periods)</i>								
PERIOD	ARG	AUS	CAN	DNK	FIN	FRA	DEU	ITA
1870-1889	18.7	9.7	7.2	1.8	6.2	2.9	1.9	1.2
1890-1913	6.2	6.3	7.6	2.7	5.9	2.3	1.4	1.9
1914-1918	2.7	7.6	3.5	5.4	14.2	3.1	—	11.7
1919-1926	4.9	8.8	2.3	1.2	3.9	11.7	2.2	4.3
1927-1931	3.7	2.8	3.6	0.7	2.9	3.7	1.8	1.5
1932-1939	1.6	3.7	1.6	0.8	2.9	2.5	0.4	0.7
1940-1946	4.8	7.1	6.5	2.4	6.9	1.8	—	3.4
1947-1959	3.1	3.4	2.3	1.4	1.4	1.5	2.0	1.4
1960-1973	1.0	2.3	1.2	1.9	1.7	0.6	1.0	2.1
1974-1989	1.9	3.6	1.7	3.2	2.4	0.8	2.1	1.3
1989-1996	2.0	4.5	4.0	1.8	5.1	0.7	2.7	1.6

PERIOD	JPN	NLD	NOR	ESP	SWE	GBR	USA	ALL
1870-1889	0.5	6.0	1.6	1.0	3.1	4.5	1.5	4.0
1890-1913	2.2	5.3	4.1	1.4	2.3	4.5	0.8	3.7
1914-1918	6.6	—	4.3	3.3	6.3	2.9	3.5	5.8
1919-1926	2.1	—	6.9	2.7	2.0	2.9	1.7	3.9
1927-1931	0.6	0.4	1.9	1.8	1.6	2.0	0.8	2.7
1932-1939	1.1	1.8	1.3	1.2	1.5	1.1	0.6	1.5
1940-1946	1.0	—	4.9	1.3	1.9	7.3	1.0	3.9
1947-1959	1.3	3.8	3.1	2.3	1.1	1.2	0.6	2.0
1960-1973	1.0	1.3	2.4	1.2	0.7	0.8	0.5	1.3
1974-1989	1.8	3.0	2.9	3.2	2.0	2.6	1.2	2.6
1989-1996	2.1	3.0	2.9	3.2	2.0	2.6	1.2	2.6

Source: Obstfeld and Taylor (2003), Table 2.3, p. 54

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TABLE 3.4 *Real Interest Rate Parity Since 1870*

<i>Average Interest Rate Differential Relative to U.S., Percent Per Annum</i>											
	AUS	BEL	CAN	FRA	DEU	ITA	NLD	SWE	GBR	StDev	
ITA											
1870–1889	4.5	3.8	4.3	4.8	1.6	1.8	3.3	3.2	3.3	4.2	
1.2	1890–1913	2.8	4.1	2.1	4.2	2.4	1.8	2.8	2.6	1.8	3.4
1.9	1914–1918	7.9	—	1.3	—	0.7	11.0	5.8	8.3	6.2	(9.1)
11.7	1919–1926	3.5	34.1	2.2	13.5	6.1	9.4	4.2	5.8	4.6	20.2
4.3	1927–1931	2.9	7.6	1.1	6.6	2.9	4.8	1.7	1.8	1.3	6.0
1.5	1932–1939	3.3	3.3	1.2	10.7	2.6	4.7	3.8	3.4	3.0	6.5
0.7	1940–1946	3.3	10.7	3.2	—	—	38.5	5.5	5.2	3.9	(22.3)
3.4	1947–1959	4.4	3.3	1.8	4.5	4.5	4.4	4.2	3.0	2.1	6.0
1.4	1960–1973	1.3	1.3	1.0	0.9	1.8	2.0	1.7	1.4	1.3	1.6
2.1	1974–1989	1.9	2.4	1.2	1.5	2.4	2.2	2.3	1.8	3.2	3.7
1.3	1990–1996	3.6	2.7	2.2	2.6	1.5	3.2	1.6	1.9	1.1	1.8

Source: *Obstfeld and Taylor (2003), Table 2.3, p. 54.*

ALL

became important destinations for portfolio capital flows. By the 1980s, developing countries became important net absorbers of capital, and by the early 1990s, developing countries were absorbing large and growing amounts of capital.

### THE BENEFITS OF FOREIGN CAPITAL

Many poor countries remain poor because they lack legal and political infrastructures needed for creation of wealth and, therefore, for growth. (see Beim and Calomiris 2001 for a review). But poor countries also lack capital, for a host of reasons. Low existing wealth and poor corporate governance protections for outsiders constrain the available supply of home-grown equity finance, while weak legal institutions and ineffective creditor protections constrain bank lending.

The problem is worsened by the phenomenon known as “financial repression”—active taxation of the financial sector through a variety of mechanisms. These include direct taxation of financial transactions, bank “reserve taxation” (government rules that require banks to lend a portion of depositors’ money to the government for free), government mandates that force banks to lend to government-favored parties on concessionary terms, and barriers to entry in banking that constrain the supply of credit to benefit particular financial institutions.

TABLE 3.5 Annual Average Flows of Investment for Industrial and Developing Countries, 1973-1996

	INDUSTRIAL COUNTRIES		DEVELOPING COUNTRIES	
	<i>Direct Investment</i>	<i>Portfolio Investment</i>	<i>Direct Investment</i>	<i>Portfolio Investment</i>
<i>Gross Outflows</i>				
1973-78	28.6	11.8	0.4	5.5
1979-82	46.9	35.0	1.1	17.8
1983-88	88.2	126.5	2.3	-5.1
1989-92	201.3	274.6	10.4	10.3
1993-96	259.6	436.4	19.2	19.2
<i>Gross Inflows</i>				
1973-78	17.9	24.4	5.0	1.3
1979-82	36.6	51.0	14.6	3.1
1983-88	69.3	139.1	15.5	4.0
1989-92	141.9	343.0	37.8	27.5
1993-96	173.0	549.9	106.4	95.9
<i>Net Inflows</i>				
1973-78	-10.7	12.6	4.6	-4.2
1979-82	-10.3	16.0	13.5	-14.7
1983-88	-18.9	12.6	13.2	9.1
1989-92	-59.4	68.4	27.3	17.2
1993-96	-86.6	113.5	87.2	76.7

Source: International Monetary Fund (1998), pp. 6-7.

Thus, for many emerging market economies, foreign capital offers a potentially important means for jump-starting economic growth.

### THE RISKS ATTACHED TO FOREIGN CAPITAL

There are, however, significant disadvantages to using foreign capital rather than local financing.

Local banks should be better able to screen and monitor local risks than foreign banks, and local sources of capital are more willing to write contracts

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in local currency. By contrast, foreign suppliers of capital incur higher costs of information about and control over the users of funds.

Furthermore, foreign suppliers of capital typically insist on being insulated from fluctuations in the value of currencies in emerging markets. Regulations in developed countries (such as pension laws in the United States) also constrain the ability of foreign investment to be denominated in local currency.

The scarcity of domestic capital and foreigners' demands to denominate claims in their own, "hard," currencies have created an unprecedented degree of risk in financing development in emerging markets. When debt is denominated in local dollars, the domestic central bank can rescue debtors, either directly (by paying their debts for them) or indirectly (by printing money, generating inflation and thereby reducing the real value of loans and other debt). Not so with debts denominated in hard currency. The cost of debt service for local borrowers will rise if their country's exchange rate depreciates.

No wonder, historically, most emerging markets have relied on domestic capital where possible.<sup>1</sup> But the absence of domestic sources of capital gives many of today's emerging markets little choice.

Dependence on foreign capital can be quite risky for emerging markets. The greatest risk is the danger of a financial collapse coinciding with a large fall in the value of the domestic currency (depreciation). Here is how such a collapse typically unfolds.

When the local currency depreciates—say, because foreigners sell the currency out of fear that the country is headed for financial collapse—the amount of local currency needed to pay off debt of a given dollar amount rises. If the depreciation is dramatic, it can trigger financial distress because debtors will be unable to pay the promised amounts in hard currency, even if their domestic-denominated cash flows remain strong. Also, interest rates on foreign loans rise at the first sign of financial problems because lenders demand higher rates to compensate for the higher risk of default.

What's worse, depreciations tend to occur at times of weak or declining domestic economic growth. Thus, while the currency is plummeting, debtors are often suffering both reduced earnings and higher debt service costs due to depreciation. The financial distress of debtors and the rising interest rates further aggravate both the decline in growth and the currency depreciation. In severe financial crises in emerging markets, it is not only currencies that tumble; real GDP plunges too.

The domestic financial system often collapses alongside the currency. As banks fail, credit availability for local borrowers dries up, and the increased fiscal burden on the government (which typically protects failed banks' depositors from loss and also bails out failed banks) puts further pressure on the local currency, because of the need to print money to pay government bills.<sup>2</sup>

## WHO BEARS THE RISK?

The risk of private and public sector default in emerging markets associated with exchange rate and banking crises is borne in part by foreign lenders. That risk is passed along to borrowers, in the form of higher interest rates on foreign loans.

However, some of the risk is usually borne by others. Foreign exchange risk (which contributes to default risk on hard currency-denominated debts issued by borrowers in emerging markets) may be borne by speculators in foreign exchange markets. They may sell exchange rate protection to emerging market borrowers in the form of various derivatives contracts that allow local borrowers to transfer the risk of exchange rate depreciation to the exchange rate speculator. These transactions include exchange rate futures, forwards, swaps, and options of various kinds. The cost of transferring that risk appears in the form of the forward exchange rate premium, a gauge of the cost of insurance against exchange rate changes.

A local bank may also bear foreign exchange risk. Such a bank can borrow short-term funds in dollars from foreign lenders, and then re-lend them in local currency to domestic borrowers. In this case, the bank acts as an intermediary of foreign exchange risk by placing itself between domestic currency borrowers and foreign currency lenders. If currency collapse occurs, then the local bank will suffer losses to its net worth from currency depreciation (both because of losses from pure exchange risk, and because of higher loan losses due to the increased real debt burdens of its borrowers). When banks act as intermediaries of exchange rate risk, they concentrate even more risk in the domestic financial system. That can lead to severe collapse of banking sectors in emerging markets.

Finally, local or foreign governments may bear a significant share of default risk to the extent that governments come to the assistance of local borrowers or financial institutions when they suffer losses during exchange rate collapses. In scores of episodes over the past two decades, this sort of policy has created enormous contingent liabilities, which can even bankrupt governments. In recent years, government costs in many cases (including Chile in 1983, Mexico in 1995, Korea, Thailand, and Indonesia in 1997), have exceeded an astounding 20 percent of GDP.

## RISK AND THE COMPOSITION OF CAPITAL INFLOWS

In the post-1980 world of massive global capital flows, the *composition* of capital inflows can be just as important for risk as their *level*.

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One concern is the potential volatility of capital flows, especially the likelihood that capital inflows will suddenly reverse at the onset of trouble—the so-called “sudden stop” problem. Sudden stops can create immediate financial distress for firms whose debts fail to roll over, forcing them to come up with money to pay back creditors. Sudden stops also put pressure on the exchange rate as the supply of foreign currency available in the market dries up, driving up rates on foreign loans. Table 3.6, from Calvo and Reinhart (2000), shows that many financial crises in emerging markets have witnessed enormous sudden reversals of net private capital inflows. The danger is especially great when financial flows predominantly take the form of short-term debt.

Short-term loans have the option to flee at maturity, and capital flight can exacerbate financial crises. That fact has led some to argue, rather naively, that the solution to the sudden stop problem is for emerging markets to avoid relying on short-term dollar-denominated debts for their financing. But it is worth remembering that it is not a coincidence that risky economies borrow more at short term. They may have no other choice. In risky financial circumstances,

TABLE 3.6 Selected Large Reversals in Net Private Capital Flow

EPISODE	REVERSAL (AS A PERCENT OF GDP)
Argentina 1982–83	20
Argentina 1994–95	4
Chile 1981–83	7
Chile <sup>1</sup> 1990–91	8
Ecuador 1995–96	19
Hungary 1995–96	7
Indonesia 1996–97	5
Malaysia <sup>1</sup> 1993–94	15
Mexico 1981–83	12
Mexico 1993–95	6
Philippines 1996–97	7
South Korea 1996–97	11
Thailand 1996–1997	26
Turkey 1993–1994	10
Venezuela 1992–94	9

Source: Calvo and Reinhart (2000), p. 181.

<sup>1</sup>Reversal owing to the introduction of controls on capital inflows.

foreign lenders will extend only short-term debt denominated in foreign currencies. Indeed, there is empirical evidence that the reliance on short-term debt rises when the macroeconomic environment becomes riskier.<sup>3</sup>

In high-risk circumstances, by structuring foreigners' claims on emerging markets as short-term, dollar-denominated debt, borrowers economize on the cost of accessing foreign capital. That is so for two reasons. First, short-term debt gives holders the option to redeem the debt quickly and exit if the economic circumstances in emerging markets sour. The value of that option increases as the possibility of a financial collapse increases. Effectively, short-term debt is a senior (first) claim on revenues, which implies a lower required yield at the time the loan is made.

Second, structuring the debt as short-term claims raises the probability that the government will bear part or all of the risk of default on those claims, reducing debt service costs of borrowers. Since the sudden redemption of a large amount of short-term debt can create a financial crisis, a massive contraction of credit, and financial distress throughout the economy, financing with short-term debt may make government intervention more likely precisely because it makes the absence of intervention more costly. Expected government intervention helps to reduce the interest rate charged for the debt at the time it is issued.

When foreign capital takes a form other than short-term dollar-denominated debt—such as long-term debt, publicly traded equity investment, foreign direct investment, or foreign entry into the local banking system—the potential for a financial crisis is mitigated. Because equity offerings of corporations held in financial portfolios (portfolio equity) and foreign direct investment do not entail fixed foreign currency-denominated claims on firms, declines in firms' equity values or in the values of foreign direct investments do not imply rising real debt burdens. And unlike debt, equity investments do not mature. These factors lessen the short-term pressures on emerging markets.

Still, capital flight is not confined to short-term debt obligations. First of all, in the context of emerging markets, long-term debt may not be very different in effective maturity from short-term debt. When interest rates are high, the proportion of the market value of debt that is coming due in the near term can be high, even when the date of final maturity of the debt is many years in the future. Furthermore, what is called long-term debt often has limited maturity.<sup>4</sup> Second, the appetite for the publicly traded equity of emerging markets is extremely sensitive to increases in risk, which complicates the valuation of equity. Sudden collapses in equity values and the drying up of the market for new equity flotations raise financing costs for publicly traded firms.

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Foreign direct investment can also exit through the repatriation of profits or sale of the assets. Yet, foreign direct investment has been shown to be one of the most stable forms of capital inflow to emerging markets. Tables 3.7 and 3.8 show that even during the emerging market crises of the mid-to-late 1990s, foreign direct investment did not flee emerging markets. In fact, it continued to grow, both absolutely and as a proportion of total inflows.<sup>5</sup> But foreign direct investors are choosy. The ability of a poor country to rely on foreign direct investment depends on convincing lenders that its economy won't collapse (Ito and Krueger 2000, p. 4).

Krugman (2000) points out that, to some extent, the recent robustness of foreign direct investment in the face of crises in emerging markets reflects the demise of government-protected local producers—"crony capitalists" favored with subsidies and other benefits. After financial collapse, government money to support cronies dries up or the political structure is overturned. Only then can efficient foreign owners prosper.

Several studies have found that foreign direct investment is responsive to the institutional climates of recipient emerging markets. Wei (2000) and Wei and Wu (2002) show that corruption acts like a tax, discouraging foreign direct investment in emerging markets. To the extent that crises improve the institutional environment in emerging markets (that is, loosen the hold of crony capitalists,

TABLE 3.7 *Net Private Capital Flows to Emerging Markets, 1990–2000*

	FOREIGN DIRECT INVESTMENT	PORTFOLIO FLOWS	BANK LOANS	TOTAL FLOWS
1990	18.4	17.4	11.9	47.7
1991	31.3	36.9	55.6	123.8
1992	35.5	53.0	28.5	116.9
1993	56.7	81.6	-14.0	124.3
1994	80.9	109.9	-49.5	141.3
1995	96.9	42.6	49.5	189.0
1996	120.4	85.0	18.7	224.2
1997	144.9	43.3	-62.1	126.2
1998	148.7	23.8	-127.2	45.2
1999	153.4	53.7	-135.6	71.5
2000	146.0	58.3	-172.1	32.2

Source: International Monetary Fund, *International Capital Markets: Developments, Prospects, and Key Policy Issues, 1999 and 2001*.

TABLE 3.8 *Capital Inflows Relative to GDP and Their Volatility,  
By Type of Claim and By Recipient, 1975–1997*

	MEAN	MEDIAN	COEFFICIENT OF VARIATION
<i>Total Inflows/GDP</i>			
Industrial Countries	4.53	3.12	1.40
Emerging Countries	1.68	1.09	7.19
Africa	1.84	0.92	9.79
Asia	2.40	0.99	2.19
Eastern Europe	1.48	1.25	2.39
Middle East	1.71	1.26	2.54
Latin America	1.17	1.20	4.81
<i>Debt/GDP</i>			
Industrial Countries	3.80	2.54	1.53
Emerging Countries	0.76	0.70	20.61
Africa	1.56	0.82	9.66
Asia	1.29	0.56	2.83
Eastern Europe	1.07	0.68	3.61
Middle East	1.48	0.66	3.60
Latin America	-1.15	0.74	-20.19
<i>Portfolio Equity/GDP</i>			
Industrial Countries	0.24	0.00	4.77
Emerging Countries	0.02	0.00	16.27
Africa	0.01	0.00	18.91
Asia	0.10	0.00	4.40
Eastern Europe	0.05	0.00	3.73
Middle East	-0.10	0.00	-8.51
Latin America	0.03	0.00	5.05
<i>FOREIGN DIRECT INVESTMENT/GDP</i>			
Industrial Countries	0.54	0.17	2.88
Emerging Countries	0.23	0.07	12.14
Africa	0.13	0.00	22.24
Asia	0.67	0.07	3.04
Eastern Europe	0.50	0.05	2.46
Middle East	0.34	0.10	4.85
Latin America	0.07	0.22	47.69

Source: Edwards (2001), Table 1.

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reduce corruption, and improve the rule of law, as the evidence in Kaminsky and Schmukler 2002 suggests they do), crises will also tend to remove prior barriers that limited foreign direct investment.

Changes in the extent of corruption contribute significantly to long-run changes in the availability of foreign direct investment. Crisis-induced reforms create hard to reverse positive changes in corporate ownership and governance in post-crisis emerging markets, which encourage lasting increases in foreign direct investment. Such gains may add to the more frequently emphasized gains from technology transfer that accompany foreign direct investment (Razin, Sadka, and Yuen 2001, Hallward-Driemeier, Iarossi, and Sokoloff 2002).

The stability of the supply of foreign direct investment in emerging markets around crisis episodes is encouraging, all the more so as foreign direct investment grows more important as a means for channeling capital from developed countries to emerging markets. The data tell a dramatic story. According to the World Bank, net foreign direct investment flows to developing countries grew to a peak of \$185 billion in 1999 from \$24 billion in 1990, an eight-fold increase in only a decade. In 2000 and 2001, foreign direct investment net inflows to developing countries declined, but still remained at \$168 billion in 2001. Clearly, the trend toward the globalization of investment via foreign direct investment has not been reversed by the high frequency of crises in emerging markets during the 1990s.

Similarly, foreign bank entry into emerging markets (itself a form of foreign direct investment) tends to be a stabilizing form of capital transfer. These banks could refuse to roll over debt during a crisis, repatriate profits, or even exit. But, in recent practice, foreign banks that establish local branches or affiliates in emerging markets (a class of investors that grew substantially in the 1990s) have been patient investors. Not only have they chosen to remain in-country during financial crises; they often use financial crises as opportunities to acquire weak banks and expand their local networks of operation. That was particularly true in the 1994–1995 Mexican crisis, where foreign banks eagerly acquired failed domestic banks' networks after laws restricting such acquisitions were changed in 1997.

Like foreign direct investment in manufacturing, bank foreign direct investment offers more than just new capital; it should bring advanced financial technology and skilled personnel to underdeveloped capital markets. Perhaps more important, it provides arms-length financing opportunities for productive firms that are denied access to funds because of widespread patronage and protectionist practices of domestic banks. Banks in poor countries often serve to distribute patronage rather than to make growth-promoting loans. Kane (1999) argues that another favorable consequence of bank foreign direct investment is that it changes the behavior of bank regulators. It encourages them to stop protecting nonviable banks, once their inefficiencies are revealed by competition. Indeed, Kane argues

that “the banking crises that have roiled world markets in recent years [should be seen as] information-producing events that identify and discredit inefficient strategies of regulating banking markets.” Research supports this favorable view.<sup>6</sup>

In summary, the literature on the role of capital flows in producing or exacerbating financial risk has produced five fairly robust findings:

- Debt magnifies the costs of macroeconomic shocks because currency depreciation raises the real burden of debt denominated in hard currencies.
- Unsustainable debt burdens produced by currency depreciation often create financial collapse of borrowers and domestic banks.
- Short-term debt denominated in dollars adds to the risk of financial collapse by adding to the risk of a sudden stop in capital flows.
- Manufacturing foreign direct investment and foreign bank entry into emerging markets offers a desirable combination of technology transfer, stability of capital flows, and competitive pressures that help to improve long-run productivity, capital allocation, and corporate governance.
- Unfortunately, access to the “right kinds” of capital flows is not universal; the riskiest emerging markets are constrained to rely more on risk-creating forms of capital flows.

This last conclusion has an important implication: It is not enough merely to point to the desirability of avoiding heavy reliance on short-term debt finance. High-risk emerging markets often do not have a choice. For many emerging markets, the choice appears to be between risky capital inflows and none at all. The policy challenge: how can emerging markets reduce the risk of their policy environments so that they can qualify for access to safer, better capital inflows? And if they are unable to do so, should emerging markets try to limit their reliance on global capital markets?

I will turn to these questions later, but first I will consider the evidence concerning the long-term growth gains that globalization of capital has produced for emerging markets.

### GAINS TO EMERGING MARKETS FROM PARTICIPATING IN GLOBAL CAPITAL MARKETS

As we’ve seen, reliance on foreign capital by emerging markets is not without risk. Yet most countries have decided that the additional risks from relying on foreign capital are worthwhile, even when foreign capital takes the form of short-term foreign-denominated debt.

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Positive effects of foreign capital on growth can be important, especially in a world where many liberalizing emerging markets face a beat-the-clock political problem. Liberalization is an act of political entrepreneurship. Costs are paid for political concessions, bargains are struck, and expectations are raised—often unrealistically high. If liberalization does not quickly deliver economic benefits, “reform fatigue” sets in and can lead to quick electoral reversals. In this context, foreign capital is more than a factor of production: *It is a political lifeline for economic reformers.*

Is there evidence that accessing global capital markets can substantially reduce the cost of financing investment and increase economic growth? Clearly, there are examples of both success and failure. Argentina was a success story in the early 1990s, as capital inflows financed purchases of capital goods, raising labor productivity and economic growth. But by 2000, over borrowing by the government had caused a reversal of capital flows. While there is no question that the Argentine crisis was the result of an unsustainable debt burden and a fundamental lack of fiscal discipline, the dependence on foreign capital made the economy more vulnerable.

Because the dependence on foreign capital can magnify the risk of shocks to the economy, some commentators argue that the potential increase in growth from accessing foreign capital comes at too high a price. A key question, however, is whether the reaction of foreign capital providers to financial trouble is more of a symptom than a cause of problems for emerging markets. If they could exercise more fiscal discipline, reduce corruption, improve contract enforcement, and strengthen discipline over bank risk taking, would markets be more patient in reacting to adverse shocks?

Let’s consider what the history of international capital investment tells us about the impact of institutional preconditions on the growth and stability of capital flows, and their consequences for economic development.

### Changing patterns of global trade and capital flows

Over the past five hundred years, international flows of capital have helped shape the world’s political and economic landscape. Those flows (initially in the form of ships, guns, and other forms of imperialistic foreign direct investment) made possible the exploration and conquest of much of the world within the mercantilist system of empire building. That system was based on a partnership between merchant explorers and sovereigns, often codified in chartered companies, which oversaw the process of exploring new lands, conquering their inhabitants, populating those lands with Europeans, and monopolizing the trade of those new imperial outposts for the mother country.

By the late nineteenth century, globalization had taken on a different shape. Now relatively free global markets among many countries combined with a capital market in which investments (primarily involving bonds) connected business interests the world over. Capital was available to flow into newly developing areas because of the promise of growing trade between those areas and the home countries of the capital providers. Investors were willing to send capital abroad in expectation of a stream of future cash revenues back to the home country.

Those payments to foreign capital would be realized only if the developing area generated the export revenues to finance payments to capital. Thus, a necessary ingredient for access to foreign capital has always been the expectation of sufficient export growth in the destination country. Trade was and remains the basis for capital flows.

The early wave of liberalization and economic linkages across countries was undone by World War I, its aftermath, and World War II—a tumultuous period of international conflict that Winston Churchill dubbed the “second thirty years’ war.” In the wake of that chaotic period, it was difficult to reestablish trade linkages like those that existed prior to World War I. It took decades to reestablish faith in international trade as a mechanism for prosperity, particularly among developing countries. Developing countries that had liberalized their trade and capital markets prior to World War I had suffered enormous costs as the result of their dependence on global trade and capital markets as engines of growth.

The world was slow to reestablish pre-World War I levels of international trade after World War II. Not surprisingly, large capital market flows, which are based upon preexisting international trade flows, did not reemerge until later. As noted at the outset of this chapter, it is only in the past decade that capital flows of the pre-World War I magnitude (relative to world GDP) have been reestablished.

It is also worth remembering that the Bretton Woods Institutions created after World War II, including the International Monetary Fund and the World Bank, were established in an environment of collapsed international capital markets, and that the most prominent economists of the time had little faith in the desirability of restoring private international capital flows in the 1940s. John Maynard Keynes, one of the primary architects of the postwar international financial order, initially proposed a plan that would have actually taxed investors that financed countries’ balance of payments deficits, as well as the countries that ran such deficits, on the grounds that doing so would stabilize global finance.

Keynes’s view reflected a common perspective at the time. Imbalances, it was believed, create economic and accompanying political risks. He feared

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that a recession produced by capital outflows could drive countries to expand their flagging economies by devaluing their currency to boost exports and limit imports—a policy response that came to be known as “beggar-thy-neighbor” policy. Consequently, limits on capital flows were a common feature of virtually every major reform plan considered for reestablishing global trade in the 1940s. At the same time, the jaundiced view of capital flows espoused by Keynes and others was opposed by some prominent economists like Dennis Robertson, who saw the taxation of capital inflows as an impediment to the financing of international trade and economic development (Horsefield 1969: 19). [See Dani Rodrik’s chapter in this volume for a related discussion.]

As late as the 1970s, most capital flows to developing countries took the form of official bilateral or multilateral loans to governments, sovereign bond issues, or bank loans to sovereigns or to a few large, well-established private borrowers. The growth in international trade in the 1970s and 1980s made substantial growth of foreign investment in developing countries feasible. At the same time, technological progress in the collection and distribution of information about enterprises has permitted the unprecedented growth of a global market in the equity and debt instruments of private corporations based in both developing and developed countries (Bordo, Eichengreen, and Kim 1998, Bordo, Eichengreen, and Irwin 1999, Calomiris 2002c), as shown in Table 3.9.

We now have a system of deep global capital markets. So we are once again faced with the question of whether reliance on private international capital markets is desirable. Was the costly collapse of global finance during World

TABLE 3.9 *Changes in the Composition of Capital Going to Developing Countries, As a Percentage of GDP, 1970–1997*

	1970	1975	1980	1985	1990	1995	1997
<i>Stock of Debt</i>							
Stock of Public Debt Issued	3.9	5.6	11.7	23.0	23.9	24.2	20.1
Stock of Private Debt Issued	1.6	1.9	2.9	3.4	1.7	4.2	5.7
<i>Flows of Equity</i>							
Net Inflows of Foreign							
Direct Investment	0.2	0.4	0.2	0.4	0.6	1.9	2.5
Net Portfolio Equity Inflows	0.0	0.0	0.0	0.0	0.1	0.6	0.5

Source: Calomiris (2002c), p. 311, based on World Bank, *Global Development Finance*, 2000.

War I and its aftermath proof that the international capital market is inevitably prone to collapse, or was World War I and its aftermath an aberration?

### Benefits from International Capital Flows: The Historic Record

Most economic historians agree that, in the decades prior to World War I, the flow of factors of production (capital and labor) across borders was one of the most important contributors to economic growth and to the reduction of world poverty. Not only did those flows produce remarkable extensive growth (increased Gross Domestic Product) in the destination countries, they also were associated with intensive growth (higher labor productivity) and demonstrated that the most effective way to improve the lot of the poor was to move them from areas where their marginal productivity was low to areas of higher marginal product.<sup>7</sup> Angus Maddison (2001) reports that the population of Latin America doubled from 1870 to 1913, while the populations of the four major British offshoots, the U.S., Canada, Australia, and New Zealand, more than doubled. Gross Domestic Product per capita grew at an annual rate of 1.8 percent from 1870 to 1913, both in Latin America, and in the British offshoots. In contrast, in Latin America from 1820 to 1870, population had grown by roughly 10 percent and per capita GDP growth averaged 0.1 percent.

These facts are consistent with basic microeconomic theory, which suggests that the primary gain from factor mobility should be the long-run improvement in productivity that comes from equalizing the marginal productivity of factors across locations. An internationally integrated capital market will move capital to its most productive use to offset any local scarcity of funds.

That is not to say that capital flowed to poor countries, *per se*. Many poor countries of the pre-World War I era suffered from low productivity. Those countries did not experience capital inflows, since capital could be more productively employed in other destinations. For that reason, both labor and capital tended to flow to resource rich countries with institutional environments conducive to trade and growth. O'Rourke and Williamson (2000: 245) quantify and summarize that process and its consequences: "Late-nineteenth-century world capital flows were a force for divergence, not convergence, since much capital moved to some of the richest countries in the world. European capital tended to chase after European labor as both migrated to the land-abundant and labor-scarce new world."

When measuring capital market integration across countries, economists typically focus on yields on publicly traded debt instruments because these are the clearest indicators of funding costs within countries. Research of this kind has provided clear evidence for beneficial capital market integration resulting from removing barriers to capital flows (table 3.4, above). Interest rate levels in

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different countries became increasingly correlated in the pre-World War I era, as foreign sources of savings could be quickly mobilized to flow to high interest rate destinations (Obstfeld and Taylor 2003).<sup>8</sup>

From the standpoint of the business cycle, labor and capital mobility can have different effects on the welfare of laborers. Historically, immigration, when permitted, varied with the business cycle to mitigate the effects of economic downturns; bad times in the home country led to increased emigration, good times to less emigration or even migration back to the country of origin (Jerome 1926).

The effects of capital flows over the cycle were more complex. They either offset or aggravated cyclical shocks, depending on the nature of the shock. If the shock was perceived as having a permanent effect on the marginal product of capital in a country (say, a change in a country's long-run terms of trade), then capital outflows would hasten the painful adjustment to the new status (Bordo and Murshid 2002, Clemens and Williamson 2000). But if the shock was not of that kind—for example, if the shock were a short-run financial problem—then international capital flows often acted to insulate the economy from the effects of the shock.

Although observers of today's financial crises may be surprised to hear it, prior to World War I, when developing countries faced financial crises caused by temporary shortfalls of liquidity, foreign capital often came to the rescue. Eichengreen (1992) describes how this process was facilitated by cooperation among central banks. Under the classical gold standard, no single country was really in control of the supply of money, since the ultimate supply of money in any economy was determined by private decisions to import or export gold. If adverse shocks produced a scarcity of gold, balance was restored by gold inflows, and central banks coordinated actions to hasten that process. The extent to which countries experienced common financial market turbulence tended to reflect real global interdependence rather than volatility produced by financial markets (Neal and Weidenmeier 2002).

This historical portrait is very different from the portrayal common today, where foreign capital flows are often seen as the cause of financial crises rather than their solution, and where many see IMF aid as needed to offset capital flight by unwilling private market participants. What explains the relatively successful historical crisis resolution through the combined efforts of international bankers, governments, and central bankers? Why did private capital play a stabilizing role in the wake of historical crises?

Adherence to the classical gold standard is part of the explanation, for two reasons. First, countries depended on one another to manage the global supply of money because they were using the same ultimate definition of the value of money: gold. Shocks in one country that disrupted the world market for gold threatened all countries with exchange rate and price instability. Thus, both

private and public sources of capital abroad had an interest in maintaining a stable world capital market.

Second, and even more important, the fundamental long-run credibility of policy was higher among developing countries. In particular, the fact that developing countries adhered to the gold standard as a long-run policy commitment meant that they were eligible for assistance when financial crises struck. Credible adherence to the gold standard allowed countries to maintain their eligibility for access to private markets because adherence to the gold standard ensured substantial fiscal and monetary policy discipline on the part of government. On the fiscal side, a country with a long-run commitment to fixed exchange parity with gold had to forego using the printing press to pay off its government debts, limiting fiscal profligacy. On the monetary side, adherence to gold parity circumscribed central banks' abilities to determine their domestic money supplies, even in the short run. After all, it is not possible to set the price of money (the gold exchange rate) and independently set its domestic supply since, in the presence of free capital markets, agents will be able to offset central bank manipulation of supply by borrowing gold from abroad.

Obstfeld and Taylor (2003) have termed the way that the combination of open capital markets and adherence to a fixed (e.g., gold) exchange rate constrains government policy the fixed exchange rate "trilemma."<sup>9</sup> A government may choose any two (but not all three) from the following list of policies: (1) a fixed exchange rate, (2) free capital flows, and (3) central bank control over the supply of money. For example, if a government maintains free capital flows and a fixed exchange rate, then it cannot determine the supply of money. If it tried to print lots of money, capital market speculators would see that the exchange rate was not sustainable and would flee.

During the pre-World War I era, central banks understood that they were constrained by the trilemma, and that markets would interpret any attempt to violate its logic as a sign of a potential lack of commitment to the gold standard. It became widely understood that the best way to react to a condition of "external imbalance" (e.g., an acceleration in gold outflows from any country) was to raise interest rates to attract gold into the country and hasten (rather than fight) the necessary long-run adjustment. Thus, the "rules of the game" demanded by the classical gold standard were simple and inflexible.

### The Russian and Mexican examples

By pursuing these disciplined fiscal and monetary policies, countries gained the confidence of the capital market, as reflected in the lower average interest rates that they paid to borrow in international markets (Bordo and Rockoff 1996).

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That confidence was also reflected in the ability to access markets during global financial crises. The cases of Russia in 1900 and Mexico in 1907 illustrate how long-term credibility was crucial for continuing access to international capital during a financial crisis.

A major recessionary shock in Europe in 1899 led to a contraction of credit in Western Europe, which produced a collapse of the Russian stock market, shut off trade credit for Russian exporters, and caused the insolvency or near insolvency of several Russian commercial banks. As severe as this imported crisis was for the Russian financial system, the swift actions of the Minister of Finance, Sergei Witte, allowed a rapid resolution of the crisis and avoided a systemic banking crisis. Witte personally examined commercial banks requesting assistance and helped only those he deemed close to solvency. This limited the amount of assistance offered to the private sector.

Russia remained on the gold standard during the crisis, and the Tsar's commitment to that discipline was never in question. Because of that credibility, and because the amount of loans offered by the government to domestic banks and firms was limited, the government was able to raise funds in the global capital market to support its local financial institutions and quickly restore confidence in the health of the banking system (Calomiris 2002a).

Mexico's Finance Minister, Jose Limantour, acted similarly in the fall of 1907 when the financial panic in New York City spread to Mexico. He offered loans to Mexican banks guaranteed by the Mexican government. As Russia had done, Mexico maintained its commitment to the gold standard and kept the amount of its exposure to loss limited. Consequently, Mexico was able to borrow from global capital markets for the purpose of restoring confidence in the domestic financial system. Limantour himself argued that adherence to the gold standard was crucial for Mexico's access to capital inflows during crises (Conant 1910, p. 88):

"[T]his influx of money, though very considerable, has occasioned no surprise to the authors of the new monetary regime. Indeed, the influx of foreign capital was precisely one of the objects sought to be obtained by the reform, not only because that capital fecundates all branches of the national wealth, but because it constitutes in itself one of the surest guarantees for the fixity of the gold value of our currency."

For Limantour, credible fixed exchange rates and access to capital flows during crises were complementary, mutually reinforcing phenomena. Credible long-term adherence to gold made access to capital markets during crises possible, and at the same time, access to capital markets during crises helped ensure credible long-term adherence to the gold standard.

Note how different the experiences during these two historical financial crises are from present-day crises in emerging markets. Today, governments

of emerging markets seem powerless to defend their banking systems or their exchange rates from collapse. As their domestic financial systems teeter, their pegged exchange rates collapse, in a pattern now referred to as a "twin crisis." Governments of emerging markets appeal to the IMF for a bailout, which is then used to finance an across-the-board rescue of the domestic financial system at enormous fiscal cost.

By contrast, early twentieth-century Russia and Mexico dealt with severe financial crises largely by themselves, and without depreciating their currencies. They did not offer blanket assistance to failing banks, but rather moderate assistance to help offset a temporary loss of confidence. They accomplished their objectives with trivial fiscal costs.

Mexico and Russia were not unusual success stories. In fact, from 1873–1913 Calomiris (2002a) finds evidence of only three twin crises worldwide, all of them occurring in the 1890s, in Argentina, Brazil, and Italy. The Argentine case was the most severe crisis of the three. A lack of available data makes it difficult to analyze the Brazilian case, but in the other two cases there was a clear chain of causality connecting *ex ante* government guarantees of bank liabilities (risk subsidization of banks by the government) with subsequent large banking losses, the costs of which undermined the governments' abilities to maintain their exchange rate pegs. In other countries, not only were twin crises absent, but also banking sector losses during recessions remained small. There are a maximum of seven cases (as many as three in Brazil and one each in Argentina, Italy, Australia and Norway) of total banking sector insolvency in excess of one percent of annual GDP.

The comparable figure for the last two decades of the twentieth century shows more than a hundred cases of banking system insolvency with resolution costs in excess of one percent of GDP (Caprio and Klingebiel 1996, updated by the authors for Beim and Calomiris 2001, Appendix to chapter 7). It is worth emphasizing that what once were the exceptions of emerging finance have become the rule. The pattern of risk subsidization, banking collapse, and exchange rate depreciation that explains both of the well-documented cases of twin crises in the pre-World War I period (Argentina and Italy) has been repeated scores of times in the past two decades, most notably in Chile in 1982, Mexico in 1994, and Thailand, Indonesia, and Korea in 1997.

### Effects of "The Rules of the Game"

Under the classical gold standard, adherence to gold constrained the use of fiscal or monetary policy to respond to adverse macroeconomic shocks. Monetary contraction was seen as a desirable response to domestic recession, helping to

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preserve external balance. The ability of fiscal policy to respond to downturns was limited by the need to maintain long-run credibility of the fixed exchange rate. That meant, in response to fundamental adverse shocks (such as an unfavorable change in a country's terms of trade), that capital would flow out of an economy, not into it, thus exacerbating the initial shock by lowering income and wages. Labor outflows, however, mitigated the effects of these shocks. Thus, under the pre-World War I system, capital flows offset the effects of temporary liquidity problems, but reinforced fundamental shocks to the macro economy.

That does not imply that capital mobility, on balance, had adverse effects on citizens of emerging markets prior to World War I. It is true that capital mobility encouraged adherence to the rules of the game, which sometimes aggravated business declines by requiring contractionary monetary policies during recessions, but at other times adherence to the gold standard helped to stabilize the economy. In particular, the responses of capital inflows to rises in domestic interest rates produced by domestic financial shocks helped to stabilize the domestic economy. Furthermore, from the standpoint of long-run growth, capital mobility encouraged adherence to the rules of the game under the gold standard by rewarding adherence and by ensuring that deviation from the rules would be punished economically. Foreign capital served both as a carrot and as a stick to encourage stable long-run macroeconomic policies, which were beneficial to both capital and labor.

Finally, because borrowing countries successfully adhered to the gold standard, they were able to avoid the problem of ballooning foreign debt burdens in the wake of exchange rate depreciation. Developing countries today have proven to be notoriously unable to maintain exchange rate parities for more than very brief episodes (Obstfeld and Rogoff 1995). But pre-World War I gold standard adherents could be confident that, over relatively long periods of time, the value of their wages, salaries, and domestic investments would rise and fall along with that of their foreign debts. Not only did gold standard adherence avoid costly debt service burdens, but also the low risk of depreciation contributed to the low yields paid on foreign debt.

Of course, the pre-World War I period was far from macroeconomically idyllic. The financial and monetary stability achieved by emerging markets operating on the gold standard, and the enormous growth produced by globalization of trade, capital, and labor, occurred despite enormous volatility in commodity prices and very pronounced business cycles, especially in the 1890s. Surprisingly, banking and currency crises remained rare.

Historians also have found that open capital markets brought risk-management advantages to both emerging markets and developed economies, raising financial system performance and probably helping to account for the remarkable

stability of the global financial system. Globalization afforded new diversification opportunities in financial markets. Global portfolios of bonds and foreign direct investments allowed investors to hold more diversified portfolios, which permitted them to absorb more of the country-specific risks from financing development around the world.

Classical economists and modern-day economic historians have also stressed another route through which capital mobility, and globalization more generally, improved economic performance and reduced risk during the pre-World War I era. Global market access, especially capital mobility, fostered international competition for productive resources across differing political and regulatory regimes. To the extent that underdeveloped legal environments and misguided government policies impede growth and poverty reduction (Jones 1988, Landes 1999, Maddison 2001, Calomiris 2002b), capital mobility created strong incentives for countries to adopt market-friendly policies that promote domestic growth and poverty reduction.

In summary, economic history casts quite a favorable light on the international capital mobility of pre-World War I globalization. The same themes stressed by economic historians—efficient resource allocation, extensive and intensive growth, poverty reduction, portfolio diversification, and intergovernmental competition—have been emphasized by advocates of capital mobility today.

Are the long-run advantages of capital as great today as they were in the pre-World War I period?

### CAPITAL FLOWS AND GROWTH IN TODAY'S WORLD

In theory, the same advantages that attended global capital flows in the pre-World War I era should be available today. In fact, they should be enhanced, since new technologies now permit much better access to information about distant risks, which is apparent in the unprecedented ability of foreign firms to place risky equity offerings abroad. But financial crises—those that are narrowly confined to systemic bank insolvency and those involving both bank insolvency and exchange rate collapse—are more frequent today. Consequently, many critics of global capital markets argue that capital flows have helped cause financial crises, and some have advocated limiting or eliminating global capital flows.

If capital flows have played a role in causing crises, why did their role change from a stabilizing force prior to World War I to a sometimes destabilizing force today? And are there policy options that might permit more stable access to capital markets?

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There is a large and rapidly evolving literature on the long-run determinants and effects of capital flows in developing countries (see the chapters in Feldstein 1999, Edwards 2000, and Edwards and Frankel 2002). Those who have measured the consequences of liberalizing capital flows have argued that destination countries benefit from capital mobility today, as in the past, through two channels. First, new inflows of savings reduce the cost of funds and help the economy to invest and grow faster. Second, diversification from cross-border trading in securities reduces the cost of capital by reducing the risk premium paid by firms, promoting investment and growth.

Some studies have found evidence that this second channel may be quite important. Bekaert and Harvey (2000) find that moments of stock market liberalization are associated with large movements of capital, which produce reductions in risk premiums and higher correlations of equity returns with global markets. They also find, interestingly, that capital market liberalization is associated with a reduction in exchange rate volatility.

Similarly, Henry (2000a) finds that permitting foreigners to purchase shares in a country produces, on average, a 3.3 percent appreciation of stock in the domestic market. There is a much larger effect (10.4 percent) for the firms that become eligible for purchase by foreigners (Chari and Henry 2002). Chari and Henry (2001) find that firms experiencing reductions in their cost of capital (as the result of global portfolio diversification) are the ones that account for the overall price rise.

Do the gains from stock market liberalization matter for real investment and growth? Henry (2000b) shows that stock market liberalizations are also associated with investment booms. Nine of eleven developing countries that liberalized their stock markets experienced growth rates of private investment above their non-liberalization median in the first year after liberalizing, and the average growth rate of private investment in the three years after stock market liberalization for the sample was 22 percent above average. Henry (2003) shows that higher investment also translates into higher output per worker, which rises by an additional 2.3 percent per year after stock market liberalizations.

Bekaert, Harvey, and Lundblad (2001) reinforce that conclusion. They find a one percent increase in annual growth, after accounting for inflation, over a five-year period after stock market liberalization. That effect holds after controlling for the effects of other simultaneous reforms and for business cycle phases.

Other research has offered a more nuanced view of the growth effects from broader financial liberalization (defined as "capital account liberalization"). Edwards (2001) examines not only cases of fully liberalized capital accounts but also partially liberalized countries. He considers various alternative measures of capital openness; separates capital flows in the form of foreign direct investment,

debt, and portfolio equity; distinguishes among countries of six types (Industrial, African, Asian, Non-industrial European, Middle East, and Latin America); and examines how the effects of capital openness on GDP growth and total factor productivity depend on other economic factors.

Edwards finds that, overall, capital openness improves growth in output and productivity, but that the context affects the size of that impact. Specifically, capital openness only significantly improves economic performance once a country has reached a certain degree of development. Edwards also points out that previous studies that had found no positive effect of capital openness (e.g., Rodrik 1998) used data that did not properly take account of actual, as opposed to legal, impediments on capital mobility (see also Eichengreen 2001 and Klein and Olivei 1999).

Overall, Edwards' research suggests that for countries with a moderately developed economic and financial system (such as Mexico, Venezuela, Singapore, Israel, and Hong Kong) capital openness provides a significant boost, but for countries with very low initial conditions, capital mobility may not help, and in fact may even hurt—for example, through the negative consequences of volatility.

Other studies, however, challenge Edwards' definition of capital openness. Edison et al. (2002) consider new measures of capital openness (such as the stock of foreign claims relative to GDP, rather than flow measures), which they argue are less prone to measurement error. They also consider an extensive range of interactive terms to gauge the conditions under which capital flows contribute more or less to growth, and adopt new econometric methods that are designed to eliminate spurious correlations. They find that, after controlling for other effects, there is no significant effect of capital mobility *per se* on economic growth, regardless of the level of economic development or other institutional factors. They attribute earlier findings (like those of Edwards) mainly to the problem of reverse causality (growth causing capital inflows rather than vice versa).

Kaminsky and Schmukler (2002) have a different take on the question of financial liberalization (broadly defined) and growth. For them, the short-term pain (that is, the disruption caused by reform) is often a necessary condition for the long-run gains from liberalization. From this perspective, it may be very difficult to find growth effects when one looks at periods immediately following liberalization, even if, in the longer run, growth effects are large.

In summary, the literature on the effects of capital account liberalization on growth in recent times is still evolving. Studies that narrowly focus on the effects of foreign direct investment, foreign bank entry, and equity market liberalization tend to find clear evidence of long-run growth and efficiency improvements from liberalization. Studies that analyze broader trends in capital

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account policy are much more mixed in their results, partly due to controversies over how to measure openness, and partly due to differences in the time horizon over which growth effects are measured.

On balance, the evidence suggests that specific policies that liberalize the capital account in an emerging market economy both add to the short-term risk of financial collapse and to the potential long-term gains from economic growth.

### CAPITAL FLOWS AND FINANCIAL CRISES

The question of whether and how capital flows contribute to the risk or severity of financial crises in emerging markets is a complex one. Teasing out causality during financial crises is complicated because, in a crisis, things happen very fast, many important aspects of the economy change simultaneously, and the observable economic variables are all potentially influenced by a wide variety of shocks.

Some proponents of the view that capital markets either breed or magnify shocks that produce financial crises tend to begin with jaundiced prior views about market efficiency (for example, along the lines of the theoretical framework of Minsky 1975). They argue that markets tend to overreact to news, and that capital markets are the main instrument of that overreaction.

Others argue for the crisis-producing role of capital by positing a multiple-equilibrium model—that is, an economic model that can deliver either a good or bad outcome, depending on which equilibrium is selected by the capital market. For example, if foreign debt is largely short-term, debt holders may be driven to demand immediate repayment only because they fear that other short-term creditors will demand repayment, and no one wants to be last in line to be repaid. The rush for the exits can produce a “bad equilibrium” even when, from a fundamental standpoint, such a bad equilibrium may not have been necessary. If creditors’ actions could be coordinated (for example, through IMF intervention), then unnecessary crises could be avoided. This point of view became popular in the aftermath of the Mexican and Asian crises because of the large amount of short-term dollar-denominated debt that fled those countries during the crises.

Some capital market critics note that contagion across countries can exacerbate market reactions. That contagion can be either rational (driven by the need for securities holders to reduce risk exposure to country X in response to losses in country Y) or irrational (where asset liquidation is seen as an unnecessary, emotional reaction to loss).

It is hard to prove or disprove these arguments in regard to any particular crisis. Proponents of market irrationality or multiple equilibriums are often reduced to arguing, unconvincingly, that they personally were unable to identify any sufficiently severe fundamental weaknesses prior to a crisis in an emerging market. Needless to say, their opponents can be relied upon to offer a long list of such weaknesses. For example, even if on-balance sheet government debts are small, contingent government liabilities (such as explicit or implicit guarantees associated with bailouts) are often anticipated by the market (see Burnside, Eichenbaum, and Rebelo 1999 for an explanation of the East Asian crises that revolves around anticipated banking sector collapse). Thus, even though exchange collapses may precede bailouts, it may be reasonable to argue that such collapses are caused by anticipated bailouts.

Narrow versions of one or more of these arguments can be tested using data. For example, we can sometimes investigate whether foreign participants in capital markets are more likely to sell before domestic participants. Such studies of the Korean crisis found that foreigners did *not* drive selling pressure in the markets (Brown, Goetzmann and Park 1998, Choe, Kho and Stulz 1998).

Another type of study uses statistical analysis to identify predictors of financial crises using a sample of crisis countries. Authors of such studies construct measures that they claim capture particular influences, including financial market influences (such as the pre-crisis maturity structure of debt and the fundamental health of the domestic banking system), and then investigate which of the predicting variables included in the statistical model is helpful in predicting crises.

These studies are generally unconvincing. Sample sizes are small, and the potential for data mining is great. The interpretations attached to predicting variables are often suspect, and variable measurements are fraught with error (especially measures of the health of the domestic financial system, given the inaccuracy of banks' accounting for nonperforming loans). Furthermore, because future expectations have so much impact on current economic behavior, prediction and causality are hard to disentangle.

Perhaps most important, the predicting variables are often themselves affected by financial crises, which complicates any interpretation of their economic roles in causing the crises. It can be extremely hard to disentangle cause from effect when interpreting these correlations. For example, the fact that a high reliance on short-term capital flows tends to predict financial crises can be interpreted in a variety of ways. One interpretation is that short-term dollar-denominated debt causes crises to occur (as in a multiple-equilibrium model). Another interpretation is that, when fundamentals are weak and crises are likely, the only financing that is available is short-term debt (in part, because holders of short-term debt receive government and IMF protection). According to the first interpretation,

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crises are unwarranted results of multiple equilibriums; according to the second, both crises and the structure of capital flows are driven by weak fundamentals.

### LOOKING TO HISTORY FOR ANSWERS

The inherent weakness of the current empirical literature on the connections between capital flows and crises should give weight to historical perspectives. I find it significant that in the pre-World War I period—when information processing was inferior, when macroeconomic shocks were at least as prevalent as the past two decades, when exchange rates were fixed, and capital flowed freely—twin crises were rare. It is also significant that the only pre-World War I twin crisis countries for which we have information (Italy and Argentina) were also unique cases in which governments subsidized banking sector risk.

I conclude that the new prevalence of costly twin crises cannot be ascribed to capital mobility, fixed exchange rates, or macroeconomic volatility *per se*. None of these factors is present today more than it was historically.

The combined factors that seem capable of explaining the new wave of twin crises (as well as the isolated historical instances of twin crises) are the subsidization of financial risk by government and the inability of government to maintain a credible commitment to an exchange rate peg. The two factors are related. Only if a country is willing to forego long-run fiscal discipline will it be able to offer a *carte blanche* bailout to its domestic financial system. Similarly, part of the economic cost of a lack of market discipline in the financial sector is a lack of fiscal discipline.

Perhaps the most interesting question is why governments prior to World War I chose to impose market discipline on banks, and to impose both credible exchange rate parities and fiscal discipline on themselves, but are unable or unwilling to do the same today. Any policy response to today's financial crises must come to grips with this central question.

I have no definitive answer to offer. Historically, political behavior has varied widely over time and across countries. Perhaps future empirical research will identify factors that explain such variation, but at the moment the best we can do is to make some informed guesses.

### THE POLITICAL ECONOMY OF FRAGILITY

Eichengreen (1996) offers one hypothesis; he argues that the expansion of the democratic franchise has made it increasingly difficult politically for

governments to adhere to long-run exchange rate rules, since doing so would require them to forego short-term macroeconomic stabilization policies. In essence, the electoral constraints of democracy may make some beneficial long-run policies unattainable.

Similar logic applies to the trend away from market discipline in banking. Banking sector bailouts misdirect capital resources away from value-creating investments in favor of value destroying ones and undermine efficient competition in the banking sector that otherwise would favor prudent, skilled management (see the literature review in Beim and Calomiris 2001, chapter 7). Although governments like to justify bailouts as cyclically stabilizing (that is, as a means of avoiding credit contractions), empirical research indicates that bailouts do not even succeed in expanding the supply of credit. After all, bailout policies reward *all* kinds of risk-taking, not just lending risk. Weak or insolvent banks with little or nothing to lose often undertake substantial currency risks as part of high-risk “resurrection strategies.” When the more likely outcome of financial collapse occurs, it typically takes years to rebuild the financial system, which places a substantial damper on economic growth.

However, bailouts do succeed at one thing: They serve to postpone the day of reckoning, which is an irresistible lure to populist politicians fighting to win elections, or to corrupt politicians seeking to protect their cronies.<sup>10</sup>

In summary, models of financial crises that view them as the unavoidable result of global capital market inefficiency, multiple equilibriums, or international contagion have the same basic flaw: They do not explain why, prior to World War I, emerging markets were capable of fixing exchange rates, maintaining open capital markets and private domestic banking systems without many twin crises, and with both growth-producing and cyclically stabilizing effects from international capital flows. If markets are always tottering toward instability because of contagion, inefficiency, and multiple equilibriums, then why were historical emerging markets so different?

The fundamental strength of historical emerging markets and the relative weakness of current emerging markets explains the changed role of capital markets in relation to financial crises, and points toward changes in the political environment for explanations of market fragility.

The developed countries and the multilateral institutions they created have exacerbated the problem of weak political fundamentals. Rather than forcing emerging markets to bear the costs of economic isolation, they have been establishing subsidies to encourage capital to flow to emerging markets despite fundamental weaknesses in their economies. Those policies have encouraged sovereign debt to balloon to unsustainable levels (as in, for example, Mexico in 1994, Argentina after 1999, and Brazil in 2002). Those policies have also encour-

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aged imprudent lending to the private sector, especially to weak or insolvent private banks.

Consequently, foreign creditors holding short-term dollar-denominated debts believe (correctly, for the most part) that domestic governments will stand behind those debts and finance their redemption if things start to go awry, and that foreign multilateral institutions (encouraged by Wall Street, the U.S. Treasury, and the rest of the G7 governments) will provide the foreign exchange bridge loans necessary to finance those transfers. Ultimately, however, as the IMF loans are repaid (as they almost always are), the costs of the crises are borne almost entirely by the citizens of emerging markets themselves.

In this sense, it is true that capital flows are a fundamental part of the problem of emerging market crises and poverty. But the reason is that capital inflows are encouraged by the political choices of emerging markets and the G7 which subsidize rather than penalize the bad policies of emerging markets.

### PROPOSED SOLUTIONS

Although many of the arguments linking free capital flows to financial crises are flawed, it does not follow that free capital flows are currently beneficial to all or most emerging markets. When emerging market financial systems are collapsing, capital flight certainly seems to make the problem worse, forcing sovereigns into default when their debts cease to be rolled over, crippling banks with massive withdrawals, and starving domestic users of capital when they need it most. What can be done to alleviate these problems?

The most important lesson that history offers is that when fiscal policy and bank regulatory policy are well chosen and credible, crises are infrequent, and capital flows play a stabilizing role in mitigating the costs of adverse shocks. By contrast, if fiscal and regulatory policies are ill-chosen or lack credibility, then crises are likely, and capital flows will exacerbate the costs of those crises. When capital enters for the wrong reason (as when governments and the IMF subsidize the costs of bearing risk in emerging markets), capital is also liable to exit during crises in a disruptive and costly way.

The obvious implications are that emerging markets need to improve their fiscal and regulatory policies, and that the IMF needs to restore proper risk-management incentives to the global financial markets. Both sets of reforms are easy to define and hard to do. In most countries, including the vast majority of emerging markets, government is crippled by populism, cronyism, corruption, and the short-sighted policies these beget. International competition in a free-market environment might help to encourage some change in policies of

emerging markets, but competition is undermined by G7 realpolitik. Meanwhile, there is little chance that the G7 governments will adopt policies that maximize the welfare of poor inhabitants in emerging markets or of their own taxpayers. Election cycles set the time horizons of the G7 leaders, too. Quick fixes that avoid current costs to the global economy at the expense of skewed long-run incentives and lower long-run growth are often popular.

IMF reforms that try to limit bailouts have been undertaken with little success over the past several years. The recent bailouts advocated by the Bush administration (particularly Argentina in 2003) seem to point away from reform. The United States has given up on reform, in part, in order to support the war against Islamic terrorism (which motivates assistance to Turkey, Pakistan, and other countries fighting terrorism in Asia). And the recent weakness of the global economy made it politically difficult to deny aid to Brazil (Latin America's largest economy).

What, then, should a well-meaning policymaker in an emerging market (there are some) do to deal with the problem of crises? It may be appropriate for such reformers to try to limit capital flows, at least of some types, until they are able to adopt the fundamental fiscal and banking system policies that will enable them to raise capital on more stable footings. How should this be done?

First, limits on capital inflows should be focused on the sources and users of capital that are most likely to create problems. If the problem is the potential abuse of short-term dollar-denominated debt to fund excessive risk-taking by domestic banks or protected cronies, then limits on short-term hard-currency debt funding for these entities—not capital controls in the broad sense—should be the policy focus.

Broader policies to limit debt inflows or outflows are undesirable and hard to enforce. In today's world of complex derivatives contracting, taxes on various kinds of short-term debt inflows (like the Chilean *encaje*) can be hard to enforce, especially since such flows are often hidden from the authorities. Furthermore, as Edwards (1999a) argues, limits on short-term debt flows tend to disproportionately disadvantage small and medium-sized firms, breed corruption, and protect domestic cronies. With all this, they usually don't work. For example, they failed to stabilize the Chilean currency or capital account from 1991–1998. Chile, which was praised by many for its taxation of short-term debt, reduced the tax rate (reserve requirement) on its *encaje* to zero in 1998 to improve its access to foreign capital (DeGregorio, Edwards, and Valdes 2000).

Similarly, the record of limits on capital outflows for promoting stability and growth (used widely in Latin America in the 1980s and most recently in Malaysia in the wake of the Asian crises) is not encouraging. The Latin American countries that did not impose controls in the 1980s actually fared better than

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those that did (Edwards 1999a, Edwards 1999b). These policies also promote corruption (Johnson and Mitton 2001 argue this in the case of Malaysia), and their effectiveness is far from clear (see the recent debate over the Malaysian experience: Kaplan and Rodrik 2002, Dornbusch 2002, Hartwell 2001).

Finally, even if reformers succeeded in restricting *private* market inflows or outflows, that would still not preclude *sovereign* borrowing or government guarantees of private risks. In other words, corrupt governments in emerging markets can and do “arbitrage” capital controls when they need to, by borrowing abroad and then lending to private parties or guaranteeing (implicitly or explicitly) domestic private debts.

When we examine the twin crises of Mexico, East Asia, and other countries, we find that in every case governments bore substantial fiscal risks and suffered substantial fiscal costs from bailing out private banks and corporations. They financed those costs largely by printing money, and the market’s anticipation of that fact largely explains why banking crises became currency crises. It is very hard for governments to tie their own hands fiscally, but unless they are able to do so, risk subsidization, excessive borrowing, and financial crises will likely continue, although the precise structure of “crisis intermediation” by governments will vary.

To the extent that there is an argument for limiting capital inflows, then, it is largely an argument for a particular form of domestic financial sector regulation: namely, limits on the extent to which banks can borrow short-term hard-currency funds or engage in derivatives contracts that amount to doing the same thing (Garber 1998). Limits on banks’ dealings are easier to police than broader limits on all borrowers. And the need to control banks’ risk taking and to prevent costly banking collapses is crucial to preserving both financial system stability and government fiscal health. More generally, establishing effective domestic regulation of banks is the key to creating an atmosphere in which foreign capital flows can boost growth without exposing the economy to the risks of excessive exchange rate exposures and sudden stops. As Calomiris (1999), Calomiris and Powell (2001), and Barth, Caprio, and Levine (2002) argue, establishing *market* discipline over bank-risk taking is both feasible and crucial to creating effective prudential regulation and supervision. If regulation gives market participants the incentives to monitor bank risk-taking, and if market opinions are harnessed by regulatory rules in ways that penalize excessive bank risk-taking, then banks and their borrowers will face strong incentives not to take excessive risks and not to abuse foreign capital to do so.

One of the best means of establishing market discipline is to encourage foreign institutions to hold the debts of domestic banks (as proposed in Calomiris 1999). If domestic banks are required to issue a class of credibly unprotected

debt in the hands of sophisticated foreign investors, and if continuing market opinions about banks' abilities to repay that debt affect banks' abilities to undertake new risks, then required unprotected debt issues can serve as an antidote to risk subsidization through government guarantees. Thus, ironically, a properly designed prudential system would *depend upon* foreign-held bank debt as part of a system to limit financial sector risk. Regulation of financial sectors in emerging markets should limit domestic banks' exchange rate exposure from short-term borrowing or from derivative contracts, but should not discourage borrowing from abroad, *per se*. In fact, it should *require it*.

Note that changes in exchange rate policy, by themselves, will not put an end to costly financial crises. I agree with those who argue that a movement from pegged to floating exchange rates will reduce the costs of financial crises. If a country has no peg to defend, there will be no predictable, sudden exchange rate movement in the offing, reducing the potential for capital to suddenly flee. Floating rates should take some of the drama out of twin crises, and should also succeed in removing some of the subsidies that non-trade sector producers receive from overvalued pegged exchange rates. However, the adoption of flexible exchange rates will do little *per se* to solve the fundamental incentive problems that plague capital flows in emerging markets.

If fiscal and regulatory policy are weak, credit collapses will still occur and exchange rates will still depreciate, albeit more gradually. Capital misallocations *ex ante*, and outflows, *ex post*, will also still characterize the boom and bust cycle of liberalization and decline. The debt burdens produced by the combination of dollar-denominated debt and exchange rate depreciation will be similar.

The fact is that market economies function only as well as governments and their agents allow. Markets are never perfect, but their unusually poor performance in emerging markets over the past two decades owes much less to inherent capital market failings than to the inability of emerging markets and G7 governments to adhere to desirable long-term economic policies. Mechanical solutions to this problem cannot solve the core problem, which fundamentally revolves around the inability or unwillingness of governments to act in their own citizens' best interests.

#### NOTES

1. While some of today's developed economies, including the United States, relied on capital inflows to help finance a portion of their early growth, particularly in the construction of the transportation infrastructure (Davis and Cull 1994, Wilkins 1989, Davis and Gallman 2001), emerging market countries of the past financed most of their industrialization domestically, as they were able to rely on strong

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domestic legal institutions and stable and efficient local financial intermediaries to channel savings to value-creating uses.

2. This combined foreign exchange rate, financial system, and economic collapse can be particularly acute and sudden when countries are pursuing so-called "exchange rate pegs." These take various forms, ranging from rigidly fixed exchange rates to target bands for exchange rate variation and "crawling pegs" that adjust gradually over time to accommodate inflation. Even many countries that claim to operate flexible exchange rate regimes, in fact, intervene to maintain targeted exchange rate values (Calvo and Reinhart 2001).

The problem with pegs is that, when they become unsustainable, the adjustment that finally occurs after a long period of resistance can be enormous. Exchange rates can depreciate suddenly by very large amounts, often by 50 percent or more.

3. Montiel and Reinhart (1999) find that risky macroeconomic policies generate a greater reliance on short-term debt. Specifically, countries that pursue sterilized intervention in their monetary policy tend to attract increasing amounts of short-term debt finance. Essentially, sterilized intervention is a policy that fails to restrict monetary growth or to depreciate the currency in response to outflows of foreign reserves. Monetary contraction is necessary to protect central bank reserves against an attack on the currency.
4. Substantial amounts of long-term debt roll over annually. Claessens, Dooley, and Warner (1995) find little difference in the behavior of short- and long-term debt flows for their pre-1995 sample, although the subsequent experience of Mexico and East Asia have been widely regarded as providing evidence that short-term capital flows pose a unique threat by putting an EM economy at extreme risk (Radelet and Sachs 1998, Chang and Velasco 1998).
5. During the East Asian crises, total private capital flows to Asia fell from \$100.5 billion in 1996, to \$3.2 billion in 1997 and continued to fall, reaching -\$55.1 billion in 1998. But foreign direct investment to Asia was nearly constant over these three years: \$55.1 billion in 1996, \$62.6 billion in 1997, and \$50.0 billion in 1998. Lipsey (2001) studies foreign direct investment by manufacturers during three financial crises (Latin America in 1982, Mexico in 1994, and East Asia in 1997) and finds that foreign direct investment behaved differently from other forms of investment (see also Ito 2000). Foreign direct investment inflows were more stable than portfolio flows or bank loans from abroad during these crises. In large part, that stability reflected the reaction of multinationals to new export opportunities in emerging markets in the wake of exchange rate depreciation during EM crises.
6. Claessens, Demirguc-Kunt, and Huizinga (1998) find that foreign entrants in developing countries tend to have higher interest rate margins and profits than their domestic counterparts. Furthermore, they find that permitting foreign entry tends to result in reduced profits and overhead expenses in domestic banks. Demirguc-Kunt, Levine, and Min (1999) also find that foreign bank participation lowers domestic bank profitability and overhead costs, but they are able to show important macroeconomic consequences, as well. Increased financial sector efficiency also raises economic growth

- and lowers the probability of a banking crisis. Goldberg, Dages, and Kinney (2000) study the relative performance of foreign banks in Argentina and Mexico and find that foreign banks saw higher loan growth and lower volatility of lending, which largely reflected foreign banks' ability to maintain lending during financial crises. Barajas, Steiner, and Salazar (2000) study the effect of foreign bank entry in Colombia and find that it lowered intermediation costs and improved loan quality.
7. Capital and labor tended to move together from the old world to the new world, helping to augment productivity, wages, and profits in both the old and the new world (O'Rourke and Williamson 2000, Davis and Gallman 2001). In the post-World War I environment, emigration from poorer countries has not been as common a solution to poverty, as many relatively wealthy countries have limited immigration. Now trade and capital flows are the primary means through which developed economies can spur development abroad.
  8. That approach can overstate the extent of capital market integration. For most firms, in and outside the United States, historically and today, access to national, much less international, capital markets remains a distant goal. Even within the United States there are many small local firms who depend on entrepreneurial wealth or local bank finance as their exclusive means of funding their activities. If international capital is only available through public securities markets, it may have little effect on those users of capital. Foreign bank entry, and foreign direct investment by companies or venture capitalists, however, can provide access to funds for firms that do not access securities markets. For that reason, the recent growth of capital flows in these categories is highly significant.
  9. The basic insight of the "trilemma" was developed by Mundell (1963).
  10. It is possible to argue that the cycle of liberalization and collapse in EMs is an intentional means of financing some favored producers in the economy at the expense of everyone else. Rojas-Suarez (2003) argues that the combination of pegged exchange rates and undisciplined banking systems provides significant short-term benefits to the nontradable good sector. These producers benefit from postliberalization easy credit and the temporary overvaluation of the currency that occurs prior to the exchange rate collapse. The implied subsidies, even if temporary, can be large.

## REFERENCES

- Barajas, Adolfo, Roberto Steiner, and Natalia Salazar. 2000. "The Impact of Liberalization and Foreign Investment in Colombia's Financial Sector." *Journal of Development Economics* 63 (October): 157-96.
- Barth, James R., Gerard Caprio, Jr., and Ross Levine. 2002. "Bank Regulation and Supervision: What Works Best?" NBER Working Paper No. 9323.
- Beim, David O., and Charles W. Calomiris. 2001. *Emerging Financial Markets*. New York: McGraw-Hill.
- Bekaert, Geert, and Campbell R. Harvey. 2000. "Capital Flows and the Behavior of Emerging Market Equity Returns." In Sebastian Edwards, ed., *Capital Flows and the Emerging Economies*. Chicago: University of Chicago Press: 159-94.

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- Bekaert, Geert, Campbell R. Harvey, and Christian Lundblad. 2001. "Does Financial Liberalization Spur Growth?" NBER Working Paper No. 8245, April.
- Bordo, Michael D., Barry Eichengreen, and Douglas Irwin. 1999. "Is Globalization Today Really Different Than Globalization a Hundred Years Ago?" NBER Working Paper No. 7195, June.
- Bordo, Michael D., Barry Eichengreen, and Jongwoo Kim. 1998. "Was There Really an Earlier Period of International Financial Integration Comparable to Today?" NBER Working Paper No. 6738, September.
- Bordo, Michael D., and Antu Panini Murshid. 2002. "Globalization and Changing Patterns in the International Transmission of Shocks in Financial Markets." NBER Working Paper No. 9019.
- Bordo, Michael D., and Hugh Rockoff. 1996. "The Gold Standard as a 'Good Housekeeping Seal of Approval.'" *Journal of Economic History* (June).
- Brown, Stephen J., William N. Goetzmann, and James Park. 1998. "Hedge Funds and the Asian Currency Crisis of 1997." NBER Working Paper No. 6427.
- Burnside, Craig, Martin Eichenbaum, and Sergio Rebelo. 1999. "Prospective Deficits and the Asian Currency Crisis." NBER Working Paper No. 6758.
- Calomiris, Charles W.. 1999. "Building an Incentive-Compatible Safety Net." *Journal of Banking and Finance* 23 (October): 1499-1519.
- Calomiris, Charles W.. 2002a. *Victorian Perspectives on the Twin Crises of the 1990s*. Manuscript, Columbia Business School.
- Calomiris, Charles W.. 2002b. *A Globalist Manifesto for Public Policy: The Tenth Annual IEA Hayek Memorial Lecture*. London: Institute for Economic Affairs.
- Calomiris, Charles W.. 2002c. "Banking and Financial Intermediation." In Benn Steil, David G. Victor, and Richard R. Nelson, eds., *Technological Innovation and Economic Performance*. Princeton: Princeton University Press: 285-313.
- Calomiris, Charles W., and Andrew Powell. 2001. "Can Emerging Market Bank Regulators Establish Credible Discipline? The Case of Argentina, 1992-99." In Frederic S. Mishkin, ed., *Prudential Supervision: What Works and What Doesn't*. Chicago: University of Chicago Press: 147-96.
- Calvo, Guillermo, and Carmen Reinhart. 2000. "When Capital Inflows Suddenly Stop: Consequences and Policy Options." In Peter B. Kenen and Alexander K. Swoboda, *Reforming the International Monetary and Financial System*. Washington D.C.: International Monetary Fund: 175-201.
- Calvo, Guillermo, and Carmen Reinhart. 2001. "Fear of Floating." Working Paper, University of Maryland.
- Caprio, Gerard, Jr., and Daniela Klingebiel. 1996. "Bank Insolvencies: Cross-Country Experience." Working Paper No. 1620. The World Bank.
- Chang, R., and Andres Velasco. 1998. "The Asian Liquidity Crisis." NBER Working Paper No. 6796, November.
- Chari, Anusha, and Peter B. Henry. 2001. "Stock Market Liberalizations and the Repricing of Systematic Risk." NBER Working Paper No. 8265.
- Chari, Anusha, and Peter B. Henry. 2002. "Risk Sharing and Asset Prices: Evidence from a Natural Experiment." NBER Working Paper No. 8988.

- Choe, Hyuk, Bong-Chan Kho, and Rene Stulz. 1998. "Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997." NBER Working Paper No. 6661.
- Claessens, Stijn, Michael P. Dooley, and Andrew Warner. 1995. "Portfolio Capital Flows: Hot or Cold?" *World Bank Economic Review* 9 (1): 153-74.
- Claessens, Stijn, Asli Demirguc-Kunt, and Harry Huizinga. 1998. "How Does Foreign Entry Affect the Domestic Banking Market?" World Bank Policy Research Working Paper 1918 (June).
- Clemens, Michael A., and Jeffrey G. Williamson. 2000. "Where Did British Capital Go? Fundamentals, Failures and the Lucas Paradox: 1870-1913." NBER Working Paper No. 8028.
- Conant, Charles A. 1910. *The Banking System of Mexico*. Senate Document No. 493, 61st Congress, 2nd Session. Washington, D.C.: Government Printing Office.
- Davis, Lance E., and Robert J. Cull. 1994. *International Capital Markets and American Economic Growth, 1820-1914*. Cambridge: Cambridge University Press.
- Davis, Lance E., and Robert Gallman. 2001. *Evolving Financial Markets and International Capital Flows: Britain, The Americas, and Australia, 1865-1914*. Cambridge: Cambridge University Press.
- Davis, Lance E., and Robert A. Huttenback. 1988. *Mammon and the Pursuit of Empire*. New York: Cambridge University Press.
- DeGregorio, Jose, Sebastian Edwards, and Rodrigo Valdes. 2000. "Control on Capital Inflows: Do They Work?." *Journal of Development Economics* 63 (October): 59-83.
- Demirguc-Kunt, Asli, Ross Levine, and Hong-Ghi Min. 1999. "Opening to Foreign Banks: Issues of Stability, Efficiency, and Growth." World Bank Working Paper.
- Dornbusch, Rudiger. 2002. "Malaysia's Crisis: Was It Different?" In Sebastian Edwards and Jeffrey A. Frankel, eds., *Preventing Currency Crises in Emerging Markets*. Chicago: University of Chicago Press: 441-60.
- Edison, Hali J., Ross Levine, Luca Ricci, and Torsten Slok. 2002. "International Financial Integration and Economic Growth." NBER Working Paper No. 9164.
- Edwards, Sebastian. 1999a. "A Capital Idea? Reconsidering a Financial Quick Fix." *Foreign Affairs* (May/June): 18-22.
- Edwards, Sebastian. 1999b. "Capital Flows to Latin America: A Stop-Go Story." In Martin Feldstein, ed., *International Capital Flows*. Chicago: University of Chicago Press: 5-42.
- Edwards, Sebastian, ed. 2000. *Capital Flows and the Emerging Economies: Theory, Evidence, and Controversies*. Chicago: University of Chicago Press.
- Edwards, Sebastian. 2001. "Capital Mobility and Economic Performance: Are Emerging Economies Different?" NBER Working Paper No. 8076.
- Edwards, Sebastian and Jeffrey A. Frankel, eds. 2002. *Preventing Currency Crises in Emerging Markets*. Chicago: University of Chicago Press.
- Eichengreen, Barry. 1992. *Golden Fetters: The Gold Standard and the Great Depression, 1919-1939*. New York: Oxford University Press.
- Eichengreen, Barry. 1996. *Globalizing Capital: A History of the International Monetary System*. Princeton: Princeton University Press.
- Eichengreen, Barry. 2001. "Capital Account Liberalization: What Do Cross-Country Studies Tell Us?" University of California, Berkeley, Working Paper.

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- Feldstein, Martin (Editor. 1999. *International Capital Flows*. Chicago: University of Chicago Press.
- Garber, Peter. 1998. "Derivatives in International Capital Flows." NBER Working Paper No. 6623.
- Goldberg, Linda, B. Gerard Dages, and Daniel Kinney. 2000. "Foreign and Domestic Bank Participation in Emerging Markets: Lessons from Mexico and Argentina." NBER Working Paper No. 7714.
- Hallward-Driemeier, Mary, Giuseppe Iarossi, and Kenneth Sokoloff. 2002. "Exports and Manufacturing Productivity in East Asia: A Comparative Analysis of Firm-Level Data." NBER Working Paper No. 8894.
- Hartwell, Christopher A.. 2001. "The Case Against Capital Controls." CATO Institute Policy Analysis No. 403, June 14.
- Henry, Peter B.. 2000a. "Do Stock Market Liberalizations Cause Investment Booms?" *Journal of Financial Economics* 58: 301-34.
- Henry, Peter B.. 2000b. "Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices." *Journal of Finance* 55 (April): 529-64.
- Henry, Peter B.. 2003. "Capital Account Liberalization, the Cost of Capital, and Economic Growth." NBER Working Paper No. 9388.
- Horsefield, J. Keith. 1969. *The International Monetary Fund, 1945-1965, Volume I: Chronicle*. Washington, D.C.: International Monetary Fund.
- International Monetary Fund. 1998. *Capital Account Liberalization: Theoretical and Practical Aspects*. Occasional Paper 172. Washington, D.C.: IMF.
- Ito, Takatoshi. 2000. "Capital Flows in Asia." In Sebastian Edwards, ed., *Capital Flows and the Emerging Economies*. Chicago: University of Chicago Press: 255-97.
- Ito, Takatoshi, and Anne O. Krueger. 2001. *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*. Chicago: University of Chicago Press.
- Jerome, Harry. 1926. *Migration and Business Cycles*. New York: National Bureau of Economic Research.
- Johnson, Simon, and Todd Mitton. 2001. "Who Gains from Capital Controls? Evidence from Malaysia." MIT Working Paper.
- Jones, Eric L.. 1988. *The European Miracle*, Second Edition. Cambridge: Cambridge University Press.
- Kaminsky, Graciela, and Sergio Schmukler. 2002. "Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalizations." World Bank Working Paper, May.
- Kane, Edward. 1999. "How Offshore Financial Competition Disciplines Exit Resistance by Incentive-Conflicted Bank Regulators." NBER Working Paper No. 7156.
- Kaplan, Ethan, and Dani Rodrik. 2002. "Did the Malaysian Capital Controls Work?" In Sebastian Edwards and Jeffrey A. Frankel, eds., *Preventing Currency Crises in Emerging Markets*. Chicago: University of Chicago Press: 393-440.
- Klein, M., and G. Olivei. 1999. "Capital Account Liberalization, Financial Depth and Economic Growth." NBER Working Paper No. 7384.
- Krugman, Paul. 2000. "Fire-Sale Foreign Direct Investment." In Sebastian Edwards, ed., *Capital Flows and the Emerging Economies*. Chicago: University of Chicago Press: 43-59.

- Landes, David. 1999. *The Wealth and Poverty of Nations*. New York: W.W. Norton.
- Lipse, Robert E. 2001. "Foreign Direct Investors in Three Financial Crises." NBER Working Paper No. 8084.
- Maddison, Angus. 2001. *The World Economy: A Millennial Perspective*. Paris: OECD Press.
- Minsky, Hyman P.. 1975. *John Maynard Keynes*. New York: Columbia University Press.
- Montiel, Peter, and Carmen Reinhart. 1999. "Do Capital Controls and Macroeconomic Policies Influence the Volume and Composition of Capital Flows? Evidence from the 1990s." *Journal of International Money and Finance* 18 (August): 619–35.
- Mundell, Robert. 1963. "Capital Mobility and Stabilization Policy Under Fixed and Flexible Exchange Rates." *Canadian Journal of Economics and Political Science* (November), 475–85.
- Neal, Larry, and Marc Weidenmeier. 2002. "Crises in the Global Economy from Tulips to Today: Contagion and Consequences." NBER Working Paper No. 9147.
- Obstfeld, Maurice, and Kenneth Rogoff. 1995. "The Mirage of Fixed Exchange Rates." *Journal of Economic Perspectives* 9, 73–96.
- Obstfeld, Maurice, and Alan M. Taylor. 2003. *Global Capital Markets: Integration, Crisis, and Growth*. Cambridge: Cambridge University Press, forthcoming.
- O'Rourke, Kevin H., and Jeffrey G. Williamson. 2000. *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*. Cambridge: MIT Press.
- Radelet, Steven, and Jeffrey D. Sachs. 1998. "The East Asian Financial Crisis: Diagnosis, Remedies, Prospects." *Brookings Papers on Economic Activity* (1): 1–90.
- Razin, Assaf, Efraim Sadka, and Chi-Wa Yuen. 2001. "Social Benefits and Losses from Foreign Direct Investment: Two Nontraditional Views." In Takatoshi Ito and Anne O. Krueger. 2001. *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*. Chicago: University of Chicago Press: 311–26.
- Rodrik, Dani. 1998. "Who Needs Capital-Account Convertibility?" Harvard University Working Paper.
- Rojas-Suarez, Liliana. 2003. "Monetary Policy and Exchange Rates: Guiding Principles for a Sustainable Regime." In Pedro P. Kuczynski and John Williamson, eds., *After the Washington Consensus: Restarting Growth and Reform in Latin America*. Institute for International Economics, forthcoming.
- Wei, Shang-Jin. 2000. "Local Corruption and Global Capital Flows." *Brookings Papers on Economic Activity* (2): 303–46.
- Wei, Shang-Jin, and Yi Wu. 2002. "Corruption, Composition of Capital Flows, and Currency Crises." In Sebastian Edward and Jeffrey A. Frankel, eds., *Preventing Currency Crises in Emerging Markets*. Chicago: University of Chicago Press: 461–501.
- Wilkins, Mira. 1989. *The History of Foreign Investment in the United States to 1914*. Cambridge: Harvard University Press.

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