
The Case for Capital Mobility

If capital account crises are indeed the threat that was suggested in chapter 2, why not resolve them by simply prohibiting capital flows? Why not cut the Gordian knot?

The answer is twofold. One reason is that we have no instrument sharp enough to stop capital flows. Capital controls leak. That does not render controls completely ineffective, as the evidence of significant premia in the presence of controls demonstrates (Cooper 1999). But it does force one to recognize that complete control is simply not feasible as well as pose the question as to whether it makes sense to risk corruption by trying to impose controls.

The other and more positive reason for not attempting to proscribe capital flows is that capital mobility brings benefits as well as costs. This chapter is about those benefits.

Reallocating Capital

The classic benefit of international capital mobility is that it provides the ability to divorce the level of investment within a country from the level of national savings. Countries with relatively large investment opportunities at the world rate of interest, compared with their national savings, can borrow from abroad; high-savings countries (relative to investment opportunities) can in turn lend. Both parties expect to gain, just as in other voluntary economic transactions: The capital exporter gains because it earns more than it could do by investing at home, while the capital im-

porter gains because the extra investment it is enabled to undertake earns more than it has to pay. As Eichengreen and Mussa (1998, 12) put it:

Flows from capital-abundant to capital-scarce countries raise welfare in the sending and receiving countries alike on the assumption that the marginal product of capital is higher in the latter than the former. Free capital movements thus permit a more efficient allocation of savings and direct resources toward their most productive uses.

Note that achieving these gains is inherently dependent on current account imbalances. It is necessary to have a deficit in the borrowing country and a surplus in the lending country in order to transfer real capital from the lender to the borrower. As the debt comes to be serviced, this current account imbalance will be reversed.

It is this factor that underlies the presumption that emerging markets ought normally to be capital importers and industrial countries ought normally to be capital exporters. Emerging markets are short of capital relative to their supply of labor and natural resources; hence, the yield on capital ought to be high, according to standard neoclassical theory. Industrial countries are capital rich; hence, the standard presumption is that the yield on capital will be low. Both gain if capital is redeployed from areas of relative plenty to those of relative scarcity, where its yield is higher. The traditional view of how this works over time in a typical country, based on the neoclassical model that offers the same production function to all countries, is summarized in the model of the debt cycle (see box 3.1).

It has been recognized for some time that this model generates predictions about the magnitude of the differentials in rates of return to capital and the size of capital flows that are dramatically larger than observed in reality (Lucas 1990). How does one explain this, and does it suggest that one should reject the whole notion that welfare gains are likely if capital flows from capital-rich to capital-poor countries?

A possible answer is suggested by the school of thought that has recently questioned the magnitude of the benefits to be expected from the convergence in capital/output ratios permitted by capital mobility. Gourinchas and Jeanne (2004) constructed and calibrated a neoclassical model (or rather two models, a Ramsey-Cass-Koopmans model with just physical capital and a "Macro-Mincer" model that also incorporated human capital accumulation) to examine the magnitude of the gains from financial integration. They found that these were typically small compared with other sources of gain. For example, the gain from a switch from complete financial autarky to perfect capital mobility might be of the order of a 1 percent increase in permanent consumption even for a country whose initial capital stock doubled as a result of financial integration. The most important reason for the modest impact is the essentially transitory nature of the distortion introduced by capital controls: With the assumption that the natural rate of interest is the same among countries, over time a country will accu-

Box 3.1 The debt cycle

The notion that the basic purpose of capital flows is to redistribute capital to the countries where the productivity of capital is highest has been elaborated into the theory of the debt cycle. The basic assumptions made in this analysis are that technology is the same in all countries, that there are diminishing returns to capital, and that the propensity to save is constant over time.

Consider the situation in a poor country when it is first integrated into the world economy. It will have a low capital-labor ratio and, hence, a high marginal return on capital at the level of investment that can be financed by the limited flow of domestic savings. The country therefore has an incentive to borrow abroad, which means that over time it will build up both its capital stock and its foreign debt.

The higher capital stock enables output to increase. A part of this is diverted into servicing the external debt. In due course the debt service comes to exceed the capital inflow, and the resource transfer (which is defined as capital flow minus debt service payments) becomes negative. This is the second stage of the debt cycle. An unthrifty country (one with a low saving propensity) will settle down into a steady state in this stage. It will have higher output, income, and consumption than it would have had without capital mobility, but its net resource transfer will be negative.

A thrifty country, in contrast, will move on through a series of three further stages. In the first of these—the third stage of the debt cycle—it will start to generate domestic saving greater than its domestic investment requirements, even after servicing its foreign debt. The excess saving will be lent abroad, increasing the negative resource transfer but starting to decrease the external debt.

The fourth stage of the debt cycle starts when the country has repaid its entire (net) external debt, and it becomes a creditor country. At that point it starts to receive net interest income from abroad, although the resource transfer remains negative because the capital outflow continues and exceeds the receipts of interest income.

The fifth and normally the final stage of the debt cycle occurs when external assets have accumulated to the point that the interest they yield exceeds the capital outflow. This is the “mature creditor country,” which enjoys a positive resource transfer even as it plows back a part of its foreign investment income into new investment and, therefore, sees its foreign assets continue to grow. This is also a possible steady-state position and will indeed be the one realized by a thrifty country, with a current account surplus equal to a part of its interest income just large enough to support a rate of foreign asset accumulation equal to the growth rate of the domestic economy. This is where Britain and France were before World War I.

A pathological sixth stage is possible in a country when its propensity to save decreases. This could lead a mature creditor country to start living off its foreign capital, consuming not merely its interest income but importing capital as well. This is not a possible steady state; it leads in due course back to stage one, where the United States has been in recent years, and then on to stage two.

multate the capital for itself, and the benefit from financial integration will wither away. The long-run level of output is unaffected, and some part of the short-run growth acceleration accrues to the foreign investors.

The principal reasons for international welfare differences are to be found in different levels of distortion and productivity, according to Gourinchas and Jeanne, and, unless capital account opening alters these, the process of financial integration will not have a large impact. This

accords with recent growth literature, where the previous emphasis on factor accumulation as the principal source of growth (embodied *inter alia* in the Lucas paper cited above) has been superseded by the view that differences in total factor productivity account for most income differences across countries.

While this interesting analysis should induce a certain element of caution in arguing that there are large potential gains from capital mobility, it would be premature to dismiss the classical source of gains as inherently trivial. Apart from the fact that some of the cross-country empirical studies suggest a more substantial effect (on which more below), one should note two theoretical points.

One, the underlying model is not the traditional neoclassical model in which the same technology is available to all countries; it is instead the endogenous growth model in which it is the growth rate of labor-augmenting productivity rather than the level of per capita output that converges across countries. I, at least, have never felt comfortable with the assumptions of a common natural rate of productivity increase while productivity levels are country specific and exogenous to the capital flow. These assumptions exclude both the traditional neoclassical model and a Lewis-type model of growth, in which people are transferred from a low-productivity subsistence sector to a modern sector in a process that requires investment in order to raise total factor productivity.

Two, the natural rate of interest (the rate of interest when the economy is in steady state) is the same across countries. This assumes that all countries have the same rate of time preference (as well as natural rate of productivity increase). If consumers are more (or less) impatient in one country, there would be scope for that country to raise its welfare by borrowing from (or lending to) the rest of the world in steady state.

Hence, I will not dismiss the possibility that a substantial flow of capital from capital-abundant to capital-scarce countries could be a significant factor in accelerating growth in those that are capital scarce. Indeed, a case can be made that capital flows motivated by a search for the highest productivity of capital ought to offer substantial welfare gains in the coming decades, even greater than those portrayed by the debt-cycle model. The industrial countries face the problem of an aging population, but at present they have unusually large cohorts in the preretirement, high-savings phase of the life cycle, which is roughly between the ages of 45 and 64. It has been estimated that this effect could raise aggregate savings in the Organization for Economic Cooperation and Development (OECD) countries from something greater than \$1 trillion in 1990 to approximately \$1.4 trillion in 2010 (World Bank 1997, 116).

The populations of these countries are also fairly stagnant or in some countries even declining in total size, implying limited investment needs. One would therefore expect them to have both an ability to save more than they invest and a motivation for investing the surplus in emerging

markets so as to earn debt service that can support pension payments as the retired proportion of the population increases in the future. This will enable them to finance spending in excess of the income generated at home as the ratio of retirees to the working population increases.

At the same time, a large part of the developing world should be at the stage of development where returns on capital are unusually high. Nowadays it is generally believed that this time of high returns on capital is not in fact the primitive stage of minimal capital accumulation as under the neoclassical assumptions of the debt-cycle model, but it occurs instead after a country has developed the basic human and institutional infrastructure needed to permit catch-up growth. Many emerging markets—most of Asia and Latin America—are now in this situation, and optimists hope that the laggards in Africa and elsewhere will also achieve takeoff in the next decade or two. Almost all of these countries are also either already well along toward or, at the latest, starting the demographic transition, where birth rates fall progressively so as to ease and ultimately end population growth. At this stage, the largest age cohorts in these countries either are entering, will soon enter, or have recently entered the working population, which suggests that they will be able to absorb large volumes of capital in productive investment with a high rate of return at the same time that industrial countries have surplus savings to invest.

The pattern of capital flows suggested by this analysis of demographic-development potential is from the industrialized countries to the more advanced of the developing countries, the emerging markets, and such a pattern of international capital flows did indeed prevail during the 1990s, up until the Asian crisis. Since then there has been a reversal, with the United States, which was already a capital importer, increasing its borrowing to a point at which it outweighs the net lending of the other developed countries, while East Asia, the part of the developing world that seems to best match the description of a natural capital importer, has become a capital-exporting region. For a time, one could hope that this was a temporary aberration caused by East Asia's need to rebuild its liquidity position following the crisis rather than a permanent shift in the pattern of capital flows, but so far it has shown no sign of ending even though East Asian countries have now rebuilt their reserves to levels that look more than adequate.¹

Admittedly, there is a school of thought that sees the emergence of current account surpluses in the East Asian countries as a manifestation of a new development strategy, export-led growth, instead of as a perverse capital flow that threatens growth (see, for example, Dooley, Folkerts-Landau, and Garber 2003). I find this view unpersuasive. It assumes that

1. Even the cautious IMF concluded that “. . . the rapid buildup of foreign exchange reserves in some emerging markets . . . may now be approaching the point at which some slowdown in the rate of accumulation is desirable.” (IMF, *World Economic Outlook 2003*, 91).

growth is always and everywhere constrained by a shortage of demand, and it neglects the need for adequate supply capacity. The other consideration that needs to be factored into analysis is that supply can be limited by a shortage of capital if excessive real resources are absorbed in a current account surplus.

A correct analysis of export-led growth recognizes both the importance of a competitive exchange rate for generating foreign demand and the cost of an excessively competitive exchange rate in diverting real resources into low-yield investment in foreign assets. The growth-maximizing exchange rate is that where these two effects are equal at the margin (Williamson 2003). This view recognizes that several East Asian countries (Indonesia, Malaysia, and Thailand) were already pursuing a successful policy of export-led growth before the crisis of 1997 even though they had current account deficits. Their export successes had made them attractive locations in which to invest, and the capital inflow financed their current account deficits. (Thailand—at least—overdid it, which is why a crisis occurred.)

Nor is this analysis fatally undermined if one believes that in some surplus countries—China comes to mind—growth is constrained by absorptive capacity, not investment. Absorption can be increased by stimulating consumption rather than investment. If one believes, as I do, that the yield on dollars added to Chinese reserves in terms of Chinese goods will certainly be negative, then even with a zero rate of time preference, Chinese intertemporal utility would be increased by additional consumption and a smaller current account surplus.

It should therefore be an important objective of policy to secure a resumption of flows from capital-rich to capital-poor parts of the world. Since 2002, a major pickup has been occurring in the flow of private capital into emerging markets, but at present this is offset by their reserve buildups, reinforced to some extent by a net reduction in the stock of official lending and an outflow of resident capital. Their current account balances remain decisively in surplus (collectively to the tune of more than \$100 billion per year). A part of the international adjustment process to reduce the US current account deficit to a sustainable level needs to be an expansion of domestic demand in the emerging markets and a consequential reduction or elimination of their collective current account surplus. This would be potentially beneficial to both parties—the United States and the emerging markets.

Not only would a reversion to the more normal pattern of net capital flows from industrial countries to emerging markets help raise global growth prospects, provided it were financed appropriately, but it would also help relieve the pressure for large flows of migrants into the industrial countries with aging populations and rising ratios of retirees to workers. This is not to suggest that any likely level of capital flows either should or will eliminate such migrant flows, which seem bound to be sub-

stantial unless current demographic trends change sharply. Nevertheless, the greater the capital inflows that help developing countries raise their living standards, the less will be the differential in income levels and opportunities that drives migrants to seek better lives outside their native countries. Whether this shows up in fewer immigrants whose large-scale absorption raises social problems to both communities (however much we might wish it were otherwise) or in less-Draconian measures to try to prevent illegal immigration, the consequence will be an unambiguous gain in human welfare.

Consumption Smoothing

A second way in which capital flows can raise economic welfare is by permitting a smoother path for consumption, given the path of output through time. This happens when a country hit by a negative shock (such as a bad harvest or low prices for its commodity exports) is able to borrow and then repay out of the proceeds of a positive shock (a particularly good harvest or high commodity prices) at some later time. Conversely, a country that enjoys a positive shock should be able to build up its stock of foreign assets and then run them down again to sustain consumption when confronted by a negative shock. Calculations reported in Prasad et al. (2003, appendices 3 and 4) imply that the potential gains from this source for developing countries are large, especially in the case of small economies.

Experience suggests that developed countries are able to achieve these gains of consumption smoothing, but this is a lot more difficult for developing countries, even for the more advanced ones that are now called emerging markets (see, for example, Gavin, Hausmann, and Leiderman 1995). Developing countries can save and build up their foreign assets in response to a positive shock if their authorities can resist the political temptation to splurge. It may later be difficult, however, to persuade the markets to view a subsequent rundown of the assets as prudent, in which case the objective of smoothing consumption will be thwarted. Certainly it is difficult to persuade the markets to increase their exposure to an emerging-market country that has been hit by a negative shock, even when the country was not overindebted to begin with. Chile's decade-long capital inflow dried up in 1998 when the price of its copper exports dove as a result of the Asian crisis, precisely when it actually needed capital inflows—which in preceding years had been so abundant as to constitute an embarrassment—in order to sustain activity. Prasad et al. (2003) concluded that the volatility of consumption growth increased relative to volatility of income growth in emerging markets in the 1990s, the decade in which financial globalization increased, suggesting that consumption volatility was aggravated, not diminished, by opening the capital account.

Regrettably, it is therefore unrealistic to include consumption smoothing among the major gains from capital mobility that can be expected by emerging markets in the near future. Matters might change if capital markets were to shake off the short-termism that currently afflicts them, but that is something on which it would be unwise to count in advance of evidence that it has occurred.

Risk Diversification

A third source of welfare gain from international capital movements may be as important as the first: risk diversification. Because risks are less correlated between countries than within countries, an investor can expect to be exposed to less risk to achieve a given expected rate of return (or to achieve a higher rate of return for the same level of risk) by holding an internationally diversified portfolio. This factor is of particular potential significance to residents of small, undiversified economies, whose wealth is otherwise highly dependent on the fortunes of their country's main export products.

Not only does the possibility of risk diversification benefit individuals directly because of less variability in their income streams, but it can also have an indirect benefit in terms of allowing investment to be channeled into more productive avenues. With limited diversification possibilities, prudent investors will not be prepared to invest large sums in high-yield, high-risk projects. As the pool of investors becomes larger and more diverse, so does the possibility that some of them will find it prudent to invest parts of their portfolios in more risky projects that will on average yield higher returns. Hence the average yield of investment can be expected to rise as well.²

Note that these welfare gains from diversification do not necessarily depend on current account imbalances at the time when the investment occurs. It is in principle possible for investment flows in opposite directions to exactly offset each other, but this is quite consistent with both parties gaining *ex ante* from the transactions.

One thinks of risk diversification as being an important motivation for portfolio investment by institutional investors such as pension funds and insurance companies as well as for capital outflows from developing countries. Such flows may well contribute to reallocating capital as well. Two important papers of Henry (2000a, 2000b) have shown that portfolio equity has major effects in terms of stimulating the level of investment. On the basis of an empirical examination of 12 countries that liberalized international access to their equity markets in the early 1990s, Henry finds

2. Maurice Obstfeld (1994) argued, on the basis of a theoretical model that he attempted to calibrate with stylized data, that this factor is quantitatively important.

that on average they experienced abnormal increases in stock prices approaching a cumulative 30 percent over a period of some eight months leading up to liberalization. One would expect this reduction in the cost of capital to stimulate investment, and Henry found that this indeed happened. On average the countries experienced a temporary investment boom of about three years' duration, during which private investment increased by some 22 percentage points more than would have been expected otherwise.³ This result contrasts with the traditional macroeconomic literature, which has concluded that capital inflows other than foreign direct investment (FDI) and aid tend to be split between consumption and investment in much the same proportion as domestic income.⁴

Nevertheless, it is also important to recognize the possibility that capital mobility without any net flow of capital can lead to important welfare gains. Contrast, for example, a situation in which the pension funds of an emerging market are restricted to domestic investments in the home market, a small monocrop economy that also excludes foreign portfolio equity investment, with one in which an outward flow of pension fund money is offset by foreign investments in portfolio equity. The capital stock, and therefore GDP, will be identical in the two cases. What would differ would be the volatility of pensioners' incomes, which would oscillate with the fortunes of the monocrop in the first case and be smoothed by investment in a world portfolio in the second case. This is not a case of smoothing pensioners' incomes at the expense of the rest of the population; international investment would bring with it less volatility in national income as well.

In practice, one should expect that during the next several decades the flow of money into emerging markets from pension funds of the industrial countries will exceed the outward flow of money from pension funds established in emerging markets. Industrial countries' pension funds are already nearer maturity, so that the switch of a small portion of their portfolios into emerging markets will provide a flood of money, while pension funds in most emerging markets are still small and undeveloped. As they grow, the disparity will gradually dwindle, so that eventually there may be rough balance between inward and outward placements. For the next several decades, however, portfolio flows are likely to bring benefits from the reallocation of capital as well as from portfolio diversification.

3. Another paper that investigates the impact of liberalizing foreign investment in the equity market is Bekaert, Harvey, and Lundblad (2001). They reached similar conclusions to Henry. The summary in Prasad et al. (2003, box 1) mentions several other studies where the association between growth and portfolio equity inflows was found to be positive, but in most of these it was statistically insignificant.

4. One might ask how the traditional result can hold if portfolio equity, which is one of the constituents of the capital inflow other than FDI, in fact has a major effect in terms of stimulating investment. I suspect the resolution of this paradox is that the empirical studies underlying the traditional result were mainly based on data from times when capital flows were dominated by inflows of bank loans, not portfolio equity.

Access to Intellectual Property

A fourth distinct source of potential welfare gain from international capital movements arises when the flow takes the form of FDI. FDI normally brings with it access to intellectual property rights of some sort or another: patents, copyrights, technological know-how, managerial expertise, access to foreign markets, or a number of these factors. Stephen Hymer (1960) first pointed out many years ago that it is difficult to imagine why a firm should go to all the difficulties and dangers of operating in a foreign market if it did not have some advantage that would enable it to out-compete local firms, which have a greater familiarity with local circumstances. It is the chance to exploit its intellectual property rights in an extra market that typically makes investment attractive to a foreign firm.

Exploitation of these intellectual property rights normally brings spillover benefits to the host economy. The multinational enterprise pays taxes. It may pay wages higher than the prevailing rate, perhaps to buy itself standing as a good corporate citizen, and will in any event add to the demand for labor. It may increase competition in the national market, although this need not necessarily occur if it acquires a local firm rather than makes a greenfield investment. It often provides a conduit to the continuous upgrading of best practices over time.

FDI may enable a country to engage in completely new kinds of activities (production of semiconductors in Costa Rica or disk drives in Thailand). A multinational enterprise may also try to upgrade the technical standards of its local suppliers in order to protect its quality reputation in the international market. Managers or workers who learn skills on the job may move on in due course to local firms. A multinational enterprise may also carve out market share in the local market by supplying improved goods that were not previously available. A firm with better access to intellectual property can benefit its host economy via so many channels that one seems fairly safe in assuming that such benefits will materialize.

Unfortunately, there seems no very convincing basis for quantifying how large the benefits may be. Estimates are that the profit rate of multinationals averages some 14 percent while the stock of FDI is estimated at about \$1.4 trillion, which suggests that multinationals' profits are approximately \$200 billion a year. If they succeed in appropriating about half of their net contribution to the economies in which they invest, they are adding to the GDP of the host emerging markets some \$400 billion (twice the \$200 billion profit), half of which is earned by foreigners. The other half yields a net benefit to the host economy in the form of higher GNP.

A particular form of FDI consists of entry into the financial-services industry by foreign banks. These banks can and often do bring substantial benefits to the host economy in the forms of both a modernization of financial techniques and increased competition in the financial-services in-

dustry. Nowadays foreign banks tend to organize their lending in emerging markets through local banks that they have bought, and they finance this lending by taking domestic deposits rather than making international loans. This practice has the great advantage of avoiding exposing the borrower to currency risk, although it also means that the emerging market does not get an inflow of foreign currency.

One host-country worry about the presence of foreign banks is that the knowledge base of the local supervisory authorities may be undermined by the fact that many operations are beyond their purview (Committee on the Global Financial System 2004). Another potential problem exists: If the domestic banks are in a parlous financial situation, the intensification of competition may push them over the brink into “gambling for resurrection.” The moral is that, when it is opening its financial sector, a country needs to be careful that either the domestic financial system is financially sound or that a strong regulatory setup is in place that is capable of restraining imprudent lending. Obviously it is better if both are true.

FDI can in principle be financed internally, by borrowing. But in practice it usually involves a substantial measure of external financing: The 2000 *World Investment Report* (UNCTAD, *World Investment Report 2000*, 19) concluded that approximately 70 percent of FDI was financed by an inflow of equity capital (plus another 10 percent or so by retained earnings). FDI is therefore normally (though not inevitably) associated with a capital inflow and, hence, with the possibility of financing a larger current account deficit. Empirical evidence (UNCTAD, *World Investment Report 1999*, 172) suggests that FDI inflows are typically translated entirely, or perhaps even more than entirely, into increased investment. That points to another spillover benefit of FDI: It generally appears to stimulate local investment rather than displace it.

Prasad et al. (2003, box 1) summarize evidence of the effect of different forms of capital inflow on growth. The one form of capital inflow that appears to have a strong and robust positive association with growth is FDI.

Discipline

Another advantage sometimes claimed for foreign borrowing is that it subjects the borrowing country to the discipline of the international capital market. For years the Indonesians used to tell themselves that one of the great advantages of their early adoption of capital account convertibility was that this restrained them from adopting populist or nationalistic policies that would not pass muster with international financiers. Nowadays Thomas Friedman eulogizes the “electronic herd”; his fantasy (Friedman 1999, 94) of how Robert Rubin might have responded to Mahathir Mohamad after his speech at the IMF/World Bank annual meetings in Hong Kong in 1997 includes:

The herd knows only its own rules. But [these] rules . . . are pretty consistent—they're the rules of the Golden Straitjacket. . . . It makes snap judgments about whether you are living by those rules, and it rewards most lavishly those countries that are transparent about what they are doing. The herd hates surprises. For years Malaysia seemed to be living by those rules. . . . But when you started to break the rules by overborrowing and then overbuilding, well, the herd sold you out. . . . [W]hen that happens you don't ask the herd for mercy, you don't denounce the herd as a "Jewish conspiracy," you just get up, dust yourself off, put your Golden Straitjacket on a little tighter and get back with the flow of the herd. Sure, this is unfair. In some ways the herd lured you into this problem: It kept offering you all this cheap money and you took it and overbuilt. . . . The herd is not infallible. . . . It overreacts and it overshoots. But if your fundamentals are basically sound, the herd will eventually recognize this and come back.

Friedman is right about the proclivity of the market to lure countries into borrowing too much, about the overreaction and the overshooting. He may also be right in thinking that the market will sooner or later return if the fundamentals are sound. But asking one to accept this sort of arbitrary discipline as a benefit of capital mobility is going too far; it might be more reasonable to count it as a cost rather than a benefit. Doubtless the fear of losing capital has sometimes been a stimulus to more responsible macroeconomic or financial policies (e.g., the primary surpluses in Brazil and Turkey), but as long as the markets swing wildly from euphoria to an absolute refusal to lend—which, it may be noted, does not seem to occur in developed countries—it is difficult to see a net benefit here.

Evaluation

Even if it were possible to prevent capital from moving internationally, this analysis suggests that one would not want to try. International capital flows offer the prospect of major welfare benefits. There is no need for facile analogies to trade in goods ("economists know that free trade in goods is beneficial, so free trade in capital must be too") in order to make the case that capital mobility has the potential to advantage both lender and borrower.

Capital mobility may also bring costs. Once upon a time people used to worry about foreign control of domestic industry, and nowadays the antiglobalization folks are concerned about the homogenization resulting from the same multinational enterprises selling the same goods everywhere. Opponents of globalization also appear to harbor suspicions that multinationals use the implied threat to move elsewhere to keep wages low, although it is difficult to see how this could result in wages lower than they would have been without the presence of the multinational. In fact, empirical evidence seems to suggest that, at least by host-country standards, multinationals generally pay relatively high wages (Moran

1998, 62). A full accounting of cost, however, needs to include that imposed by the boom-and-bust cycle and the repeated crises examined in chapter 2. Is there any evidence that can hint at how that cost compares with the benefits?

The obvious approach is to examine whether there is evidence of net benefits accruing from an open capital account. A number of studies have sought evidence as to whether an open capital account increases a country's income. Three of the early empirical studies (Alesina, Grilli, and Milesi-Ferretti 1994; Kraay 1998; and Rodrik 1998) failed to detect any benefit from overall capital account liberalization in terms of the promotion of a faster rate of growth, while one (Quinn 1997) found a positive impact from the liberalization of capital flows. Are these findings in conflict, or is it possible to reconcile them?

Kraay's measure of capital account openness was the total flow of capital (inflows plus outflows) as a share of GDP, which is quite distinct from the other authors' attempts to measure what the rules say. No attempt is made to reconcile Kraay's finding, but the conflicting conclusions of the other three authors may be due to an important difference in their specification of capital account openness. The two studies that found no impact tried to measure whether the capital account was open or closed,⁵ whereas Quinn sought to construct a measure of the degree to which the capital account was open (using data from the IMF's annual report on Exchange Arrangements and Exchange Restrictions).⁶

Most countries liberalized FDI relatively early on, and most also liberalized long-term capital before short-term capital. As argued above, we have strong reasons for believing that liberalization of FDI should be beneficial for growth; there is also evidence that is somewhat less overwhelming, but still pretty convincing, that portfolio equity brings benefits. It is also reasonable to suppose that long-term (patient) capital will be beneficial. It is what is usually the last stage—opening up to unlimited flows of short-term money—that is problematic. Thus, many of Quinn's observations were presumably drawn from episodes where there was a strong probability that the net benefits of greater liberalization were positive; it is therefore not surprising that he found a positive effect. In contrast, the test of Alesina, Grilli, and Milesi-Ferretti and Rodrik was whether complete liberalization is beneficial, and both found no evidence that it is.

5. Rodrik took the proportion of years in which the capital account was free of restrictions, but the test was whether the capital account was completely free of restrictions.

6. A second but less crucial difference concerns the sample of countries: 20 OECD countries in the case of Alesina, Grilli, and Milesi-Ferretti; a mixed panel of 64 developing and industrial countries in the case of Quinn; and a large panel of exclusively developing countries in the case of Rodrik.

If one assumes that all three studies are basically right, the implication is that one should not try to please the New York investment banks by totally liberalizing capital flows, including the short-term froth the electronic herd likes to play with, but that there are real benefits from liberalizing FDI, portfolio equity, and long-term bonds and loans.

An important paper on this topic is Edison et al. (2002). They examined five measures of international financial integration (IFI), using three different econometric procedures to try and find a relationship between IFI and growth. Their work controlled for the standard determinants of growth, notably initial income, initial schooling, and macroeconomic balance. They also searched to see whether IFI had a positive impact on growth if certain conditions were satisfied—high per capita GDP, high educational attainment, a high level of financial-sector development, a high level of institutional development (good law and order and low government corruption), low inflation or high fiscal surplus. Their results were almost uniformly negative. They stated (766) that their results “suggest the lack of a robust relationship between IFI and economic growth.” Nor did they find statistical evidence supporting any of the theories that IFI has a positive impact on growth provided that some critical condition (high per capita income, or financial development, or whatever) were satisfied. Note, however, that all five of their measures of IFI related to total capital flows or stocks rather than to the particular forms of capital flow—FDI, portfolio equity, and long-term bonds and loans—identified above as presumptively beneficial, so that the interpretation previously offered is not refuted by Edison et al.

An influential recent paper that surveyed and summarized the state of the art is Prasad et al. (2003), some of whose results have already been mentioned. Summarizing the results of 14 papers (including the 5 mentioned above), they comment (31) that “the majority of the papers [11 out of 14, actually] tend to find no effect or a mixed effect [of financial integration on growth] for developing countries. This suggests that, if financial integration has a positive effect on growth, it is probably not strong or robust.” In seeking to explain a result that presumably offended their priors, they resorted to the same explanation as Gourinchas and Jeanne (2004): that the major source of cross-country differences in per capita income is to be found in differences in total factor productivity rather than the ratios of capital to labor that could in principle be equalized by capital mobility. They also acknowledge (34) another possible explanation: that some developing countries have experienced costly banking crises in the process of financial integration, which neutralized the benefits of greater capital inflows. The fact that greater financial integration—unlike trade opening—does not bring with it clear benefits is rubbed home by a fascinating demonstration that lower trade barriers are associated not just with faster growth but also with greater longevity and lower infant mortality, while greater financial integration fails to bring either health or growth benefits.

The view of the new growth theorists that per capita income primarily reflects differences in total factor productivity, not different capital-labor ratios, has introduced an element of doubt about the magnitude of the benefits of capital mobility. Nevertheless, this doubt about the magnitude—which is still a conjecture rather than a certainty, at least for those of us who doubt whether total factor productivity rises independently of the volume of investment—does not throw into question the notion that capital mobility has a number of very real advantages. It would thus be foolish to try to break the boom-bust cycle by closing the capital account, even if that were feasible. The objective should be to make the flow of capital less unstable, not end it. Greater stability of the flow may not be consistent with complete capital account convertibility, and restrictions may impose a price in terms of some reduction in the average size of flow, insofar as controls on the movement of short-term capital deter some potential investors from investing at all. A balance between volume and stability is much preferable to either a denial of a need for a tradeoff or a corner solution.

