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A Pragmatic Approach to Capital Account Liberalization

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In the mid-1990s, mainstream economists of nearly all stripes commonly recommended capital account liberalization—that is, allowing a free flow of funds in and out of a country's economy—as an essential step in the process of economic development. Indeed, in September 1997, the governing body of the International Monetary Fund (1997) sought to make "the liberalization of capital movements one of the purposes of the IMF and extend, as needed, the IMF's jurisdiction . . . regarding the liberalization of such movements." But then came the East Asian financial crisis of 1997–98, in which even seemingly healthy and well-managed economies like those of South Korea were engulfed by massive capital outflows and tremendous currency volatility, and capital account liberalization became quite controversial in the economics profession. For example, Fischer (1998) and Summers (2000) continued to make the case for capital account liberalization, while Rodrik (1998) and Stiglitz (2000) were skeptical.

A decade later, now that time has quelled passions and intervening research can shed more light on the debate, it appears that both the costs and benefits of capital account liberalization may have been misunderstood in that earlier debate. The major benefit of capital account liberalization was allegedly that it would help low-income countries expand investment and thus generate higher rates of economic growth. However, cross-country regressions suggest little connection from foreign capital inflows to more rapid economic growth for such countries. This suggests that the lack of domestic savings is not the primary constraint on growth in these economies, as implicitly assumed in the benchmark neoclassical framework.

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So is openness to capital flows irrelevant? Probably not! The debate is refocusing on a different set of benefits, primarily the indirect or "collateral" benefits that accrue to a country's governance and institutions when it opens up to cross-border capital flows. It is also looking at some other costs, primarily the real exchange rate overvaluation and loss of competitiveness that can occur when foreign capital floods in, rather than the more traditional risks of "sudden stops" and capital flow reversals, when foreign (and domestic) investors take fright and head for the exits.

But if the benefits of capital account liberalization are large, why don't we see them in cross-country regressions of growth against net foreign financing? One explanation could be that there are threshold levels of institutional development only above which the benefits exceed the costs. This hypothesis could explain why the correlation between growth and the use of foreign capital is strongly positive for industrial countries but not for low-income countries. A related explanation is that the collateral benefits of openness to foreign capital are greater at higher levels of development, while the associated costs and risks are greater at lower levels of development. Another hypothesis is that crude quantity-based measures of the use of foreign finance, such as the current account deficit or gross inflows, may not accurately capture the influence of foreign capital. These explanations are not mutually exclusive.

Countries that might be close to, but still below, the undoubtedly difficult-to-define institutional threshold for gaining the benefits of capital account liberalization can thus face a Catch-22 situation. On one hand, the country's institutions will probably improve with greater openness to financial flows, allowing the country eventually to secure net gains from openness; on the other hand, greater openness to financial flows may expose the country to significant immediate costs. In this setting, a pragmatic approach would call for opening up capital account liberalization further when costs are likely to be lower and attempting to take steps to reduce the costs even further.

All this assumes that policymakers have the luxury of being able to decide when to increase or decrease their economy's openness to capital flows. But increasingly, they may not have much option. The enormous expansion in trade around the world offers a conduit for disguising capital account transactions—for example, through under-invoicing and over-invoicing—which inevitably will result in the further de facto opening of the capital account. Open capital accounts are a looming reality in virtually every country, irrespective of the formal capital control regime in place. In this situation, policymakers in emerging market economies should see their job as how to manage the speed and scope of capital account liberalization, not whether to liberalize at all.

Challenges to the Conventional Story of International Financial Integration

The conventional view about international financial integration is that it should enable capital to flow from high-income countries, with relatively high

capital–labor ratios, to low-income countries with lower capital–labor ratios (Lucas, 1990). If investment in poor countries is constrained by the low level of domestic saving, access to foreign capital should boost their growth—and it would also allow residents of richer countries to get higher returns on their savings invested abroad. However, this conventional story has a variety of shortcomings. Let us start by discussing foreign capital inflows.

Missing Links from Capital Inflows to Growth

Many economists believe that productivity growth, rather than just accumulation of inputs, is the main determinant of long-term growth (for example, Solow, 1956; Hall and Jones, 1999). A corollary is that foreign capital inflows by themselves should only have temporary effects on growth. Gourinchas and Jeanne (2006) use calibrations of a parameterized general equilibrium model to argue that the effects on economic growth of opening up to capital inflows are likely to be small precisely because productivity growth is the main determinant of long-term growth. Similarly, Henry (2006) points out that the benefits of equity market liberalizations on investment and output growth are likely to be of short duration, unless the resulting financial market development fundamentally changes productivity growth. Of course, for countries with very low levels of investment, the period of adjustment to higher levels of factor inputs could be several decades long. Hence, it is reasonable to expect positive correlations between capital flows, investment, and growth over shorter time spans, even if the long-run correlation is zero.

However, empirical studies using macroeconomic data typically do not find that inflows of foreign capital have spurred growth in developing countries. For example, Aizenman, Pinto, and Radziwill (2004) find that developing countries with higher self-financing ratios (share of domestic investment accounted for by domestic savings) turn in better growth performances on average. In Prasad, Rajan, and Subramanian (2007), we document that nonindustrial countries that have relied less on foreign finance—that is, countries that have run smaller current account deficits or even run current account surpluses—have not grown slower (and, in many cases, have grown faster) over the last three decades than those more reliant on external capital. Kose, Prasad, Rogoff, and Wei (2006) conclude from a more extensive survey that there is little evidence that financial integration has a robust positive correlation with GDP growth.[1]

Moreover, Lucas (1990) noted that capital flows from industrial to developing countries were much smaller than the levels predicted by the conventional story of capital flows between countries with differing capital–labor ratios. During the first decade of the twenty-first century, the "Lucas paradox" has intensified as emerging market economies have, on net, been *exporting* capital to richer industrial economies, mostly in the form of accumulation of foreign exchange reserves, which are

[1] Some recent studies based on data over longer time spans and using finer measures of financial integration have turned up more positive evidence of the benefits of financial integration; for example, see Quinn and Toyoda (forthcoming) and Bekaert, Harvey and Lundblad (2005). But these scattered pieces of positive evidence are far from conclusive.

largely invested in industrial country government bonds. These "uphill flows" of capital have had no discernible adverse impact on the growth of developing economies, which suggests that the paucity of resources for investment is not the key constraint to growth in these economies.

One possible explanation is that perhaps low-income countries are not primarily "savings-constrained" but the profitability of the investment opportunities they offer is very limited. This situation might arise because many low-income countries lack institutions protecting property rights (so private investment, if profitable, risks expropriation) or because their financial system is underdeveloped so investor rights are not protected (Alfaro, Kalemli-Ozcan, and Volosovych, 2007). In these economies where the lack of important domestic institutions constrains investment, Rodrik and Subramanian (2008) argue foreign capital inflows may be disproportionately used to finance consumption, leading to an overvalued exchange rate and an even greater reduction in the profitability of investment. This argument may explain the positive correlation between foreign capital inflows and exchange rate overvaluation as well as the negative correlation between foreign capital inflows and growth that we found in Prasad, Rajan, and Subramanian (2007).

Yet this argument cannot be the entire story. What about countries like China or India that are experiencing investment booms? Why are they not big users of foreign capital? One possibility is that the very improvement in domestic institutions that enhances investment opportunities also enhances incentives for domestic households to save (or keep their savings in the country). Indeed, the improvement in domestic savings may be a better proxy for the true improvement in the quality of institutions and hence investment opportunities. So countries that invest more but are able to finance more of it with domestic savings grow faster, as we found in Prasad, Rajan, and Subramanian (2007), but this pattern may have nothing to do with whether foreign capital is bad for growth and everything to do with the quality of investment opportunities in countries that finance more through domestic savings.

In sum, there is little evidence that low-income countries have a tremendous gap between domestic investment and savings that holds back growth—a gap that can be plugged by foreign capital, as the traditional literature would suggest. Some countries simply don't have good investment opportunities (and the factors that depress investment may depress domestic savings even further, forcing these countries to rely on foreign capital), while those that have investment opportunities may also be able to generate adequate domestic savings. But what then are the benefits of financial openness more generally and foreign capital inflows specifically?

Collateral Benefits and Institution Building from Financial Liberalization

Openness to capital flows can expose a country's financial sector to competition, spur improvements in domestic corporate governance as foreign investors demand the same standards locally that they are used to at home, and impose discipline on macroeconomic policies and the government more generally. So even if foreign capital is not needed for financing, it may be that financial openness (to

both inflows and outflows) creates "collateral benefits" (Kose, Prasad, Rogoff, and Wei, 2006) such as domestic financial sector development (also see Rajan and Zingales, 2003a), which could enhance growth in total factor productivity.

For instance, international financial flows serve as an important catalyst for domestic financial market development, as reflected in both straightforward measures of the size of the banking sector and equity markets as well as broader concepts of financial market development, including supervision and regulation (see the survey by Mishkin, 2006). Foreign bank presence is associated with improvements in the quality of financial services and the efficiency of financial intermediation (Claessens, Demirgüç-Kunt, and Huizinga, 2001; Levine, 2001; Clarke, Cull, Martinez Peria, and Sanchez, 2003; Claessens and Laeven, 2004; Schmukler, 2004). Stock markets tend to become larger and more liquid after equity market liberalizations (Levine and Zervos, 1998).

Financial openness has induced a number of countries to adjust their corporate governance structures in response to foreign competition and demands from international investors (see the evidence surveyed in Gillian and Starks, 2003). Moreover, financial-sector foreign direct investment from well-regulated and well-supervised source countries tends to support institutional development and governance in emerging markets, providing a sense of direction for the complex supervisory and regulatory challenges that developing countries face as they integrate into the world economy (Goldberg, 2004).

Other collateral benefits could include, for instance, the discipline imposed on macroeconomic policies. The logic is that financial openness acts as a commitment device since policies that result in excessive government budget deficits or high inflation could lead to foreign investors bolting for the exits at the first sign of trouble. The evidence on this point is limited, however. Tytell and Wei (2004) find that financial openness is positively correlated with lower inflation but uncorrelated with the size of budget deficits.

If indeed collateral benefits are important and they come from the possibility of two-way flows as much as from the actual inflow of foreign capital, then only looking at the effects of inflows of foreign capital may be inadequate. The effect of de jure openness—the existence or absence of formal capital controls—also needs to be examined (see, for example, Arteta, Eichengreen, and Wyplosz (2003) and Klein and Olivei (forthcoming)). The evidence here is rather mixed, in part because the information content of measures of capital controls is limited—having legal controls is one thing, enforcing them effectively is quite another. Using the sum of the stocks of foreign assets and liabilities as the measure of financial integration to capture the accumulated exposure to international capital markets also yields at best weak evidence of the growth benefits.

Also, it takes time to build institutions, to enhance market discipline, and to deepen the financial sector, which may explain why, over relatively short periods, detecting the benefits of financial globalization is difficult. Even at long horizons, it may be difficult to detect the productivity-enhancing benefits of financial globalization in empirical work if the analysis includes structural, institutional, and

macroeconomic policy variables. After all, these are the very channels through which financial integration generates growth benefits.

Thresholds for Benefiting from Financial Openness

But perhaps the biggest problem in detecting collateral benefits in long-run cross-country regressions may be that such benefits kick in only when a country is above a certain level of institutional and economic development. For instance, when property rights are unprotected or the judiciary is very weak, foreign investors may be able to do little to improve corporate governance (see Stulz, 2005). Only when a minimum threshold level of these institutions exists can arm's-length foreign investors press for better governance. It may also be that only when a country is more advanced and close to the technological frontier that the country can use the full capabilities that foreign financial know-how brings, such as the ability to discriminate between alternative sets of investment opportunities. When a country is very poor, the investments that are needed may be more obvious and potentially very profitable and attractive to foreign investors, but weak institutions may prevent the realization of the broader indirect benefits of foreign capital.

Indeed, below a certain institutional threshold, financial openness could be detrimental (see the evidence in Prasad, Rajan, and Subramanian, 2007). For example, foreign investors are often depicted as arm's-length investors who cut and run at the first sight of trouble. If this description is not entirely a caricature, a country with an inadequate regime to deal with corporate insolvencies could be hurt very badly in a panic, as fleeing foreigners bring down domestic firms.

In fact, the very nature of foreign engagement may change with improvements in a country's institutional quality—a term that encompasses quality of corporate and public governance, the legal framework, government transparency, and level of corruption. Faria and Mauro (2004) find that better institutional quality tilts a developing country's foreign inflows towards foreign direct investment and portfolio equity flows, which not only are less risky than debt flows, but also lead to more foreign involvement in corporate governance and technology transfer. Rajan and Tokatlidis (2005) suggest that countries with limited capacity to solve internal fiscal conflicts are likely to have more fragile foreign debt structures and more dollarization.

Finally, some macroeconomic structures and policies are also typically (though not always) associated with underdeveloped countries and lead to greater risks from financial openness. A rigid exchange rate regime can make a country more vulnerable to a crisis when it opens its capital markets (Obstfeld and Rogoff, 1995). A lower level of trade relative to the size of the economy increases the probability of crises associated with financial openness and increases the costs of such crises if they do occur. Thus, the recent literature strengthens the case made by the old sequencing literature for putting trade liberalization ahead of financial integration.

Some evidence suggests threshold effects for the correlation between openness and growth; that is, although greater reliance on foreign capital does not seem to be associated with growth for nonindustrial countries, it is positively associated with growth for industrial countries and, over shorter time horizons, for more advanced

transition countries also (Prasad, Rajan, and Subramanian, 2007; Abiad, Leigh, and Mody, 2007). A number of papers also suggest that financial depth or the quality of domestic institutions can affect growth benefits from capital inflows (for example, Alfaro, Chanda, Kalemli-Ozcan, and Sayek, 2004; Klein, 2005; Chinn and Ito, 2006; Klein and Olivei, forthcoming; Kose, Prasad, and Taylor, 2008).

The Policy Dilemma

If net collateral benefits kicked in beyond a certain institutional threshold, the policy response would be clear—wait till the country is clearly beyond the threshold and then liberalize. The problem then (not an inconsequential one) would be to determine when the country was beyond the institutional threshold. The real dilemma lies, however, in the possibility that openness can catalyze some of the institutional and financial sector development that is necessary to obtain the collateral benefits of openness. If so, it might make sense for a country to liberalize somewhat before it is institutionally developed enough to secure net benefits from openness, for the purpose of speeding up institutional development itself.

Given that even somewhat institutionally underdeveloped countries may experience benefits from capital account liberalization, a country following a pragmatic approach to liberalization might follow this strategy: pick periods when the risks associated with liberalization are likely to be lower so that its relevant institutions could develop over a relatively benign period and so that the institutions would then be better-developed when times become tougher. What might define such benign periods? We explore this question in the next section.

The Evolution of the Cost–Benefit Tradeoff

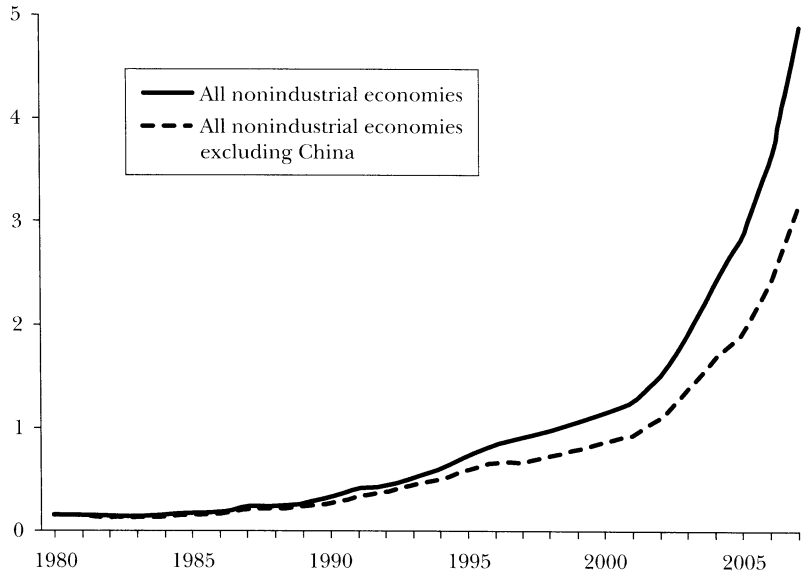
In recent years, a number of developments in international trade and finance have shifted both the potential risks and benefits of openness to foreign capital. We now discuss a few of these key developments.

Stock of Foreign Exchange Reserves

Emerging markets and developing countries in recent years have typically run large current account surpluses instead of the more traditional deficits. In part, this pattern has arisen because of relatively subdued investment, perhaps because of learning from past crises; in part, this has been because of expanded savings. For instance, in the Philippines, investment fell from 21 percent of GDP in 1996 to 17 percent in 2006, while savings rose from 17 to 22 percent of GDP. In other words, the Philippines has changed from borrowing the equivalent of 4 percent of its GDP from abroad to pumping out 5 percent of its GDP as a current account surplus.

In part as a result of trade surpluses, in part as a result of capital inflows because of their better economic health, a number of emerging market countries have had a prodigious build-up in their foreign exchange reserves. These countries have accumulated reserves because they have attempted to stave off large exchange

Figure 1
Foreign Exchange Reserves Held by Nonindustrial Economies
(in trillions of U.S. dollars)



Sources: The IMF's International Financial Statistics and authors' calculations.
Note: This figure is based on data for 147 countries.

rate appreciations by intervening in the foreign exchange market. Figure 1 shows that the total stock of foreign exchange reserves held by emerging markets and other developing countries skyrocketed to nearly $5 trillion dollars at the end of 2007 (compared to $0.7 trillion in 1995 and $1.2 trillion in 2000).

The level of reserves now held by emerging market countries far exceeds the standard guidelines for what is necessary to insure against sudden stops or reversals of capital flows (Jeanne, 2007; Durdu, Mendoza, and Terrones, 2007; Reddy, 2005). Most emerging markets now comfortably meet or exceed the common rules-of-thumb that they should hold liquid reserves sufficient to meet all foreign liabilities coming due over the next twelve months or at least six months' worth of imports. In addition, arrangements for pooling foreign exchange reserves, like the Chiang Mai Initiative in South East Asia, allow individual countries to swap their domestic currencies for U.S. dollars held by other countries in the pool, increasing the insurance value of individual country reserve holdings. Of course, such pooling would not provide much insurance against common regional shocks that hit all countries in the pool. However, the sheer volume of reserves is likely to serve as a deterrent to speculative attacks on a currency, making financial crises and their subsequent contagion effects (wherein countries with otherwise reasonable macroeconomic conditions get swept along in financial panics) less likely in the first place.

While foreign exchange reserves provide a useful cushion against financial and balance of payments crises, thus making capital account liberalization less risky, they also create problems of their own. Many of these economies are finding it increasingly difficult to soak up or "sterilize" (using government bonds) the liquidity created by inflows, so pressures for domestic currency appreciation are building. Furthermore, governments are increasingly questioning the benefits of a policy that, in essence, involves purchasing more low-yield securities from foreign governments financed by higher-yield domestic debt.

The surge in foreign exchange reserves has led to three types of responses. One approach is to find creative uses for reserves—for instance, using them to recapitalize domestic banks, to finance infrastructure spending, or to stockpile oil reserves. China and India, for instance, have adopted some of these uses for their reserves.

A second approach has been to set up government investment corporations, sometimes called "sovereign wealth funds," that can recycle reserves into high-yielding assets. Estimates of assets held by sovereign wealth funds, including those of industrial countries such as Norway, come to about $2.5 trillion dollars, not including the unreported size of wealth funds of oil-exporting countries in the Middle East. (This total is separate from the foreign exchange reserves by sovereign governments.)

It is difficult to predict how much of the resources from these funds will flow into international capital markets; for example, some of the resources of these funds may be destined for domestic investment in strategic sectors or in infrastructure. But even so, such funds raise a number of questions: Do the governments of these countries have the competence to choose profitable investments? Will the sovereign fund be so risk adverse (because the domestic political consequences of making losses could be large) that it simply joins the herd of institutional investors? Will the governments exercise influence not motivated by commercial concerns, over the foreign companies that they own? Will governments allow foreign corporations in which they invest undue influence over their own policies?

A third approach under consideration in some countries is to expand opportunities for private capital outflows with the hope that this will alleviate appreciation pressures on the exchange rate by offsetting some of the inflows. Many countries such as China and India have loosened the reins on capital that can be taken out by corporations and individuals. We will discuss this option at greater length later.

A more basic concern is that the underlying distortions that often contribute to rapid reserve accumulation, such as overly rigid exchange rates and repressed financial sectors, could have long-term detrimental effects on the economy. While policymakers in emerging markets often recognize this point, they are typically under political constraints to restrain rapid currency appreciation, because this could hurt export competitiveness. Consequently, policymakers are able to allow only modest currency appreciations that, in the short run, generate expectations of further appreciation. This pattern, in turn, tends to fuel further speculative inflows and makes domestic macroeconomic management even more complicated.

Changes in the Composition of External Liabilities

One major trigger of balance of payments crises has historically occurred when a country has a large share of short-term debt denominated in foreign currency (Rodrik and Velasco, 1999). Many emerging markets were unable to generate other, safer forms of financial inflows during the 1980s and 1990s, perhaps because foreign investors feared the countries' weak institutions, bad policies, or worse still, possible expropriation (for example, Diamond and Rajan, 2001; Jeanne, 2000; Rajan and Tokatlidis, 2005). Whatever the underlying cause, sudden stops of capital inflows in this situation mean that countries cannot finance their debts, which in turn leads to more capital fleeing the country and a plummeting exchange rate. When the exchange rate depreciates, it becomes difficult for the country to repay its foreign-currency–denominated borrowing, which can lead to a collapse of the banking sector.

However, the share of foreign direct investment flows has now become far more important than that of debt in gross private capital flows to nonindustrial countries. Table 1 (top panel) shows how these shares have evolved for emerging markets and other developing countries. The share of foreign direct investment in total gross inflows to emerging markets and other developing countries rose from about 25 percent in 1990–94 to nearly 50 percent by 2000–04. Over the same period, the share of debt (including portfolio debt and bank loans) in inflows to emerging markets fell from 64 percent to 39 percent. There has been a similar but more gradual evolution in the composition of stocks of external liabilities (Table 1, lower panel).

Moreover, when emerging market countries do borrow, they have had less need to borrow in a foreign currency; foreign investors now enthusiastically buy bonds denominated in many local currencies—even from countries that suffered financial crises just a few years ago. For example, during 2004–5, Brazil, Colombia, and Uruguay issued bonds denominated in local currency to foreign investors. These bonds were not indexed to inflation, had reasonably long maturities, and had low spreads relative to industrial country bonds.

Countries that have experienced an increase in the share of foreign direct investment and a decrease in borrowing in foreign-denominated currencies face lower risks from capital account liberalization. Domestic currency-denominated debt is of course safer for the issuing country because it does not create the risk that currency depreciation will make it difficult or impossible to repay the debt. Of course, only time will tell how much these developments reflect temporary benign worldwide financing conditions, and how much they reflect permanent changes.

From Fixed Exchange Rates to Inflation Targeting

Many emerging market economies once used a fixed exchange rate as the primary target for their monetary policy. Fixed exchange rates can be useful for economies at early stages of financial development and could serve as a useful nominal anchor, especially if their central banks are not credible (Husain, Mody, and Rogoff, 2005). One hope behind this policy was that a fixed exchange rate would make it easier for the country to carry out foreign trade and investment,

Table 1
The Changing Composition of Gross Inflows and External Liabilities

	1980–84	*1985–89*	*1990–94*	*1995–99*	*2000–04*
Gross inflows					
Emerging markets (in billions of U.S. dollars)	66	60	194	328	288
Share of debt	83.0	69.3	63.9	48.2	39.3
Share of FDI	15.5	27.3	24.4	40.7	48.6
Share of equity	1.5	3.4	11.7	11.0	12.1
Other developing countries (in billions of U.S. dollars)	6	4	7	13	16
Share of debt	83.8	82.2	71.8	58.6	55.4
Share of FDI	15.1	17.2	27.7	40.9	44.2
Share of equity	1.1	0.6	0.5	0.5	0.4
Gross external liabilities					
Emerging markets (in billions of U.S. dollars)	611	865	1,356	2,585	3,469
Share of debt	84.6	83.7	70.9	61.1	51.7
Share of FDI	14.2	14.6	21.5	29.0	36.7
Share of equity	1.2	1.8	7.6	10.0	11.5
Other developing countries (in billions of U.S. dollars)	71	101	129	170	222
Share of debt	79.9	84.1	81.2	73.7	64.9
Share of FDI	19.8	15.4	18.3	25.5	33.6
Share of equity	0.3	0.5	0.5	0.8	1.5

Sources: Data for the top panel are taken from table 2 of Kose, Prasad, Rogoff, and Wei (2006), which is based on data from the IMF's International Financial Statistics and Lane and Milesi-Ferretti (2006). The lower panel is based on Lane and Milesi-Ferretti (2006) and authors' calculations.
Notes: "Debt" is defined as the sum of portfolio debt, bank loans and deposits, and other debt instruments. "FDI" is foreign direct investment and "equity" refers to portfolio equity flows. Data are based on averages of annual data over the relevant five-year period for each group of countries. The sample covers 20 emerging markets and 30 other developing countries.

because the risks of foreign exchange fluctuations would be reduced. However, as these economies opened their capital markets, they encountered severe risks.

A number of papers have made the point that the combination of open capital accounts and de facto fixed exchange rates has precipitated many of the financial and balance of payments crises witnessed in the last two decades. Edwards (2007) summarizes these arguments and provides new empirical evidence that, for countries that have relatively open capital accounts, a fixed exchange rate significantly increases the probability of a capital flow contraction.

An increasing number of emerging market economies have begun to switch to more flexible exchange rate regimes, with many of them using an inflation target rather than a fixed exchange rate as the anchor for their monetary policy. The academic literature suggests that giving monetary policy the operational indepen-

dence to focus on low inflation is the best way that monetary policy can contribute to overall macroeconomic and financial stability (for discussion and some critical perspectives, see Bernanke and Woodford, 2004). Rose (2006) provides empirical evidence that inflation targeters have lower exchange rate volatility and fewer sudden stops than similar countries that do not target inflation. He also notes that this monetary regime seems durable—no country has yet been forced to abandon an inflation targeting regime. Of course, emerging markets are only recently beginning to adopt this regime in significant numbers and international capital markets have been relatively calm during the 2000s (until very recently), so this regime hasn't really been tested much yet. However, flexible exchange rates do offer an important shock absorber for an economy that is becoming more integrated into international trade and financial markets.

Conducting monetary policy with a framework of inflation targeting and flexible exchange rates can still leave policymakers with a difficult set of options in the short run if there are surges in foreign capital inflows. Inflows translate into increases in domestic liquidity that result in inflationary pressures, which require monetary policy tightening in the form of higher interest rates. This response, in turn, can induce even more capital inflows. An appreciation of flexible exchange rates can of course act as a shock absorber, reducing domestic inflation and tamping down inflows. However, very rapid exchange rate appreciation can also hurt external competitiveness because exporting firms have little time to boost their productivity sufficiently to avoid becoming uncompetitive.

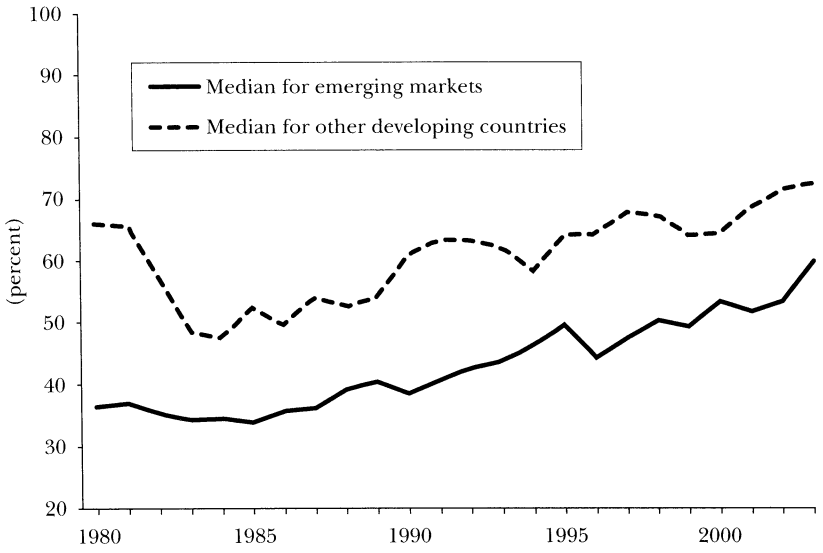
Thailand is an example of an Asian economy that allowed its exchange rate to appreciate significantly to maintain its inflation target. India's experience has been similar, with the real effective exchange rate of the rupee appreciating by about 12 percent during 2007, notwithstanding a current account deficit. Exporters in countries experiencing such rapid currency appreciation have complained loudly of reduced competitiveness and job losses. In India, these pressures have led the government to compensate exporters directly using fiscal transfers. However, a country with an open capital market is probably better off dealing with the problems of currency fluctuations, rather than attempting the risky policy mix of fixed (or tightly managed) exchange rates and an open capital market.

Trade Openness

Many emerging market economies and developing countries have liberalized trade flows by reducing tariff and nontariff barriers. Figure 2 shows that the volume of total trade expressed as a ratio to GDP has increased significantly since the mid-1980s for both emerging markets and other developing countries. Indeed, the trade openness ratio for virtually every emerging market economy has increased steadily and, for some economies, quite markedly over the last two decades.

Economies that are more open to trade are also more favorably placed for capital account liberalization for two broad reasons. First, they face less risk from sudden stops or reversals of capital inflows because they are in a better position to service their external obligations through their export revenues and are less likely to default (Calvo, Izquierdo, and Mejia, 2004; Frankel and Cavallo, 2004). Further-

Figure 2
Trade Openness
(the sum of imports and exports as a ratio to GDP, in 2000 constant prices)



Sources: Penn World Tables 6.2 and authors' calculations.
Notes: The sample comprises 20 emerging markets and 30 other developing countries. The statistics shown above are based on cross-sectional distributions of the openness measure, calculated separately for each year.

more, more open economies have to undergo a smaller real exchange rate depreciation for a given current account adjustment; hence, among countries that have experienced sudden stops or current account reversals, those that are more open to trade face smaller adverse growth effects and are able to recover faster (Edwards, 2004, 2005).

Second, expanding trade is in effect a form of capital account liberalization because it provides a simple avenue to evade capital account restrictions. For instance, by over-invoicing exports, an exporter can funnel money into its home country—that is, by making the capital inflow associated with the exports greater than the actual market value of exports. Of course, this procedure requires a willing counterparty at the other end to facilitate such a transaction; the proliferation of multinationals and foreign-owned subsidiaries has made this much easier. Similarly, over-invoicing of imports provides a conduit for taking money out of a country.

In China during the late 1990s, for example, the "errors and omissions" category of the balance of payments was large and negative, which was widely believed to reflect capital outflows through unofficial channels (Prasad and Wei, 2007). As the renminbi has come under increasing pressures for appreciation during this decade, the sign of the errors and omissions category switched and the magnitude grew rapidly until 2005, indicative of capital *inflows* through unofficial channels, notwithstanding extensive controls on inflows. As China's government

tightened up its capital controls to try and stanch speculative inflows, the errors and omissions fell to near zero in 2006, but the trade surplus rose dramatically, buoyed by remarkably high rates of export growth. A portion of this increase in reported exports and the trade surplus is believed by some analysts to reflect speculative inflows through the trade channel.

Summary

Recent economic developments have generally created a more benign environment in which countries can become more open. But the risks are not inconsequential. Many emerging market countries are still below the necessary threshold levels of institutional and financial development. The capacity of these countries to weather the volatility associated with foreign capital flows, especially surges in inflows followed by sudden stops, is limited. An underdeveloped financial system, which is typical of many developing economies, is more likely to channel foreign capital to easily collateralized nontradeable investments like real estate, thereby contributing to asset price booms (and the risk of disruptions from subsequent busts). Similarly, foreign portfolio equity flows into shallow equity markets could lead to disruptive sharp swings. In the absence of other financial assets in some emerging markets, foreign investors may also use equity markets in these countries to bet on currency appreciation, thereby distorting asset values and adding to the risk of speculative bubbles.

Large capital inflows could also result in rapid real exchange rate appreciation, which can hurt manufacturing exports (Rajan and Subramanian, 2005; Bhalla, 2007; Johnson, Ostry, and Subramanian, 2007; Prasad, Rajan, and Subramanian, 2007; Rodrik, 2007). Even a relatively short-term appreciation can sometimes lead to longer-lived consequences like loss of market share in export markets and reductions in manufacturing capacity.

In sum, while the environment is benign, countries may want to liberalize more so as to reap some of the benefits of openness, such as financial market development, but only if they can limit some of the costs, such as potential exchange rate overvaluation. The need to consider a pragmatic approach becomes all the more important because as trade expands the world over, the effectiveness of capital controls is rapidly eroding, even in a tightly controlled economy like China. It is becoming increasingly easy for capital to find loopholes and channels for evading these controls. Is there a constructive way to make progress that does not result in precipitous opening of the capital account and the attendant risks? In the next section, we discuss what countries have tried to do; in the following section, we offer some suggestions of our own.

Approaches to Restricting and Liberalizing Capital Flows

Before we turn to liberalization, let us start by asking whether countries have been successful in shutting themselves off from cross-border capital flows. Are capital controls effective?

Capital Controls

The measures that countries have put in place to control capital flows come in various flavors. For example, controls can be imposed on inflows or outflows; on different types of flows (like foreign direct investment, portfolio equity, or portfolio debt); flows of different maturities; and flows into specific sectors. Kose, Prasad, Rogoff, and Wei (2006, Appendix I) provide a detailed taxonomy of capital controls. Do capital controls affect capital flows in the intended way? Do capital controls lead to better macroeconomic outcomes? The answer to this second question cannot be conclusive because the counterfactual is not clear, so our discussion on this point can only be suggestive.

In recent decades, a number of countries have imposed capital controls, usually in response to short-term problems with international capital flows. Some Latin American economies imposed controls on capital outflows during the 1980s and 1990s, but typically did not succeed in stemming capital flight by domestic economic agents.

During the Asian crisis of 1997 through mid-1998, the Malaysian ringgit came under severe depreciation pressures as foreign exchange reserves fell rapidly and portfolio outflows surged. However, Malaysia declined IMF financial assistance and in September 1998, the Malaysian government pegged the ringgit to the dollar and introduced sweeping controls on portfolio outflows. The Malaysian experience is sometimes touted as an example of the success of capital controls, although there are different interpretations of how effective these were in practice and how important they were in Malaysia's recovery from the Asian crisis. Kaplan and Rodrik (2001) argue that the imposition of controls had beneficial macroeconomic effects, especially compared to the experiences of countries such as Korea and Thailand that accepted IMF programs during the crisis. Dornbusch (2001) rejects this view, noting that the capital controls came quite late, after the region had already begun to stabilize. In terms of the efficacy of capital controls, one key difference between Malaysia and the Latin American economies is that Malaysia had tight control of its banking system, which meant that channels for capital flight could be shut off more easily.

Countries have also attempted to control inflows. Chile, which faced massive inflows during the early 1990s, is the canonical example. The authorities imposed an unremunerated reserve requirement of 20 percent on short-term debt inflows in 1991. In subsequent years, as investors began to exploit various loopholes, the authorities attempted to stay ahead of the game by increasing the reserve requirements and extending them to different types of inflows and by imposing a minimum "stay" requirement on foreign direct investment and portfolio equity inflows. De Gregorio, Edwards, and Valdes (2000) argue that the controls did not affect the volume of inflows but were successful in tilting the maturity structure of debt inflows—away from short-term and towards longer-term loans. These authors argue that the reasonable effectiveness of the Chilean controls on capital inflows is attributable to an effective government with low corruption and to the nimbleness of the authorities in clamping down on evasion. However, the Chilean experience

also suggests that capital controls with more than the most modest objectives will eventually lose effectiveness as the private sector finds ways to get around even the most innovative regulators.

More recent examples include Thailand and India, which have tried to manage the frothiness in their equity markets that has been abetted by foreign capital inflows. In December 2006, the Thai central bank imposed a tax on short-term portfolio equity inflows. The announcement of this measure set off a 15 percent one-day fall in the main stock price index, causing the government largely to retract it. The government of India, fearing that foreign inflows were feeding house price inflation and also feeding into upward pressure on the rupee, attempted in May and August 2007 to limit external commercial borrowing by certain corporate entities. However, firms have circumvented this restriction by disguising their borrowing through other channels (for example, by delaying repayments on trade finance and thereby effectively getting a temporary loan). One lesson from these episodes is that when capital controls have previously been eliminated, reinstating them can have substantial effects on asset prices and will thus be politically very difficult. This irreversibility means that the opening of the capital account should be driven by longer-term considerations.

These episodes suggest a few other general lessons about capital controls. First, inflows are easier to control than outflows; once channels for outflows are opened up, they can be much harder to shut down when there are large pressures for capital to flee (Reinhart and Smith, 2002; Magud, Reinhart, and Rogoff, 2007). Second, capital controls work better when the financial system is reasonably well-regulated and well-supervised and domestic institutions are reasonably strong. This point has an ironic tone because these conditions of course make it less likely that controls will be needed in the first place. Third, new capital controls pose a significant administrative burden—they need to be constantly updated to close loopholes and, in any event, tend not to be effective beyond the short term.

Even when capital controls are effective in a narrow sense, they can have significant costs. In the case of Chile, the capital controls penalized short-term credit. As a consequence, small and medium-sized firms (and also new firms), which typically find it harder to issue long-term bonds, faced much higher costs of capital (Forbes, 2007). Capital controls can also affect overall economic efficiency by conferring undue benefits to politically well-connected firms (invariably, quotas on inflows are implemented in an arbitrary fashion by the government) and protecting incumbents from competition. Johnson, Kochhar, Mitton, and Tamirisa (2006) provide some evidence of this phenomenon for Malaysia. There is also increasing microeconomic evidence of the distortionary costs of capital controls (see the survey by Forbes, 2007). Desai, Foley, and Hines (2006) show that capital controls distort the investment decisions of multinational firms. Finally, an accumulating body of evidence indicates that capital controls by themselves do not serve their main stated purpose of reducing the probability of financial crises, especially banking crises. Edwards (2005) and Glick, Guo, and Hutchison (2006) find that there is no relationship between de jure capital account openness and crises.

Liberalizing the Capital Account

Capital account liberalization can imply removing impediments to inflows of capital, or allowing domestic investors to invest more freely in foreign assets. We catalogue various approaches that countries have taken to freeing capital inflows and outflows and discuss the pros and cons of some of these approaches.

Inflows of foreign direct investment are considered quite attractive for an emerging market economy. They tend to be more stable than other types of capital flows (unlike portfolio equity and bank loans, which can be reversed quickly) and also tend to bring in more transfers of technological and managerial expertise. China has successfully tilted its flows largely towards foreign direct investment by encouraging those inflows, even at the expense of domestic industry (Prasad and Wei, 2007). For example, until recently, China's income tax on joint venture enterprises financed through foreign direct investment inflows was set at 15 percent, compared to 33 percent for domestic firms. China also set up special economic zones to attract foreign direct investment by providing additional incentives such as better infrastructure, less red tape, and exemptions from local labor laws. One lesson from China's experience is that trade liberalization is important for attracting foreign direct investment—the ability to use China as an export-processing platform has encouraged substantial foreign direct investment from other East Asian countries. The focus on foreign direct investment, however, has deprived China of one of the key indirect benefits of financial integration—the catalytic effect on development of the domestic financial market.

A number of emerging market economies have undertaken equity market liberalizations, which make shares of common stocks of local firms available to foreign investors. Equity market liberalizations appear to boost economic growth (Henry, 2000; Bekaert, Harvey, and Lundblad, 2005); firm-level evidence suggests that they have a positive impact on profitability, efficiency, and other measures of operating performance (Chari and Henry, 2006; Mitton, 2006).

Some countries have permitted entry of foreign banks and have generally found that this can act as a spur for improved efficiency of the overall banking system as domestic banks are forced to raise their service and risk-assessment standards to compete. For example, starting in early 2007, China has in principle allowed free foreign bank entry, and even before that, China had allowed a small group of foreign banks to take minority stakes in a few of the largest state-owned banks. The idea behind China's policy was to use these "foreign strategic investors" to introduce better corporate governance practices and other innovations to local banks without exposing the local banks to full-fledged competition from foreign banks. Foreign banks also often introduce new saving and loan instruments, thereby widening the range of choices available to depositors and borrowers. However, the presence of foreign banks poses difficult regulatory and supervisory challenges, particularly since local bank supervisors may have little familiarity with complex financial instruments. Foreign banks can also introduce channels for moving capital in and out of a country, rendering capital controls less effective.

China and Taiwan, along with some other countries, have sought to encourage capital inflows and outflows cautiously by limiting portfolio investments (those that

do not involve foreign direct investment) to certain carefully screened qualified foreign or domestic institutional investors. The logic behind this approach is to maintain control on capital inflows and outflows by limiting the number of players. A related approach has been taken by the Reserve Bank of India, which decided upon a particular hierarchy of economic agents that would benefit from a liberalization of outflows, with the intent being to first liberalize outflows for corporations and eventually for individuals. Reddy (2007) describes the rationale for this approach. In particular, corporations have been implicitly encouraged to make foreign acquisitions, with the idea that domestic financing for these takeovers would lead to a net outflow of reserves. In practice, however, domestic Indian banks have often been too small, too unsophisticated, or have had too high a cost of funds to compete with foreign lenders in financing these acquisitions. Hence, only a small amount of the needed funding for foreign takeovers is raised domestically, resulting in little outflow.

A recurring theme in many of the approaches to capital account liberalization is the government's desire to maintain some control over the composition and quantity of capital inflows and outflows. However, the surge in overall international capital flows, and the increasing sophistication of international investors, has made it harder to shape financial flows into or out of a country. Moreover, attempts to control capital flows invariably reduce the indirect benefits of financial globalization.

A Pragmatic Approach to Capital Account Liberalization

Four Guiding Principles

Rather than viewing capital account liberalization as a one-shot, all-or-nothing phenomenon that is welfare-improving under all circumstances, a pragmatic policy would design a gradual and opportunistic approach to capital account liberalization that takes into account individual country circumstances. A pragmatic approach would recognize four main points.

First, not all countries are ready for capital account liberalization—typically the more developed the country, the readier it is. However, some may want to liberalize to improve institutions even if the net benefits do not seem to be overwhelming. Others may want to liberalize because leakages through trade are creating de facto channels for capital to flow. Second, liberalizing flows and strengthening institutions at a time when the country's economic situation is good and the external environment is relatively benign can stimulate the institutional development that will sustain the country's economy even when the environment turns. For example, attempting to deepen domestic currency debt markets in benign times by allowing more foreign participation can give the country more options in harsher times and reduce its reliance on riskier foreign currency debt. Similarly, allowing domestic households a greater ability to hold globally diversified asset portfolios can reduce their exposure to domestic shocks.

But there are costs to opening up. Substantial inflows could lead to an

overvalued exchange rate, and as we have argued, there are limits to sterilization. This leads to our third point: Rather than the central bank intervening and sterilizing these inflows, and accumulating more reserves, a pragmatic approach would focus on encouraging more international portfolio diversification by domestic investors—that is, encouraging outflows. The easiest way is to push government-controlled pension funds and insurance companies to invest more of their holdings internationally. Less easy is to get households to diversify abroad at a time when their own country's markets are being buoyed by international interest. This step may require an active education campaign on the benefits of international portfolio diversification so as to reduce the existing home bias in investment choices. In addition, the channels for households to invest money in other countries have to be made more accessible and easier to use.

But this set of policies raises a difficulty—how to prevent possible capital flight when times turn adverse? Shutting off international access for individuals in bad times may be difficult and even impose costs if investors have entered into situations where they have to put up further capital (for example, margin calls) to maintain their investments. Thus, our fourth point of guidance is that in the early stages of liberalization, it is best if these private sector outflows are easily controlled. We offer a proposal next.

A Modest Proposal for Controlled Outflows

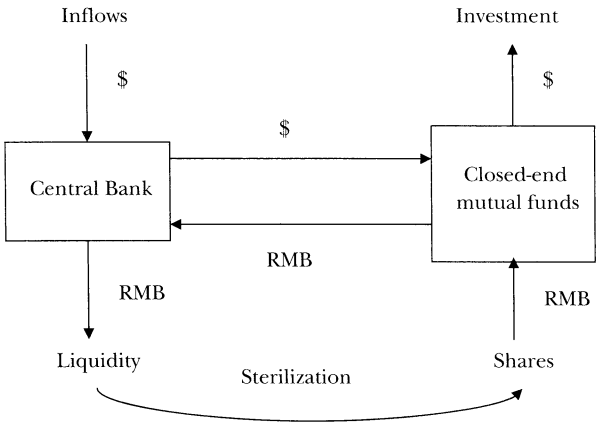
The risks we have outlined would suggest a more controlled approach to capital account liberalization that essentially channels household flows through institutions. In this approach, the country authorizes a number of closed-end mutual funds to issue shares denominated in the domestic currency.[2] These mutual funds will use the proceeds to purchase foreign exchange from the central bank and then invest this foreign exchange abroad in a wide array of foreign assets. The central bank would control the timing and amount of outflows by stipulating the amount of foreign exchange it would make available to the mutual funds in a given period. Licenses for such mutual funds could be auctioned by the government both to foster competition and capture any rents. The sale of foreign exchange to the mutual funds would take place at the market exchange rate. This scheme essentially securitizes reserves as shown in the schematic diagram in Figure 3, where the Chinese currency—the renminbi—is the domestic currency (we offer more details in Prasad and Rajan, 2005).

The government would need to maintain clear separation from the fund—other than its traditional role in financial sector regulation and supervision—to avoid any presumption of bailouts if asset values plunge. Given that a large number of domestic citizens will be investing in these funds, the government risks angering many if it expropriates assets, and thus the structure of our proposal builds in some natural protection against expropriation.

To understand the merits of this plan, it's useful to consider why some close

[2] Open-ended mutual funds could achieve much the same objective except that they may engender more frequent flows and therefore complicate the licensing of fund flows for the central bank.

Figure 3
Securitizing Foreign Exchange Reserves
(an example with dollars and the Chinese renminbi (RMB))



alternatives would be inferior. For example, the central bank could itself create an investment vehicle for purchasing foreign assets. But this approach would require the central bank to acquire investment skills, and it is not clear why the central bank would be able to do so better than the private sector, especially given the constraints on pay in the public sector (also, the problems associated with sovereign wealth funds discussed earlier would apply here). The central bank could sell shares in that investment vehicle to domestic investors. However, this approach would create a direct link between the government and investors that could be detrimental, especially because it could create pressures for a bailout if the investment vehicle were to generate poor returns or losses.

Our proposal would give domestic retail investors experience with international investments and allow for gradual learning-by-investing while giving them more choice and potential diversification in their portfolios of financial assets. In countries with weak financial systems, this approach would give domestic banks some breathing room to adjust to the new reality of their depositors having alternative investment opportunities, and it would leave the recycling of foreign inflows to the private sector rather than to the government. Private sector institutions could gain expertise in investing in foreign assets. These developments would improve the depth and efficiency of the domestic financial sector and better prepare the ground for eventual fuller capital account liberalization.

Also, unlike proposals that would give open-ended mutual funds the right to invest abroad up to an aggregate dollar amount (across all funds) that is determined every year, our proposal would remove the uncertainty about how much a fund can invest, right at the outset. Similarly, the closed-end funds cannot be an explicit channel for foreigners to repatriate money, so they are unlikely to prompt greater inflows from foreign investors (unlike other channels liberalizing outflows, which could prompt greater inflows).

If appropriately structured, our proposal has limited downside risk. At worst, if domestic investors felt that returns in domestic investments trump the need for international portfolio diversification, there would be no demand for the securities of the new mutual funds. The liabilities of the mutual funds would be denominated in domestic currency, which eliminates the risk that speculative runs on the currency would cause a debt crisis. Thus, the proposal would allow countries to make progress towards the goal of capital account convertibility in a calibrated manner, without exposing the domestic financial system to risks associated with uncontrolled capital outflows.

Concluding Remarks

The main benefits of capital account liberalization for emerging markets appear to be indirect, more related to their role in building other institutions than to the increased financing provided by capital inflows. These indirect benefits are important enough that countries should look for creative approaches to capital account liberalization that would help attain these benefits while reducing the risks. In fact, countries don't have much of a choice but to plan for capital account liberalization because capital accounts are de facto becoming more open over time irrespective of government attempts to control them.

However, capital account liberalization is not an appropriate policy objective for all countries and in all circumstances. For poor countries with weak policies and institutions, capital account liberalization should not be a major priority. However, even this group includes some poor but resource-rich countries that are having to deal with capital inflows and their mixed benefits. These countries need a strategy, rather than just coping in an ad hoc way with the whims of international investors. Indeed, a key lesson from country experiences is that capital account liberalization works best when other policies are disciplined and not working at cross-purposes (Arteta, Eichengreen, and Wyplosz, 2003).

Ultimately, a framework to achieve capital account liberalization could help set in motion broader reforms and break the power of interest groups that seek to block reforms (Rajan and Zingales, 2003b). China's commitment to open up its banking sector to foreign competition at the beginning of 2007 can be seen in this light. The Chinese government has used the prospect of increased competition to spur reforms in the state-owned banking sector and used foreign strategic investors to bring in not just capital but also knowledge about better risk-management and corporate governance practices into domestic banks. Similarly, in India and many other emerging economies, the entry of foreign banks has helped spur efficiency gains in the domestic banking system and provided a fillip to banking reforms. In this way, capital account liberalization may best be seen not just as an independent objective but as part of an organizing framework for policy changes in a number of dimensions (Kose, Prasad, Rogoff, and Wei, forthcoming).

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