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Should Capital Controls Be Banished?

AT ITS SEMIANNUAL MEETING in April 1997 the Interim Committee of the International Monetary Fund (IMF) proposed that the organization's Articles of Agreement (the basic "constitution" of international financial relations among its 182 member countries) be amended to include currency convertibility for capital transactions among its fundamental objectives. Since the IMF was founded in 1946, currency convertibility for current transactions—goods, services, travel, interest, and dividend payments—enshrined in Article VIII, has been not only a fundamental objective of the organization but a condition for membership in good standing. But convertibility for capital transactions was pointedly excluded from the basic objectives; indeed, early proposals would have enjoined member countries, when requested, to help other members enforce such controls on international capital transactions as they might impose, although that provision was ultimately not adopted.

Private international capital movements were badly disrupted by the extensive debt defaults of the 1930s and the ravages of World War II. Since the 1940s, however, they have grown rapidly, regaining the importance in international transactions that they had before World War I and in the 1920s. The world of international economic intercourse is thus very different today from that envisaged by the architects of the IMF.

Shortly after the Interim Committee's meeting, the Asian financial crises erupted. Some observers attributed these crises in part to unwise or excessive capital liberalization. Malaysia dramatically reimposed controls on outward capital movements in September 1998, while other countries tightened their existing controls. All these developments have made

capital account convertibility, or its obverse, capital controls, a hot topic. The IMF has just published a lengthy study on capital account liberalization, written by a team of economists led by Barry Eichengreen and Michael Mussa.¹ That study is comprehensive and of high quality, and I agree with its basic thrust. This paper reviews the key issues raised in that study, adds some historical material, and concludes with a view that I suspect the report's authors—or at least their employer—may not like.

Semantic and Other Useful Distinctions

Capital account convertibility refers, strictly speaking, to the availability of foreign exchange to a country's residents to purchase assets abroad, or to nonresident owners of assets in the country for repatriating their capital. It also implies allowing residents to accept foreign currency for assets they wish to sell to nonresidents. The focus on foreign exchange transactions, which is an appropriate one for the IMF, leaves open the possibility of maintaining many restrictions on capital transactions other than restrictions on the purchase or sale of foreign exchange. Capital account convertibility thus interpreted falls far short of freedom for international capital movements, just as current account convertibility falls far short of ensuring free trade in goods and services. Capital account convertibility excludes exchange controls, that is, the rationing of foreign exchange by requiring official permission to purchase it. But it does not exclude (although the IMF does disapprove of) multiple exchange rates, that is, charging different prices for foreign exchange depending on the purpose of the transaction or the identity of the transacting parties—this, in effect, is taxation administered by the monetary authority. Nor does it exclude many of the kinds of actions designed to influence capital transactions that have been used in recent years. These include requiring non-interest-bearing reserves against certain capital inflows (as in Chile), limiting interest payments to foreign owners of claims (as in Switzerland), prohibiting resident purchases of foreign securities except through domestic financial institutions (as in France and Japan), rationing foreign access to the new issue market, or limiting the open position in foreign currency

1. Eichengreen and others (1998). See also Dooley (1996), Edwards (1998), Mathieson and Rojas-Suárez (1993), Quirk and Evans (1995), and Ries and Sweeney (1997).

that domestic financial institutions may take. Such actions might be encompassed by the general term *capital restrictions*, reserving *capital controls* to refer to the subclass of these actions that involve quantitative restrictions, as opposed to those that allow unlimited transactions, but at a price penalty. These terms could, of course, also be applied to transactions between domestic residents; this paper, however, addresses only restrictions on international capital movements. *Exchange controls* may apply to current as well as to capital transactions.

Public discussion and even the professional literature do not always make fine distinctions among these terms, which are sometimes used interchangeably. My main point is that restrictions on capital movements include a wide variety of possible actions, and it is somewhat artificial to focus only on one subclass, namely, rationing through the sale of foreign exchange, without paying attention to other actions that may have similar effect. Which measures are used to try to restrict capital transactions are often governed by administrative ease and effectiveness. This paper focuses on the economic rather than the administrative issues, that is, on the desirability and feasibility of restricting international capital transactions.

Restrictions on capital movements have many possible motivations and include a variety of instruments, and the objectives must be kept in mind in assessing the desirability and the effectiveness of restrictions. The classic motivation for restricting capital outflows (but encouraging inflows) has been to protect the balance of payments. This, in turn, reflects concern for macroeconomic stability, since the practical alternatives to capital controls for improving the payments position, as they were viewed in the 1930s at least, were contraction of aggregate demand and inflationary depreciation of the currency.

Capital restrictions may also, however, be used to influence the structure of output, either by influencing the real exchange rate or by selectively allowing foreign investment within the country. Or they may be used to reduce national vulnerability to macro- or microeconomic shocks coming from abroad through the financial sector. They may be used to inhibit excessively risky behavior by resident financial institutions. They may be used to reduce the evasion of taxes on capital income. They may be used to create a vehicle for bestowing political favors. Other motivations no doubt exist, and of course several may be in play at the same time. However, some countries are more concerned with limiting capital outflows, others with limiting capital inflows. Some countries are concerned mainly with

maintaining domestic ownership of domestic firms, for reasons of national security or simple nationalism, or to shape the structure of industrial output. Different motivations may call for quite different types of restrictions on capital flows, whether inflows or outflows, whether portfolio capital or direct investment, whether short term or long term.

Thus it is necessary to be precise about the motivation and the instrument in either criticizing or condoning capital restrictions—unless of course one wants to reserve the term “capital controls” for all those actions of which one disapproves, while calling acceptable measures “prudential” or “ensuring tax compliance,” even though the economic effects are similar.

Some History

Capital controls can be traced back at least to sixteenth-century Spain and to Napoleonic France, and probably to antiquity, if the term is used to encompass prohibitions on the export of gold or silver coinage. However, exchange controls in their modern form date, so far as I have been able to determine, from World War I. If we disregard those wartime controls as a special case, we can say that the modern practice of capital controls dates back to the international financial crisis of 1931.

Interestingly, however, even throughout World War I the leading financial power of that period, Great Britain, managed to avoid formal exchange controls. J. M. Keynes, then an employee of the U.K. Treasury, managed a weekly foreign exchange budget in such a way that payments were kept free of formal controls.² Imports, however, were placed under license, and Britain imposed conditions on how its war loans to its allies were to be spent. Harrod laments that in imposing these loan restrictions Keynes became the father of the extensive exchange controls that became commonplace in the 1930s and 1940s.

Surprisingly, France also generally avoided controls until the last year of the war. In the war's early years, after suspending gold convertibility, France relied on its own large monetary reserves and on borrowing from Britain. Beginning in April 1917 it covered its payments largely by bor-

2. See his after-the-fact account of his experience, reproduced in Harrod (1951, pp. 204–05).

rowing from the United States. (This was the source of the contention over war debts that plagued international financial relations during the 1920s.) The French franc depreciated roughly 10 percent against gold (and the dollar) in 1915, but it remained remarkably stable thereafter despite considerable domestic inflation. Then, on April 3, 1918, France passed a comprehensive exchange control law designed to inhibit capital flight and requiring Ministry of Finance permission for any *resident* to export capital, whether securities or funds for the purchase of securities or foreign exchange.³ This law was kept in place, with various additions and amendments, until the restoration of gold convertibility in 1927. Dulles recounts the use of various channels for illegal export of capital and claims that much of it took place: her estimates range from 5 billion to 30 billion paper francs (\$200 million to \$1.2 billion) by 1926.⁴

Germany moved quickly to a controlled economy after the outbreak of war, under the direction of Walther Rathenau, who became foreign minister after the war. Overseas trade was restricted by the Royal Navy. Germany introduced heavy controls on payments to foreigners, as well as controlling imports tightly. These restrictions were maintained beyond the end of the war and into the period of dispute over reparations payments.⁵

It was, however, the international financial crisis of 1931 that led to widespread and enduring capital restrictions in peacetime. Many countries, in both Europe and Latin America, adopted exchange controls in that year.⁶

Germany introduced exchange controls in July 1931 as a temporary emergency measure to protect rapidly declining reserves and avoid currency depreciation (this was two months before the depreciation of sterling).⁷ The election of September 1930 had revealed strong support for both the Nazis and the Communists, reflecting an unsettled political environment; unemployment reached 5.0 million, over 20 percent of the labor force, in early 1931. Especially after the collapse of Austria's Kredit-Anstalt, short-term funds began to be withdrawn rapidly from Germany,

3. Dulles (1929, p. 223).

4. Dulles (1929, pp. 226–27).

5. Moulton and McGuire (1923, p. 166).

6. League of Nations (1944, pp. 162ff.) mentions Argentina, Austria, Bulgaria, Czechoslovakia, Denmark, Estonia, Germany, Greece, Hungary, Latvia, and Portugal. In later years Bolivia, Chile, Italy, Poland, Romania, Uruguay, Yugoslavia, and doubtless others followed. See also League of Nations (1938).

7. Ellis (1941, pp. 171–73).

despite a (short-lived) rise in the Reichsbank's discount rate to an astonishing 15 percent on August 1. Germany seemed to face a Hobson's choice between yet further deflation and substantial currency depreciation. Since the 1923 hyperinflation, currency depreciation had been strongly associated in the public mind with inflation, to be avoided at all costs. Also, depreciation would have made the large public and private external debt even more burdensome; under those circumstances, and with weak demand for exports everywhere, depreciation may not have offered a practical alternative to deflation. Yet even with the temporary exchange restrictions, Germany's gold and foreign exchange reserves dropped by 50 percent between May and November 1931, despite the relief to the trade balance from a sharp fall in world commodity prices.

The evolution of exchange controls into an instrument of planning and control by the Nazis was a gradual one that occurred after 1933. The Nazis improved their electoral position in the fall of 1932, and Adolf Hitler became chancellor in January 1933. Exchange controls were embraced as a key component of modern economic management, and what had started out as a temporary expedient was not finally dropped until over thirty years later. Coverage was extended, with German thoroughness, to eliminate loopholes: by 1938 there were 3 laws, 50 decrees, and 500 administrative rulings concerning exchange controls,⁸ and penalties for violation were strengthened, to include even the death penalty. By the late 1930s exchange controls had become associated with Nazi Germany.⁹

Hungary also adopted exchange controls in July 1931, with a rationale similar to that in Germany; by early 1933 these had evolved into a system of multiple exchange rates. Austria adopted exchange controls in October 1931, after the depreciation of the pound sterling. However, the loopholes were numerous and compliance was lax. Therefore they were dropped de facto by the spring of 1932 after a substantial depreciation of the Austrian schilling, except for clearing agreements that had been signed with Germany, Hungary, and other countries with exchange controls so that foreign trade could continue. Other eastern European countries also adopted exchange restrictions, either for their own merit or as a defensive reaction. The adoption of general exchange restrictions (that is, covering foreign trade as well as finance) by any major market, such as Germany, com-

8. Ellis (1941, p. 166).

9. See, for example, Ohlin (1937).

pelled other countries into some form of restrictions in order to retain their export markets.¹⁰

The emergency capital controls of the 1930s acquired an enduring place in economic policy in many European countries for half a century. Several eastern European countries (for example, Hungary, Poland, and Yugoslavia) continue to maintain them. The financial emergency aggravated the Great Depression, which merged into preparations for war followed by World War II itself and the subsequent arduous recovery. In the meantime, an emphasis on national economic planning, whether of the Marxist or the non-Marxist variety, became fashionable in many countries, not just the Soviet Union and its satellites, and capital controls played an important although supplementary role to more general government involvement in steering national investment. Some countries (for example, Britain under Labour governments, social democratic Sweden, and France under the Socialists) also favored controls for distributional reasons.

Depression, war, and their aftermath thus left a legacy of heavy controls on trade as well as capital movements. Early efforts, led by the Organization for European Economic Cooperation (OEEC, the predecessor of the Organization for Economic Cooperation and Development, or OECD) and its subsidiary the European Payments Union (1950–58), concentrated on liberalizing trade and establishing multilateral institutions to promote trade. The western European countries finally accepted current account convertibility under the IMF's Article VIII in 1961 (and *de facto* by 1959), fifteen years after the IMF's creation—and ten years beyond the postwar transitional period originally envisioned.¹¹

The exceptions to the general practice of capital controls were the United States, Canada, Switzerland, a number of Central American countries until the 1960s, and Germany after the 1960s. In 1979 Prime Minister Margaret Thatcher and her Chancellor of the Exchequer Nigel Lawson finally abolished Britain's capital controls, which had been introduced at the outset of World War II. The decision by the European Community

10. See, for example, Salera (1941) for the case of Argentina. Argentina introduced multiple exchange rates in October 1931, to help allocate reserves and avoid fluctuations in the money supply. The controls were intended to be temporary but lasted for some time. Preferential rates were given to debt service, essential imports, and remuneration of British investment, the last as a result of the Anglo-Argentine Treaty of May 1933.

11. For contemporary accounts of the postwar European experience, see Triffin (1957, 1966), Harrod (1958), and Kindleberger (1966). The OECD in the early 1960s promulgated a Code for Liberalization of Capital Movements, but it had many derogations.

(now the European Union) to create a single market by 1992 implied that capital could move freely within the union, and given the commitment of Britain and Germany to full external freedom of capital movements, that implied the same for other members as well. France and Italy were committed to removing their residual capital controls by 1990 (they had already been substantially relaxed before then); Greece, Portugal, and Spain were given a few years longer. New members (Austria, Finland, and Sweden in 1995) are expected to comply. In January 1999 eleven members of the European Union adopted a common currency, also with full convertibility.

During World War II, American and British officials, later aided by many others, had hammered out a framework for the postwar international monetary system, which was approved at Bretton Woods in July 1944 and, following ratification, was implemented in 1946. Its institutional embodiments are the IMF and the International Bank for Reconstruction and Development (IBRD, now the core institution of the World Bank Group). The IBRD was to address the question of long-term capital movements, as it was assumed that once the needs for reconstruction had been met, capital should be directed to flow from the rich to the poor countries of the world. The IMF's Articles of Agreement set down the rules governing financial relations among its (originally forty-four) member states. As noted above, the Articles require currency convertibility for all current account transactions, although as of late 1998 some thirty-eight member countries still maintained exchange controls on current transactions under the "transitional" Article XIV. But they permit countries to maintain controls on capital movements, and indeed they make contracts that violate the exchange controls of any member country unenforceable in all member countries.¹²

The architects of the Bretton Woods system engaged in a lively debate over what should be the role of capital movements in the postwar economic system. Keynes, a successful investor both as bursar of King's College, Cambridge, and on his own account—he left an estate worth about \$15 million in today's dollars—was deeply skeptical about the role that capital movements might play. He considered them fair-weather friends, capable of becoming deeply disruptive in periods of difficulty, and adding to financial and economic turmoil. "Speculators," he wrote, "may do no

12. Gold (1977, p. 30).

harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes a bubble on a whirlpool of speculation.”¹³ He believed that international capital movements should be kept under control, not only to reduce unnecessary turbulence in the world economy, but also to give national authorities some room to conduct an independent monetary policy, necessary in a system of fixed exchange rates for maintaining full employment or for combating inflation. An early version of Keynes’s Clearing Union plan would have had members cooperate in enforcing the capital controls of other member countries. But the Americans, who for their own reasons did not feel the necessity for capital controls, were unwilling to accept that strong commitment, and the weaker formulation mentioned above made it into the Articles.¹⁴

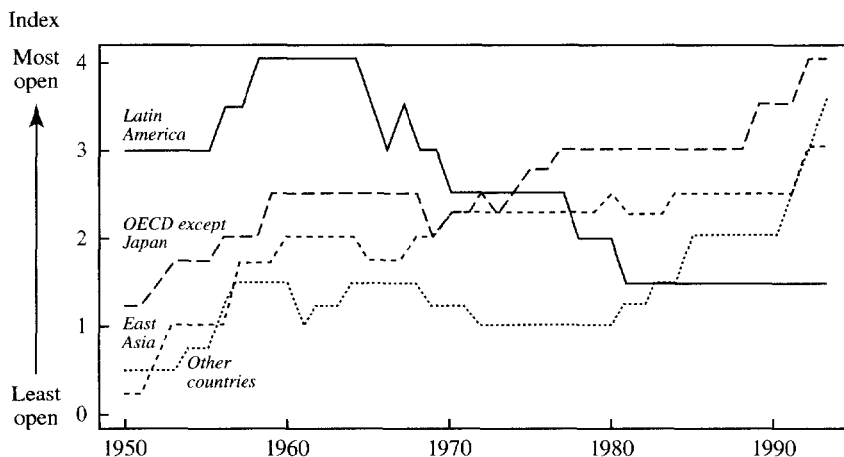
Many developing countries, particularly in Latin America, emerged from the war with relatively strong payments positions and relatively liberal policies toward capital movements, which they liberalized further in the late 1950s. Restrictions were then gradually imposed as, one by one, these countries ran into payments difficulties, and as they became enamored with the notion of development achieved through active government design and control. The oil shocks of the 1970s and the debt crisis of the early 1980s led to further tightening of controls on capital movements. These were relaxed again in the 1990s, as part of the general tendency to rely more on private markets in pursuit of economic development, but in many developing countries capital movements remained less liberal than they had been in 1950.

Since the early 1970s, restrictions on international capital movements have been reduced substantially. Figure 1 shows one index of the increase in capital account openness, described further below, which has been especially noteworthy in Europe, but also in East Asia.¹⁵ The decline in restrictions has been accompanied by a vast increase in transborder capital movements, as shown in table 1. Foreign direct investment into industrial countries increased nearly tenfold between the early 1970s and the early 1990s, and that into developing countries by more than twentyfold. Port-

13. Keynes (1936, p. 159).

14. Roy Harrod, among the team of economists then at the British Treasury, also opposed capital controls, on the grounds that they were unnecessary so long as creditor nations agreed to extend unlimited credit to debtor nations—the core of his alternative plan. See Skidelsky (forthcoming, chapter 5).

15. The liberalizing trend is also discussed and well documented in Williamson and Mahar (1998).

Figure 1. Openness of the Capital Account by World Region, 1950–93

Source: Quinn and Toyoda (1997).

a. Data are medians for the countries in the group.

folio investment grew even more rapidly into both groups of countries. Moreover, these figures, especially those on portfolio investment, understate the growth in transactions, since they record only net changes in foreign claims in a given year. Data for U.S. portfolio investment abroad suggest that gross annual purchases of foreign securities are often ten times the corresponding net changes, or even more, as investors buy and sell securities during the course of the year.¹⁶ For comparison, the value of world merchandise exports grew from \$539 billion in 1973 to \$3.7 trillion in 1993, or by only a factor of seven, and exports grew about twice as rapidly as gross world product in real terms.

Some General Observations on Financial Markets

The financial sector plays a critical role in facilitating production, trade, and growth in any modern economy. Banks, in particular, help mobilize the savings of households (which in traditional societies are held in com-

16. For instance, U.S. net purchases of foreign equities in 1996 were \$57 billion, but gross purchases were \$514 billion. In 1997 the corresponding figures were \$41 billion and \$797 billion. *Treasury Bulletin*, September 1997 and September 1998, table CM-V-5.

Table 1. Portfolio and Direct Investment Flows to and from Industrial and Developing Countries^a
Billions of U.S. dollars

Type of investment	Gross outflows					Net inflows				
	1973-78	1979-82	1983-88	1989-92	1993-96	1973-78	1979-82	1983-88	1989-92	1993-96
<i>Industrial countries</i>										
Direct investment	28.6	46.9	88.2	201.3	259.6	-10.7	-10.3	-18.9	-59.4	-86.6
Portfolio investment	11.8	35.0	126.5	274.6	436.4	12.6	16.0	12.6	68.4	113.5
<i>Developing countries</i>										
Direct investment	0.4	1.1	2.3	10.4	19.2	4.6	13.5	13.2	27.3	87.2
Portfolio investment	5.5	17.8	-5.1	10.3	19.2	-4.2	-14.7	9.1	17.2	76.7

Source: Eichengreen and others (1998), pp. 6-7. Reprinted with permission of the International Monetary Fund

a. Data are annual averages for the period.

modities such as gold or silver) for investment by firms. They assess the risks of the firms to which they lend, making judgments on the basis of balance sheets, collateral, business plans, business prospects, past performance, and the character of management—or on the basis of political influence. In principle, opening to financial transactions with the rest of the world can contribute to domestic welfare by augmenting domestic savings, lowering the cost of borrowing, diversifying risks, increasing competition, and introducing foreign expertise in financial management.

However, financial markets are potentially unstable, in that they involve at a minimum a significant transformation of the maturity of financial obligations. Lenders (including depositors) generally want to keep their savings as liquid as possible, so they can draw on them in case of unforeseen need. Borrowers need funds for longer periods, even if only to carry inventories, but especially to buy plant or equipment or to launch a new business. Financial institutions face the task of bridging these conflicting needs. They do so by relying on diversification, a variant of the law of large numbers. They assume that not all the ultimate lenders will want their funds at the same time, so they can lend a large portion of their liabilities at terms longer than their claimants might desire, while holding just enough liquid assets to satisfy those claimants who want their money back soon. This maturity transformation is most obvious in the case of banks and other deposit-taking institutions, but it is also present in a well-functioning capital market: stock- and bondholders expect to be able to liquidate their claims quickly in a secondary market, yet issuers can devote the funds they have raised to long-term investments. But every so often claimants want their funds, for any of a variety of possible reasons, in larger amounts than the financial intermediaries can quickly provide. This creates a financial crisis.

Financial crises may be confined to the financial community, but often they get transmitted to the real economy, as new borrowing becomes more difficult, old loans become impossible to roll over, and aggregate demand slumps, wasting productive resources and lowering real incomes. Thus countries have installed a series of contrivances to minimize the likelihood of financial crises and to reduce the impact of those that occur. The key elements include deposit insurance (to avoid panic liquidations of deposits), a lender of last resort (to liquefy illiquid assets when necessary), minimum capital and liquidity requirements for deposit institutions, rules requiring rapid and accurate disclosure of information, and rules against

fraud and exploitation of inside information for personal gain. They also include a host of regulations, with accompanying supervision, to ensure that financial institutions do not undertake investments that are more risky than their circumstances and obligations permit; mechanisms for penalizing those who willfully or even inadvertently violate the rules; and bankruptcy proceedings for firms that have become insolvent but retain some value. These contrivances have been developed over time and honed in response to (usually negative) national experience.

Countries today are at very different stages in the evolution of these financial support structures. No responsible person wants a financial crisis, so when crises occur they reflect an oversight or an error somewhere, a failure to anticipate and forestall a new possible danger. Even in countries without a strong formal regulatory apparatus, the prospect of extra-legal political penalties or social ostracism serves to discipline those whose errors are thought to be deliberate or egregious, and hence to some extent to deter crises. Opening domestic financial markets to international competition or access to foreign funds or new investment opportunities may aggravate their potential instability while weakening these (usually implicit) cultural barriers to malfeasance.

Pros and Cons of Capital Liberalization

Should countries liberalize their capital movements fully? Should the international community encourage or even pressure them to do so? What distinctions, if any, should be made among the types of capital to be liberalized, among retained instruments of control, and with regard to the timing and phasing of liberalization? These are all questions that now occupy the IMF, the World Bank, finance ministries, and central banks around the world.

Several reasons have been advanced to answer the first question in the affirmative.¹⁷ First, capital liberalization is one dimension of freedom, and in any free society, people should be able to place their assets wherever they choose, provided they were acquired legitimately and their placement is not harmful to others.

17. See, for example, Fischer (1998), Skidelsky (1999), and Eichengreen and others (1998).

Second, freedom of capital movements exercises a useful discipline on the policies of governments, since policies, including macroeconomic policy, that are deemed to be unsustainable or punitive to property will evoke an export of capital, sending a signal to the government that its policies need changing. A government following exemplary policies in the eyes of potential investors, in contrast, will attract foreign capital into the country, augmenting the country's economic possibilities.

Third, countries will experience domestic and external shocks from time to time, unbalancing the current account, and capital movements will be necessary to equilibrate the balance of payments, to avoid deflation or the need to impose trade restrictions. This equilibration is likely to be smoother and more complete if private capital is free to move into the country—at least for countries with stable governments and well-developed financial markets.¹⁸

Fourth, freedom of capital movement can permit optimal use of the world's resources by allowing capital to move to those countries where its real rate of return is greatest or where, without sacrificing return, it can reduce overall portfolio risk with respect to investments elsewhere. This is a point most often emphasized by economists. An analogy is sometimes made to freedom of foreign trade, which on allocational grounds is beneficial to the world as a whole and, with rare exceptions, to each trading country as well.

Finally, it is sometimes argued that, given the state of modern communications and jurisdictional diversity, restrictions on capital movements are bound to be ineffective. Attempting to maintain them will merely corrode the rule of law and respect for government by rewarding scofflaws who move their capital around the restrictions, and by encouraging corruption of those officials responsible for exercising judgment in admitting exceptions to the controls.

Several arguments have been advanced, on the other side, for restricting international movements of capital. First, in an early recognition of results later attributed to Mundell and Fleming, Keynes argued that full freedom of capital movement under a gold standard (implying fixed exchange rates) would limit the capacity of national monetary authorities to engage in countercyclical monetary policy.¹⁹ His preferred solution for giving greater independence to the movement of national interest rates was to widen the

18. This point is emphasized by Friedman (1953) and Kindleberger (1966).

19. Keynes (1930, pp. 313–15).

gold points (that is, the range of prices within which a country would commit to buy or sell gold), thus creating a wider band of exchange rate flexibility. But (thinking of Britain) he also averred that it might be necessary from time to time to limit foreign access to the long-term issue market. This would result in slippage through the secondary market, so it might be necessary also to tax interest payments to or from foreigners, and possibly to take other (unnamed) steps.

Second, capital controls may be necessary to prevent financial instability. This was a widely held view among those whose experience included the 1930s and who shared responsibility for installing a better international monetary system after World War II. Thus Edward Bernstein, U.S. Treasury official and later research director at the IMF, explained in 1945 that, under the IMF Articles, "When capital controls are imposed, they may not be used to restrict payments for current transactions or to delay unduly the transfer of funds in settlement of commitments. Their sole purpose is to prevent international monetary instability originating in a currency flight."²⁰ He conceded, however, that to prevent the unauthorized outflow of capital some countries might require complete control over international payments. Even Gottfried Haberler, long an exponent of maximum freedom for economic transactions, accepted the need for capital controls so long as currency depreciation was a policy option.²¹

Third, controls on the export of resident capital might be necessary to pursue policies of heavy or redistributive taxation such as those that many European governments adopted after 1945. Without such controls, heavily taxed individuals would simply move their wealth overseas. Although taxation of income from all sources would in principle cover earnings on overseas investments, enforcement would be difficult or impossible; and many law-abiding individuals find it easier to rationalize shaving their tax bill than violating outright prohibitions, for example on overseas portfolio investment.

Fourth, some governments, of industrialized as well as developing countries, actively try to shape the industrial structure of their economies, and here controls over international capital movements, inward as well as outward, may be a useful if not an indispensable instrument. The focus here is mainly on inward foreign direct investment, which could through

20. Quoted in Harris (1945, p. 342).

21. Harris (1945, pp. 331–32).

controls be steered toward favored sectors, but governments implementing such industrial policies have also tried to influence the cost of capital.²²

Finally, particularly in a world in which export performance is believed to be a key determinant of economic growth, governments may take a view on the evolution of the real exchange rate, desiring levels that are steady and that do not value the currency too richly. This was a major motivation for the introduction of restrictions on short-term capital inflows into Chile in 1991, discussed further below, but it has been an important factor elsewhere as well. Countries do not like having their exchange rates jerked around—one likely consequence, emphasized by Bernstein and other Bretton Woods architects, of the financial instability generated by capital movements.

Of course, all these rationales, pro and con, have their critics—sometimes of the end itself, sometimes of the relationship between ends and means. The objectives will not be discussed further here; all are legitimate positions for democratic governments to take, even if economists may be skeptical of their feasibility or desirability. But of course the correct answers to the questions posed earlier depend intimately on what national objectives are, and on whether restrictions on international capital movements are necessary or sufficiently facilitating to attain them.

Three issues in the foregoing list of pros and cons will, however, be taken up here: free movement of capital as a necessary or facilitating condition for optimal allocation of the world's resources; free movement of capital as a device to discipline macroeconomic policies; and the contention that restrictions on capital movements cannot be effective in today's world.

Why Capital Movements Might Not Lead to Efficient Allocation of Capital

The claim that free capital movements will contribute to efficient international allocation of capital has a superficial plausibility, by analogy perhaps with the familiar argument that free trade enhances the efficient use of world resources through specialization according to comparative

22. Quinn and Jacobson (1989) assess the influence of capital controls via interest rates on the industrial policies of five industrial countries under different ruling parties and find a discernible effect only in France under the Socialists.

advantage.²³ But there are at least three reasons to view this claim with skepticism. My focus here is on full freedom of capital movements, whose antithesis is not the absence of such movements, but movements under guidance or constraint.

First, it has long been established that capital mobility in the presence of significant distortions to trade will result in a *misallocation* of the world's capital, and indeed can even worsen the economic well-being of the capital-importing country.²⁴ The basic argument is that if capital flows freely into countries that are well endowed with labor but that protect their capital-intensive industries—a widespread phenomenon, especially with respect to steel and automobiles—the world capital stock will be misallocated, national product at world prices will be reduced, and national income will be reduced further by the payment of returns to the foreign capital. Taxes mitigate but do not eliminate the third effect; economies of scale mitigate the last two effects but must be strong to overcome them. Although worldwide restrictions on imports are much reduced from what they were two decades ago, they are still substantial enough, especially in many developing countries, that this possible effect cannot be dismissed. Various studies, summarized by Moran, suggest that a third to half of foreign direct investment in developing countries actually reduce national income, properly valued, in the host country.²⁵ Free movement of capital is likely to become allocationally efficient only after trade barriers have come down substantially, particularly on capital-intensive activities in countries well endowed with labor.

Free movement of capital may not be allocationally efficient even in the absence of barriers to trade. Much foreign capital flowed into U.S. Treasury securities during the early 1980s, helping to finance a large U.S. budget deficit. These inflows would undoubtedly have been even greater with universal capital account convertibility, strengthening the dollar even further. Would that have resulted in a more efficient allocation of the world's capital stock?

Second, every nation levies taxes, usually at substantial rates. If marginal tax rates were everywhere the same on capital, foreign or domestic, that would not compromise the desirability of capital liberalization on allocational grounds. But marginal tax rates on capital income are not every-

23. This section draws on Cooper (1998). See also Bhagwati (1998).

24. Brecher and Diaz-Alejandro (1977).

25. Moran (1998).

where the same, and capital income is defined differently for tax purposes in different countries. Probably most important, free capital mobility is an invitation to escape domestic tax authorities by lodging capital in countries where taxes are lower or effectively nonexistent, and where the tax authorities in any case are unlikely to report the income back to the owner's home tax authorities.

The issue of capital taxation is complicated, and instances are easy to construct in which tax evasion is allocationally efficient. But it is equally easy to construct cases in which tax evasion (or even legal tax avoidance) is allocationally *inefficient*, especially where exported capital escapes taxation altogether in a world in which capital taxation is widespread. Even when it may be allocationally efficient, such evasion would hardly be optimal from a social point of view, where taxation of income on capital reflects the norms and notions of equity in each community.

Capital movements become allocationally efficient in a world of widespread potential for tax evasion only if marginal tax rates on capital are harmonized and if national tax authorities cooperate sufficiently closely to reduce evasion on capital income to negligible levels. But such an agenda is itself much wider and more ambitious than capital account liberalization. Of course, if one's aim is to eliminate taxes on capital income, capital liberalization deserves consideration. But that very different objective should be made explicit.

This discussion in practice pertains to the export of capital from developing countries, since all rich countries—including Japan—allow significant freedom of capital movement. But much tax-evading exportation of capital takes place from rich countries: Luxembourg and Switzerland thrive on it. World current account statistics report a very large measurement error: over \$100 billion in deficit for 1996, with recorded payments of capital income far exceeding recorded receipts. This gives credence to the suggestion that a substantial portion of international capital movements is tax avoiding in motive and in effect, although of course other factors undoubtedly also influence the asymmetry in measurement.

Third, the allocation of capital is improved only if adequate information is available and if investors take advantage of it in making their investment decisions. Yet financial markets are well known for their herd behavior, in which market judgments become heavily one-sided. Sometimes this is in response to genuinely new information, which informs all investors in the same way. But sometimes there is no really new information, only a

change in sentiment that leads everyone to rush in or out, so as not to be left behind. Examples of this bandwagon behavior are numerous, and it is difficult to see how they improve the allocation of the world's capital. It might be the case, to be sure, that the withdrawal of foreign (and domestic) capital from Thailand in 1997 "sent a signal" to the Thai government that its economic policies, especially its rigid exchange rate and tolerance of foreign currency loans to the domestic property market, were not sustainable. But even so, it is difficult to ascribe similar social value to the inrush of foreign capital to Thailand in 1995 and 1996. The large inflow followed by the large outflow cannot both have been similarly socially useful signals, and possibly neither of them were. In any case, the large outflows from Malaysia following the Thai crisis in July 1997 were a case of pure contagion: they were economically disruptive, with little useful allocative or signaling effect. From London or New York all Southeast Asia is a blurred spot on the globe, and traders (or holders of regional mutual funds) issued their sell orders before asking discriminating questions. Moreover, as we learned during the fad of monetarism in the United States in the early 1980s, market participants may have in mind an incorrect model of how the economy works, and therefore send wrong signals.

It is not persuasive to argue that the large international capital flows of recent years merely demonstrate the moral hazard created by the prospect of IMF bailouts for countries that run into difficulty. Only interbank loans or purchasers of government securities have even the possibility of bailouts, yet that did not keep foreigners from making large purchases of equities in emerging markets, or from making direct loans to nonbank enterprises (especially in Indonesia). Furthermore, herd behavior was observed in financial markets long before the arrival of the IMF. Keynes, an acute observer of and participant in both foreign exchange and equity markets in the 1920s and 1930s, likened financial markets to a beauty contest, but one in which the judges are asked to select not the most beautiful contestant, but rather the one that the other judges would choose as the most beautiful. The most successful traders are not those who judge corporate or country fundamentals correctly, but those who guess where their competitors will next buy or sell. Both traders and analysts are subject to waves of euphoria or pessimism about whole classes of securities, and the fact that this may create profit-making opportunities for contrarians in the longer run is small comfort to those who experience real economic damage in the meantime. Moreover, because of possible multiple equilib-

ria, discussed further below, these waves of euphoria or pessimism may sometimes be self-fulfilling when currencies are involved, so even contrarians might lose.

Participants in financial markets perhaps have no worse information than government officials do, and perhaps they have as good an idea about how economies work, but they have a fundamentally different perspective. They are motivated to make as much money as they can without running excessive risk to themselves—by greed and fear, as it is sometimes said—in the economic system as they find it. Many succeed, but many also fail, through poor judgment as well as bad luck. Their behavior is always myopic. They do not adopt, and in the absence of official pressure cannot be expected to adopt, a perspective of system maintenance and system evolution. But financial systems are not intrinsically robust, and therefore governments must concern themselves with system maintenance.

The IMF's Interim Committee agreed at its April 1997 meeting that capital account convertibility should not interfere with the imposition of prudential rules on financial institutions. But unless these prudential rules are to be harmonized internationally—another ambitious project, going far beyond worldwide capital account convertibility—free capital movement alone will lead to “unfair competition,” that is, to competitive pressures on those countries that choose prudential regulations more rigorous than those prevailing in other countries with aspirations toward a role in international finance.

There is little doubt that controls on international capital movements can lead to serious distortions in the allocation of capital, which in turn lead to its inefficient use. The very low returns to investment in major industries in South Korea, compared with what is available abroad, offer only one of many examples of how prohibitions on the private export of capital may have reduced national income below what it might have been.²⁶ But controls on international capital movements are only one of many factors that contributed to this result; a similar phenomenon can be found in Japan, where restrictions on flows of capital have recently been much lower. Many other factors distort the allocation of capital, including imperfect legal systems, corruption, and, especially, a strong preference on the part of management (often reinforced by tax codes) to retain corporate earnings. In any event, such examples suggest a case for liber-

26. See McKinsey Global Institute (1998).

alizing international capital movements in some instances, not a case for generalized freedom of capital movement. The case for the liberalization of international capital movements needs to be made, not assumed.

In short, building a case for capital movement on allocational grounds requires specifying the context in which it is to occur. Is it to occur in parallel with (or following) removal of all other policy impediments to the efficient allocation of capital across boundaries, in other words a far-reaching and ambitious program for international cooperation? Or is it to occur with all other impediments and incentives remaining about the same as they are today? or with partial removal of the other factors that distort capital movements? If the last, exactly which distorting factors will be removed and which will remain? The allocational effects of capital movements cannot be assessed analytically without answers to these questions. Efficient allocation over time between countries involves their current account positions and changes therein; but as noted earlier, gross capital movements, which typically dominate exchange rate movements in the short and the medium run, are typically many times the net flow. A country can enjoy large net inflows of capital (that is, a current account deficit), as most developing countries have over the past few decades, without allowing residents or even nonresidents uninhibited freedom to move funds in or out.

Capital Movements for Market Discipline

The issue of how well financial markets discipline economic policy, especially fiscal policy, enlivened in the 1990s with the debate over what fiscal discipline, if any, the European Union should impose on member states after the creation of a single currency. Some worried that fiscal profligacy by one or more governments could undermine Economic and Monetary Union. Others argued that prohibition of central bank financing of budget deficits would be sufficient to avoid such a catastrophe, since market financing of budget deficits would become more expensive and ultimately impossible if the market judged a government's deficits to be unsustainably large or prolonged. In the end, European officials, demonstrating a lack of confidence in market discipline, agreed to the Stability and Growth Pact, which limits budget deficits to 3 percent of GDP except in exceptional circumstances.

In a reversal of the usual sequence, however, in the early 1970s Indonesia opted for freedom of capital movements before it had a well-developed domestic financial system and before it formally liberalized trade. Two reasons were given. First, liberalized capital movements would help discipline the government's fiscal and monetary policies. And second, capital controls could not be made effective in any case, given the strong ties between Indonesia's ethnic Chinese minority and their relatives and business associates in Singapore and Hong Kong.²⁷

Recently, Woochan Kim has studied the effect of liberality of capital movements, measured simply as free or restricted according to IMF reports, on macroeconomic policy as defined by the size of the budget deficit relative to GDP, for fifty-four industrialized and developing countries from 1950 to 1989.²⁸ The econometrics are designed to avoid simultaneity bias and other statistical pathologies and to take other determinants of budget deficits into account. Kim finds a marked and statistically significant negative impact of freedom of (outward) capital movement on the size of budget deficits: complete freedom reduces deficits by 2.3 percent of GDP on average. This gives some support to the thesis that freedom of capital movements does provide a disciplining effect.²⁹ Of course, even if these results are accepted as valid, one would want to inquire further, country by country, whether the effect was desirable. After all, there are occasions when budget deficits should be allowed or even encouraged to rise rather than required to fall.

The Effectiveness of Capital Controls

There is little point in imposing restrictions on capital movements if they cannot be effective. To assess the effectiveness of capital controls, we need a comprehensive description of the controls that are in place, an expectation about what the impact of the controls might be, and an assessment of whether the expected impact can be observed—all with respect

27. Cole and Slade (1996). Woo, Glassburner, and Nasution (1994) omit any discussion of capital controls but have much to say on the use of interest rates, implying a liberalized regime.

28. Kim (1999).

29. The results suggest that the disciplinary effect is greater with fixed than with flexible exchange rates, as might be expected.

to the stated or implicit objectives. Fortunately, the IMF has for decades attempted to describe the official controls imposed by its member countries, and these descriptions are published in its annual *Exchange Arrangements and Exchange Restrictions* (formerly the *Annual Report on Exchange Restrictions*). As has already been made clear, however, restrictions on international capital transactions, to say nothing of other international transactions, come in infinite variety. Therefore an accurate portrayal requires knowledge not only of the laws and regulations in place, but also of how they are implemented—which often involves much official discretion—and of how easily they are circumvented, either legally or illegally. The IMF reports the presence of restrictions, but not their intensity or their impact.

As usual in economics, we can focus on either prices or quantities, and we can engage in detailed analysis of specific cases or broad analysis of general results. What follows involves a little of each. We start with an analysis of possible price effects of capital controls, an approach that involves scaling capital controls in some way and comparing the degree of control with a rough indicator of effectiveness. Political scientist Dennis Quinn of Georgetown University has attempted to scale capital controls for sixty-four countries for the years 1958, 1973, and 1988, based on his interpretation of the IMF country descriptions. His scale ranges from 0 to 4, where 4 represents full liberalization of international capital movements—a level attained, on his interpretation, in 1988 only by Germany, Guatemala, Panama, Switzerland, and the United States (table 2).³⁰ The lowest scores, 0.5 or below, were attained by Burma, Ethiopia, and Morocco.

If capital controls are effective, they must be preventing some financial arbitrage that would otherwise occur, and thus creating a price differential that would be absent with full capital liberalization. Such price differentials might be created in many ways, but two obvious places to look are exchange rates and interest rates. Interpretation of interest rate differentials is complicated by the possible presence of risk premiums, but we will turn to an example below. Where obstacles are placed on undertaking capital transactions legally, they may be attempted illegally, and a black or gray market for hard currency (usually U.S. dollars, sometimes Swiss francs or German marks) will develop. Prices in this market will register a premium over officially approved exchange rates for the purchase of the

30. Derived from Quinn (1997, table B-1).

Table 2. Openness of the Capital Account and Exchange Rate Premiums by Country

Country	Openness index (4 = maximum)		Exchange rate premium (percent)	
	1973	1988	1971-75	1988
<i>OECD</i>				
Australia	0.6	2.9	0	2
Austria	0.0	2.6	0	0
Belgium	3.0	3.0	0	1
Canada	2.8	3.6	0	2
Denmark	1.3	2.8	0	2
Finland	0.2	1.8	0	1
France	2.9	2.9	0	2
Germany	4.0	4.0	0	1
Great Britain	0.5	3.6	0	1
Greece	1.1	2.7	4	8
Ireland	0.3	1.8	0	1
Italy	1.3	2.8	0	1
Japan	1.5	2.3	0	0
Netherlands	2.3	3.8	0	1
New Zealand	0.0	3.2	0	0
Norway	0.0	2.3	0	0
Portugal	0.7	2.3	1	13
Spain	1.8	2.6	0	2
Sweden	1.8	2.6	0	0
Switzerland	4.0	4.0	0	1
Turkey	0.2	1.0	7	9
United States	3.2	4.0	0	0
<i>Latin America</i>				
Argentina	1.4	2.2	38	50
Bolivia	4.0	3.2	37	6
Brazil	1.5	1.5	13	57
Chile	2.5	1.8	414	29
Colombia	1.7	1.7	14	15
Costa Rica	3.0	2.2	34	23
Dominican Rep.	2.4	3.2	23	12
Ecuador	3.4	2.6	9	18
El Salvador	1.5	1.5	18	195
Guatemala	1.7	4.0	0	27
Haiti	3.5	1.9	0	151
Honduras	4.0	2.3	0	85
Mexico	3.5	2.8	0	15
Nicaragua	3.9	0.8	19	416
Panama	4.0	4.0	13	0
Paraguay	3.5	1.9	25	127
Peru	2.2	1.4	63	7
Uruguay	1.9	3.4	45	11
Venezuela	4.0	2.3	0	190

(continued)

Table 2. Openness of the Capital Account and Exchange Rate Premiums by Country
(continued)

Country	Openness index (4 = maximum)		Exchange rate premium (percent)	
	1973	1988	1971-75	1988
<i>Other developing countries</i>				
Burma	0.2	0.2	...	680
Egypt	1.5	1.5	84	249
Ethiopia	0.0	0.5	13	26
Ghana	0.9	1.7	45	36
Hong Kong	2.3	3.8	0	1
India	1.9	1.1	43	14
Indonesia	2.3	2.3	3	16
Iran	1.3	1.3	3	1,030
Israel	2.1	1.3	25	17
Jordan	0.9	1.7	5	10
Korea	0.7	2.3	11	10
Liberia	4.0	3.6	10	0
Malaysia	3.4	2.6	1	2
Morocco	0.5	0.5	5	4
Nigeria	0.5	2.1	31	90
Pakistan	0.6	1.3	86	10
Philippines	0.8	0.8	8	3
Singapore	2.3	3.8	1	2
South Africa	0.0	1.5	12	5
Sri Lanka	0.7	0.7	81	36
Syria	3.9	2.3	11	354
Thailand	1.6	1.6	0	1
Tunisia	1.6	1.6	15	12

Source: Author's calculations using data from Quinn (1997, 545-46); Barro-Lee data set; *World Currency Yearbook*, 1997.

hard currency. Such black or gray market exchange rates have been collected for many countries for years and are published at three-year intervals in *World Currency Yearbook* (formerly *Pick's Currency Yearbook*).

The market rates recorded are for banknotes within the country in question at the end of each month. They thus reflect the demand for greenbacks, possibly for untraceable transactions, for the purpose of evading taxes or engaging in illegal transactions. If currency trading is itself illegal, the premium would reflect the possibility of being caught and punished and thus would be somewhat higher than similar transactions occurring in free markets such as Hong Kong or Zurich. The premium for greenbacks reflects the strength of demand for them as well as any restrictions on supply; thus a low premium can coexist with severe

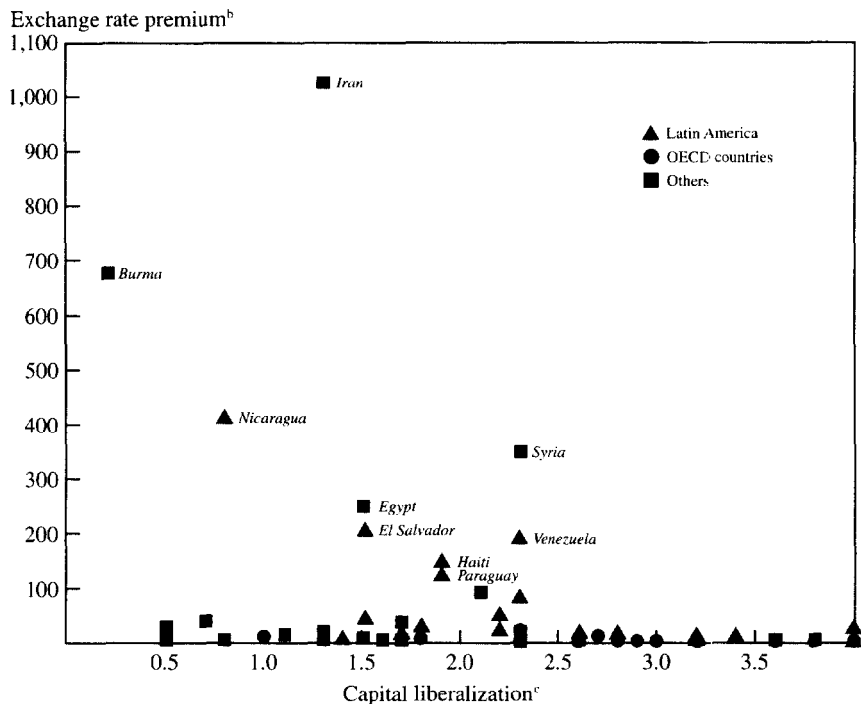
restrictions on capital exports, if at the time the desire to export capital is low.

Some countries have multiple exchange rates; here the black market premium has been measured against the principal exchange rate or, when that is ill defined, against the principal rate applicable to exports. A premium may thus arise for perfectly legal transactions, if those transactions are denied access to foreign exchange at the principal prevailing rate and are channeled instead into a free market.³¹ If there are no effective capital restrictions, any premium on purchases of greenbacks should be modest, reflecting only the particular costs (including the possible exchange rate risk) of dealing in banknotes; anything above that should be arbitrated away. I will assume that a premium of 5 percent would comfortably cover transactions costs; anything above that can plausibly be attributed to effective restrictions on arbitrage, that is, to the effectiveness of capital restrictions. At the end of 1988 the currencies of no fewer than ninety-one countries registered market premiums in excess of 5 percent; only fourteen of these were communist countries (among which Hungary showed the lowest premium, at 56 percent). I take this as strong *prima facie* evidence against the proposition that capital controls cannot work. Among the member countries of the Organization for Economic Cooperation and Development (OECD), only Greece, Portugal, and Turkey registered premiums in excess of 5 percent, even though most OECD countries retained residual capital controls of one kind or another (many were dismantled in 1990 under EU single market directives).

The absence of an exchange rate premium on greenbacks may suggest that effective capital controls are not present, but it cannot be taken as definitive evidence; the demand for greenbacks may simply have been low at the record date. A test of the effectiveness of capital controls would come when economic agents wished to move substantially more capital into or out of the country than the controls permitted. The premiums generally persist year after year—that is, they are not just transitory—although again there are significant exceptions.

Table 2 reports Quinn's measure of the severity of controls on capital movements for sixty-four countries and the market premiums on green-

31. The premium applies to general residual transactions, however, and not to specially channeled transactions such as those to which the security exchange rate of Sweden or the financial rate of South Africa apply; these are applicable to resident purchases of foreign securities, and the premiums are typically higher.

Figure 2. Capital Liberalization and Exchange Rate Premiums, 1988^a

Source: Quinn (1997) and *World Currency Yearbook*, 1996.

a. Countries are the same as in table 2.

b. Exchange rate premiums are in percent.

c. Capital liberalization scale of Quinn (1997).

backs for the early 1970s and for 1988. Figure 2 shows the expected negative correlation ($r = -0.39$) between the two variables (greater liberality leads to a lower premium), but with many exceptions. The high correlation is driven by a relatively few observations. Indeed, a comparison of the two sets of data for the early 1970s yields essentially no correlation ($r = -0.02$) between them. Note, however, that all countries with liberalization scores above 3.5 in 1988, and many with scores above 3.0, have negligible premiums. The notable exception is Guatemala, where political uncertainty and a civil war kept up a continuing domestic demand for greenbacks, and where Quinn's rating fails to capture restrictions on channels for investment abroad.

Several countries have maintained segregated markets for overseas portfolio investment: Belgium, Great Britain (before 1979), South Africa, and Sweden, to name a few. These markets have registered significant and persistent, although varying, premiums (for example, 14 percent in Sweden at the end of 1988, and 62 percent in South Africa), suggesting effective segregation over long periods. Belgium is a possible exception: there the premium was generally low, and it is widely believed that the central bank acted to ensure a low premium.

From 1963 to 1969 the United States imposed an “exchange equalization tax” on short-term capital outflows, to limit pressure on the dollar at a time when U.S. interest rates were lower than those prevailing abroad, notably in Europe. The general consensus is that this tax did not limit total outflows from the United States but did push them toward longer maturities, thus permitting somewhat lower short-term interest rates than might otherwise have been possible under the fixed exchange rates then prevailing.³²

France in 1981, 1982–83, and 1985–86 experienced periods of four to six months when interest rates on eurofrancs (francs held outside France, with trading centered in London) were substantially higher—sometimes more than 10 percentage points higher—than comparable interest rates in Paris. This suggests that the capital controls then maintained could be effective in a short run that ran into months, permitting lower domestic interest rates than could have been maintained under free capital mobility.³³ French monetary policy operated mainly through credit controls during those periods, rather than market intervention. France was a member of the European Monetary System (EMS), which allowed limited exchange rate flexibility against other EMS currencies, notably the German mark, but excluding the pound sterling.

Perhaps the most widely cited recent restriction on capital flows is Chile’s policy, from 1991 to 1998, of requiring non-interest-bearing reserves to be held against Chilean short-term liabilities to foreigners—in effect, a tax on short-term capital inflows. This system was first introduced in the form of a 20 percent deposit requirement. The required deposit was raised to 30 percent in 1992 as U.S. interest rates declined, and it was reduced in stages to zero in late 1998, but the system remains in place, so the deposit requirement could be reinstated. Chilean authorities

32. See Solomon (1982), Cooper (1965), and Hewson and Sakakibara (1975).

33. See Giavazzi and Giovannini (1989) and Davanne and Ewencyzk (1989).

maintained this restriction with one eye on the real exchange rate, with a view to maintaining the competitiveness of nontraditional Chilean exports, and the other on reducing inflation. Inflows of capital rose sharply in 1990, threatening to push up the real exchange rate, but interest rates had to be kept high to confine inflationary demand pressures, and this encouraged inflows of funds. Chile had a crawling band exchange rate regime, with a central rate that was altered monthly in response to estimated inflation differentials between Chile and the outside world; between the monthly fixings the exchange rate could fluctuate within a band of 10 percent (widened to 20 percent in January 1992). High domestic interest rates encouraged Chileans to borrow abroad and foreigners to deposit funds in Chile. The special reserve requirements were introduced to try to reconcile Chile's partially conflicting objectives.

As was to be expected, arbitrage around the new regulations soon occurred. For example, direct investment was free of the special reserve requirement, so direct investment began to take place in new Chilean funds whose purpose was to buy short-term Chilean assets. The authorities responded by tightening and extending the regulations in a variety of ways.

Chile also requires inward foreign direct investment and portfolio investment to remain within the country for at least one year, to discourage quick round trips, and it requires bonds issued by Chileans in international markets to have a minimum term of four years. During the early 1990s Chile dropped virtually all its controls on the outflow of resident capital, again with objectives similar to those cited above, as well as to liberalize capital flows as a long-term measure.³⁴

Controversy remains over how effective the restrictions were. The Chilean peso appreciated by 30 percent in real terms while the restrictions were in effect, and net capital inflows continued to mount during the 1990s, reaching \$5 billion in 1996, after dropping in 1995 following the Mexican crisis. However, the typical maturity of Chilean liabilities to foreign banks in June 1997 (57 percent of these obligations had maturities of over one year) was longer—in some cases markedly longer—than for many other developing countries, including Mexico (55 percent),

34. Capital flows to and from Chile had been controlled from the 1930s until 1979, when they were all removed. Many were reimposed during the financial crisis of 1982–83. See Massad (1998, p. 40). Kenen (1995) points out that the efficacy of a deposit requirement is questionable when a country's currency is held extensively abroad, which, however, is not the case with Chile.

Argentina (46 percent), Malaysia (44 percent), Indonesia (41 percent), the Philippines (41 percent), Brazil (38 percent), Thailand (34 percent), and Korea (32 percent).³⁵ And inflation in Chile declined from 15 percent in 1991 to 5 percent by 1998. Thus, although the restrictions may not have fully served their stated purposes, they did permit Chile to maintain short-term interest rates significantly above those prevailing in world markets. Also, by lengthening the average maturity of external debt, they may have helped protect Chile during the Mexican financial crisis of early 1995 and during the emerging market financial crises of 1997–98.³⁶

Malaysia attracted considerable attention when it ostentatiously reintroduced capital controls in September 1998, over a year into its financial crisis.³⁷ These were designed to permit a reduction in domestic interest rates without putting downward pressure on the ringgit, to help alleviate the recession and take pressure off domestic debtors, and to provide a stable exchange rate environment for exports and for servicing external debt. Exports of ringgit, by residents or nonresidents, were restricted, a measure aimed at drying up the offshore market in the currency, concentrated in Singapore. Malaysian officials believe short sales in the Singapore market were a continuing source of downward pressure on the ringgit and inhibited a decline in domestic interest rates. Under the controls, portfolio capital could not be withdrawn until it had been within the country for 12 months (foreign direct investment, presumed to be long term, was exempt). An official exchange rate of 3.8 ringgit to the U.S. dollar was established, at which all legal transactions were to take place.

35. Data are for claims of banks reporting to the Bank for International Settlements at the end of June 1997, just before the Thai financial crisis (Bank for International Settlements, 1998, table 1).

36. See Massad (1998) and Labán and Larraín (1998) and the references cited there. It is true that the share of short-term indebtedness had declined only slightly from 45 percent in 1990, before the deposit requirements were introduced, to 43 percent in June 1997. But during this period short-term external indebtedness rose substantially throughout the world, from 35 percent to 52 percent in Latin America and from 44 percent to 58 percent in the developing countries as a group. Thus Chile bucked a major trend, dropping from modestly above average in 1990 to considerably below average in 1997. Data are from Bank for International Settlements (1998). Of course, the possibility of maturity swaps through derivatives implies that balance sheet data alone may not provide a reliable indication of the true maturity structure of a country's debt.

37. Technically, Malaysia has had controls in place since 1953. They were extensively liberalized in the 1980s and 1990s, but restrictions remained on resident borrowing abroad—a factor that may have lessened the impact of the financial crisis on Malaysia.

Early on, an acute shortage of dollars developed in the domestic market, and informal exchange rates rose to over 10 percent above the officially sanctioned rate (itself up from a precrisis rate of 2.5 to the dollar, but down from 4.2 to the dollar in August 1998). The central bank authorized importation of U.S. currency, and the "black" market rate subsided to 3.8 to the dollar (that is, the premium disappeared). Exports of capital through export commodities also began to occur, with exports being paid for domestically in ringgit that had been purchased with dollars in Thailand at a discount. All foreign trade was put on a foreign currency basis.

In February 1999 the controls were converted into a 30 percent tax on earnings, including capital gains, on any new (post-February) capital withdrawn in less than one year (10 percent thereafter). A tax of up to 30 percent was imposed on principal plus earnings for withdrawals of foreign capital that had been in the country less than one year; the tax was graduated according to the length of time in the country.

Many Malaysians believe the controls were successful, in that following their introduction domestic interest rates declined significantly, foreign exchange reserves increased, the stock market rose significantly, and the economy ceased to decline, thanks partly to increased exports. The domestic market for foreign exchange normalized, and domestic interbank rates on dollars dropped to 1 percent above the London interbank offered rate (versus 3 percent earlier). It will take time to assess the long-run costs of the controls, however. In particular, it remains to be seen whether foreign mutual funds will be willing to invest in equities subject to a heavy tax on short-run earnings, and whether foreign direct investment will be frightened off despite the Malaysian efforts to shield it from the controls.

What is less well known is that Thailand also introduced capital controls, initially in May 1997, before the crisis broke. They were given much less publicity than Malaysia's, and as in Malaysia they were initially aimed at preventing forward sellers of local currency (baht) from acquiring baht domestically. The controls seemed to have worked temporarily, as indicated by a sharp rise in interest rates for offshore baht, at one point to 500 percent (at an annual rate), much higher than domestic rates, as short sellers rushed to cover their positions. The controls may have somewhat mitigated pressure on the baht, but they certainly did not prevent the crisis: the Bank of Thailand exhausted its usable reserves despite the controls, partly through forward baht purchases. Controls were strengthened successively

in June, July, and September 1997, and in early January 1998, as the authorities moved to plug loopholes and to strengthen the currency by requiring exporters to convert foreign exchange earnings to baht on a shortened timetable. But there was no serious mechanism for enforcement. In late January the controls were lifted on all transactions by nonresidents, thus again unifying the onshore and offshore baht markets, except for a limit of 50 million baht (about \$1.25 million) per counterparty on credit facilities that could be extended in baht to nonresidents having no underlying trade or investment activities in Thailand.

Korea still maintained extensive controls on inflows of portfolio capital (as opposed to bank lending) when its crisis broke in November 1997. At that time foreigners could not own more than 23 percent of the market capitalization of any listed Korean stock. Those limits were raised in steps and in May 1998 were eliminated entirely. (Net purchases of Korean equities by U.S. residents rose sharply in the first and second quarters of 1998. These followed large net purchases in 1997, but those purchases had slowed considerably in the fourth quarter.) Controls on overseas borrowing by non-financial enterprises with maturities over one year were also eliminated, the foreign purchase of real estate was permitted, and several other controls on capital inflows were relaxed, although in April 1999 the ministry of finance was given greater control over short-term capital movements.

China adopted current account convertibility for the yuan in December 1996 but maintained extensive controls on capital movements, inward as well as outward, although foreign direct investment was extensively courted. Stung by the failure of foreign exchange reserves to rise in the first half of 1998 despite a large trade surplus, China considerably tightened its exchange control regime beginning in June 1998. This was done to ensure that export earnings were repatriated and that payments for imports and interest and dividends were legitimate.³⁸ Other countries no doubt took similar actions in the wake of the financial crises.

These episodes will provide material for future research on the competing claims about the efficacy of controls on capital movements. Both Korea and Malaysia show signs of economic recovery in 1999, Korea having liberalized and Malaysia having tightened restrictions on capital movements (from quite different initial positions). Both countries also took serious steps to strengthen their banking systems, and both, after some tightening,

38. See Jones and Maher (1999).

adopted stimulative fiscal policies. It will be difficult to sort out the partial effects of changes in capital restrictions.

It is, of course, much easier to protect against sudden surges of funds into or out of a country than to thwart a persistent determination to move capital. With time, many channels of arbitrage can be found to move capital into—or especially, out of—a country. Even complete exchange control does not guarantee protection.

Does Liberalization of Capital Movements Foster Growth?

The review of the pros and cons of capital liberalization presented above leads to no clear prediction about the impact of liberalization of international capital movements on economic growth, although as with foreign trade the allocational argument might suggest a positive effect on balance. Accumulation of better-quality data for many countries over the past two or three decades has made large cross-sectional and time-series regressions fashionable. Their results are inconclusive on this question, with hints at a positive impact of liberalization on growth.

Dani Rodrik finds a positive but small and statistically insignificant relationship between capital account liberalization and growth in per capita income.³⁹ His sample includes nearly 100 countries over the period 1975–89, and he controls for initial per capita income, initial secondary school enrollment, and an index of quality of government institutions. His equation also includes regional dummies for sub-Saharan Africa, Latin America, and East Asia. He measures capital account liberalization as the number of years between 1975 and 1989 in which each country had no restrictions on international capital movements.

Dennis Quinn finds a larger and statistically significant effect of capital account liberalization on growth in per capita income, using the more refined measure of capital liberalization discussed above, for sixty-four countries over the period 1960–89.⁴⁰ His specification also controls for initial per capita income, population growth, the investment rate, and secondary school enrollment. (Experimentation with many alternative formulations reduces the coefficient on capital liberalization somewhat, but it remains statistically significant.)

39. See Rodrik (1998, p. 62).

40. Quinn (1997, table 1).

These studies merely open a potentially fruitful line of research. Results cannot be considered decisive until we have better measures of the intensity, as opposed to the mere existence, of capital controls.

Is Capital Freedom Compatible with Flexible Exchange Rates?

Within a country, the overall price level is beyond the reach of any entity except the central bank; it is taken as autonomously determined by all players in financial markets. The same, however, is not true for the price levels of small, open economies: their national price levels are strongly influenced by their exchange rates, at least in the short to the medium run. Yet the exchange rate is technically not anchored by anything in the long run, as it is the barter price between two nominal variables (as Kareken and Wallace pointed out two decades ago⁴¹). Nor is it anchored even in the short run if the central bank is not pegging it, or if the central bank is pegging it but lacks sufficient reserves to resist movement against large, market-driven shocks. Thus a large financial player can influence the exchange rate, and hence the price level, of a small country by selling its currency short. Furthermore, given the dynamics of thin financial markets, a single player does not need enormous resources to move the exchange rate radically; such a player only has to start a run on the currency, through a combination of sales and rumors. If the word goes out persuasively that the currency will depreciate, many will join the bandwagon, and the currency will depreciate.⁴² If the price level adjusts and the central bank later accommodates the adjustment for macroeconomic reasons, the depreciation will have been justified *ex post*. This is a fundamentally unstable dynamic. According to Aliber,⁴³ the Belgian franc was dragged down by the French franc in the early 1920s, despite very much better “fundamentals,” and the depreciation led to inflation that subsequently justified the depre-

41. Kareken and Wallace (1977).

42. Recent research involving detailed data on equity trading suggests strong persistence and positive feedback trading in emerging markets; that is, investors buy on a rising market and sell on a falling market. There is also substantial evidence of herd behavior. In other words, the assumption of independence of agents' behavior is not warranted, and the possibility of destabilizing movements is high. See Kim and Wei (1999), Froot, O'Connell, and Seasholes (forthcoming), and Stulz (1998/1999). Stulz reports, however, that foreign equity sales were not in fact destabilizing during the Korean financial crisis of late 1997.

43. Aliber (1962).

ciation. Obstfeld (1986) has identified more general circumstances in which a sharp change in the exchange rate leads to a change in government policy that in turn justifies, *ex post*, the change in the exchange rate.

On August 13, 1998, four days before the Russian government abandoned its exchange rate commitment, the financier George Soros wrote a letter to the *Financial Times* predicting the imminent demise of the ruble. It was suggested soon thereafter that the letter was a deliberate attempt to destabilize the ruble, on which Soros could be expected to make a lot of money.

In this case, on his own testimony Soros actually lost money,⁴⁴ and there is no evidence to support the suggestion that his letter was an attempt to destabilize. But the example and the subsequent suspicions illustrate the point that, when market expectations are already fragile, a single respected player can in fact move market prices by discrete amounts, in a manner that can become self-justifying—something that cannot happen in an idealized competitive market.⁴⁵ This example, it is true, was about bringing into question an exchange rate commitment; but there is no reason to believe that any other commitment, such as a prospective budget deficit, could not be similarly challenged, or even a market-determined exchange rate.

Domestically, at least in the United States, there are rules against market manipulation, in both commodity and securities markets, by one or a few parties. Convicted market manipulators can be sent to jail. There are no such international sanctions, however, and small economies are therefore vulnerable.

The core problem is that, for economies with imperfectly developed financial markets, the exchange rate is the most important asset price. But the exchange rate is also the most important price in the market for goods and services. Widely fluctuating asset prices can therefore badly disrupt the markets on which the economic well-being of the majority of humankind depend.

Free movements of capital and floating exchange rates may therefore be basically incompatible, except for large and diversified countries with

44. Soros (1998, chapter 7).

45. Although the Russian fiscal situation was anything but satisfactory, there is no evidence that the ruble was overvalued in terms of foreign trade, unless the fall in oil prices was judged to be a permanent one. The fragility was created by the growth of foreign and domestic holdings of short-term, ruble-denominated paper amid doubts whether the government could continue to make payments on these instruments at the relatively high interest rates required to sell them.

well-developed and sophisticated financial markets. Of course, free movements of capital are also incompatible with fixed but adjustable exchange rates. Thus, unless countries are prepared to fix the values of their currencies permanently to some leading currency, or to adopt some leading currency as their national currency, they may reasonably choose to preserve the right to control at least certain kinds of capital movements into and out of their jurisdictions, in the interest of reducing both nominal and real exchange rate variability.

Conclusions

Apart from the point made in the preceding paragraph, the discussion in this paper, like most discussions of capital controls, does not lead to strong, definitive conclusions. For a variety of reasons made explicit in the discussion of pros and cons, liberalization of capital movements seems to be a good idea—if the conditions are right. But the right conditions are extremely demanding. And the arguments for liberalization, although persuasive, are not compelling even if the conditions are right.

The right conditions involve low barriers to international trade; a well-developed, well-diversified, and well-regulated domestic financial market; and a tax regime for capital that does not differ markedly from world norms. Until these conditions are met, serious misallocation could occur if capital movements are fully liberalized, and considerable vulnerability is created for economies whose exchange rates are strongly influenced by changes in sentiment by owners—residents as well as nonresidents—of liquid assets. Countries in this condition—which include most countries in today's world—may find themselves having to make an uncomfortable choice. Either they must tie their currencies strongly to a major currency, for example through a currency board, or they must maintain restrictions on capital movements, particularly those movements that are subject to rapid changes in sentiment and are easily reversible.

Are there any useful general guidelines beyond the conclusions above? I share the preference of most economists for market-friendly instruments, such as taxes or reserve requirements, over quantitative restrictions. But I would not want to rule out quantitative restrictions in all instances, and there are some ambiguities in classification, such as the prohibition on banks taking an open position in foreign exchange beyond a certain

fraction of their capital. And I can imagine a prohibition on short sales of currency borrowed locally, when markets are thin.

I share the view that, generally speaking, restrictions on capital inflows are preferable to restrictions on capital outflows. But I would not want to rule out restrictions on outflows in all circumstances, for example, limits on local bank lending as well as borrowing abroad. I also share the view that restrictions on short-term capital movements are less objectionable than those on long-term capital movements, especially direct investment. But I would not want to rule out restrictions on long-term capital movements in all circumstances, for instance when some kinds of foreign direct investment are seen as a threat to widely shared social values or threaten control of local media. In general, we should seek a world that allows room for registration of national preferences.

Comments and Discussion

Daniel K. Tarullo: I am broadly sympathetic to the approach taken by Richard Cooper in this paper. Notwithstanding his self-confessed visceral reaction against capital controls, Cooper has assessed fairly such evidence as exists and has made an even-handed judgment as to the efficacy and desirability of capital controls.

I approach this set of issues from an explicitly institutional and policy perspective. That is, I ask what we ought to do on the basis of the limited knowledge we have. Therefore my first request of the author would be to develop more fully the policy conclusions that follow from his analysis. The absence of anything like conclusive empirical evidence does not release Cooper and other analysts of capital controls from the task of prescription. The dilemma in which he finds himself is not uncommon for policymakers, namely, the need to make decisions in the face of substantial and probably continuing uncertainty about what is effective, why it is effective, and when it is effective.

To a significant degree, the interesting question about capital controls is not whether one is for or against them in the abstract, although that issue can still provoke lively debate. Rather, given the varieties of capital controls and the uncertainties surrounding their use, it is more interesting to ask what specific policy a specific country might adopt in its specific circumstances. This paper moves us only modestly toward being able to answer this question, although it provides a reasonable, clear-headed starting point.

Having said that, let me turn to my principal comment about the paper. Whether this is a criticism of the failure of this paper to address the issue,

or a suggestion for another paper, I am myself not altogether sure. The implications of Cooper's analysis for institutional action and policymaking are perhaps farther reaching than might be inferred on first reading. Particularly in the last couple of pages, the logic of the paper moves toward the conclusion that capital controls may be more than a transitory or transitional policy measure. The discussion that drew my attention is tantalizingly short, but its implications, when fully developed, could be profound.

In much of the recent literature, the newfound openness of many economists to some limited form of capital controls is implicitly—and, in some cases, explicitly—premised on the assumption that controls address a temporary problem. The implication of the latter part of Cooper's paper is that the conditions that call for capital controls may not be temporary. That conclusion, if sustained by further analysis, has significant policy and institutional implications for the individual developing country that adopts capital controls, as well as for the role of the International Monetary Fund (IMF).

Obviously, the use of capital controls in a pegged or fixed exchange rate system is unremarkable as a matter of history. Cooper himself summarizes the history of controls in the 1930s. Given a fixed exchange rate, and the consequent choice between free capital flows and monetary policy autonomy, many countries have throughout this century opted for maintaining limits on capital flows.

In the wake of the Asian financial crisis, recent thinking about capital controls has been applicable to countries with floating exchange rate systems, as well as those with pegged exchange rates. Much of this analysis, I think, has been premised on the lack of sophistication of financial institutions and financial regulators in developing countries. Problems with banking systems are identified as central to the Asian crisis. Banks there did not do a particularly good job of assessing and managing their own credit risks. They mismatched maturities in their lending and borrowing rather badly. They failed to hedge their foreign exchange transactions. All these sins have been laid at their doorstep, not without considerable justification.

The missteps of developing-country banks were magnified by the centrality of banking systems in generating and deploying capital in those countries. In the absence of developed capital markets, developing-country governments have an even greater incentive than those in developed coun-

tries to bail out troubled banking systems. The collapse of the banking system would mean that capital flows virtually dry up. The result of this dilemma, of course, is an enormous moral hazard.

The implication of much recent analysis is that properly designed capital controls can help compensate for an immature financial system and a lack of sophistication on the part of developing-country financial regulators. The further implication is that, as financial systems mature and banking regulators become more expert, even well-designed capital controls will be of less utility. They are seen as a stopgap that needs to be in place for a time, but which can be mercifully removed in the foreseeable future, as the domestic financial system becomes more adept at intermediating capital flows. Cooper's paper, however, begins to push toward a different judgment, although, again, only in its last few pages. That conclusion is that the case for sensibly crafted capital controls may be more or less permanent—or at least as permanent as most economic policies in most countries of the world.

At the end of his paper, Cooper draws two conclusions. One is that unregulated and unrestricted flows of capital make sense only if a set of fairly rigorous conditions obtain. The second conclusion is that the arguments for liberalization are not compelling even if the conditions are right. These must be the conclusions that Cooper meant when he said some of his conclusions would be unwelcome at the IMF. I think he is right.

Among the conditions he specifies is a well-developed and well-diversified financial system. This seems to me even less likely to materialize quickly in a developing country than a well-regulated banking system. I assume that one of Cooper's standards for determining whether a financial system is well developed and well diversified is liquidity. A system with abundant liquidity would not, presumably, be subject to enormous impact from a relative handful of foreign exchange traders changing their positions, a circumstance that Cooper recounts toward the end of his paper.

These kinds of conditions for removing all capital controls look sufficiently difficult to achieve as to suggest that some form of controls might be a justifiable feature of economic policy in some countries for an indefinite period. The situation for some developing countries today may have a limited parallel in the many countries after World War II that maintained capital controls for a quarter century under the Bretton Woods par value system.

In presenting developing countries with a choice between capital controls on the one hand and a currency board (or, I assume, dollarization) on the other, Cooper is returning the basic issue of the exchange rate regime to the center of the post-Asia debate. Although Argentina's dollarization proposal has itself restarted that debate, I think that official commentators and official proposals have to this point confined themselves to the conclusion that pegged exchange rates are inadvisable.

But if the choice is really between, on the one hand, going all the way to removal of monetary policy autonomy and, on the other, restricting the freedom of investors to send capital across national boundaries, one does not need to be a particularly insightful political economist to see that capital controls will be attractive to policymakers in at least some developing countries. It seems likely that, with recent experience in mind, developing-country officials who adopt a floating rate system will be uncertain whether they can count on the IMF to rescue them should rapid outflows contribute to a financial crisis.

Now, *if* one agrees with the drift of Cooper's analysis, and *if* this drift is borne out on the basis of further analysis, there are significant additional implications for policy. These go beyond the kinds of measures contemplated by Barry Eichengreen and others, who have more or less embraced temporary capital controls as a transitional measure to what is seen as a more sophisticated and achievable financial system.

From the standpoint of the IMF, there is an institutional difficulty. I think that the IMF will accept relatively easily the idea of capital controls within the parameters that Cooper suggests. The IMF may not exactly embrace controls, but it can live with them as part of an overall package for a country responding to external financial problems. Institutionally, however, the IMF has already begun to see capital controls as part of a trade-off in stand-by arrangements. For example, commitments to restrictions on indigenous bank operations in international financial markets, or on liberalization to allow sophisticated foreign banks into domestic markets, could be part of a deal that includes the sweetener of sensible but temporary controls on capital inflows. That kind of quid pro quo, which presumes that capital controls will be phased out within a few years, is obviously going to have to be redrawn if the controls are defensible more or less indefinitely.

From the standpoint of an individual country that chooses to impose capital controls, a different sort of problem arises, to which Cooper

alludes. Even partisans of controls recognize that, over time, markets, traders, and lawyers get better at evading them. Just as with the tax code, given enough time and motivation, people are going to figure out how to get around the controls. In some sense, then, capital controls are a wasting policy asset.

Thus governments will need policy alternatives, as they find that capital controls lose their efficacy and perhaps accentuate dishonesty and corruption. But if this means broader capital controls than the carefully limited type now achieving acceptance in the mainstream, the developing country may begin to lose too many of the advantages of capital inflows in its effort to protect against the disadvantages. This prospect, in turn, could affect the initial decision about which basic exchange rate path to follow.

John Williamson: Let me say at the outset that I am very sympathetic to Richard Cooper's bottom line, which is opposition to the rapid elimination of capital controls, or even the adoption of this as a medium-run objective. In this comment I will review the list of arguments, pro and con, in Cooper's paper. I will cover more arguments than he lists as pros and cons, because in my view most of the rest of his paper can also be categorized rather naturally in that way.

The first critique of capital controls that Cooper mentions is that they impinge on one dimension of freedom. I have some personal sympathy with that point. At one time in my life, when Britain still had capital controls, I and my family emigrated to Brazil, where we bought a car in the expectation of being able to pay for it using the U.K. emigration allowance for which I had applied. Two days before the bill fell due, the money had still not arrived, and I had visions of the car being repossessed. Fortunately, I happened to know the deputy governor of the Bank of England, so I sent him a telegram, and the money arrived just in time, but surely avoiding misfortune should not depend on happening to know the right people. To my mind this sort of concern makes a strong case for reasonable liberality in dealing with small personal transactions. But that is not the same as giving Goldman Sachs and Morgan Stanley unfettered freedom to play games on the international markets, which is what the debate is essentially about.

On the pro (that is, pro-banishment) side, Cooper next takes up the notion of capital mobility as a source of policy discipline. I was interested to read that there is some empirical evidence that capital mobility has

actually had a measurable effect in limiting budget deficits. At the same time, my own impression is that capital mobility provides a highly capricious form of discipline. Capital inflows offer either feast or famine; there is none of that gradual buildup of pressure as policy deteriorates that one would look for in an efficient disciplinary mechanism. Cooper himself makes the same point subsequently, in discussing the Thai experience. So although the evidence on fiscal deficits is interesting, it does not make a very persuasive case for welcoming capital mobility as an efficient way to discipline macroeconomic policy.

Cooper then makes the argument that capital movements play a stabilizing role, helping minimize the impact of shocks. This is certainly a potential role of the international capital market, but the question needs asking as to how well it performs this function. There is in my view a very fundamental difference here between most or all developed countries on the one hand, and most, or perhaps all, developing countries on the other. Developed countries that encounter adverse shocks do indeed seem able to borrow to mitigate their impact, by offering lenders only marginally improved terms. But is the same true for developing countries? I visited Chile in early 1992, at the start of the decade of excessive inflows from which that country has suffered. The Chileans I met with argued that they did not believe that in the event of a big negative shock (which in Chile's case means a sharp fall in the price of copper) they would be able to attenuate its effects by importing more capital. On the contrary, they said, in such a situation they would expect capital to flee, which is exactly what happened last year in Chile following the collapse in the copper price. I know of no statistical evidence on this, but it is my strong impression that Chile's experience is typical and that capital flows do not play the stabilizing role in emerging markets that they do in neoclassical theory and in developed economies. It is certainly true that the East Asian countries found themselves unable to borrow on any terms in the midst of the crisis.

Cooper then mentions as a pro-banishment argument the expectation that capital mobility will improve the efficiency of resource allocation, but he rather brushes this argument aside. Perhaps I am more conventional in that I judge this issue to be very important. I see enormous potential gains from intertemporal trade in the next several decades, as rich countries with fast-maturing populations in the high-saving phase of the life cycle lend to poor countries that have established the preconditions that will permit the import of capital to finance rapid catch-up growth. I also believe there

to be great benefits from risk diversification. However, most of the benefits of this intertemporal trade and risk diversification can be garnered without total liberalization of capital movements: one can liberalize foreign direct investment and other long-term capital flows without abolishing all restraints on the short end of the market, which is where the big problems have arisen.

Cooper cites two pieces of empirical evidence on the impact of capital account liberalization on economic growth. First, he tells us that Dani Rodrik “finds a positive but small and statistically insignificant relationship between capital account liberalization and growth in per capita income.” I will take his word for it that the relationship is positive, although it is not obvious from eyeballing Rodrik’s figure (and he presents no regression coefficient), but Rodrik concludes differently than does Cooper: “The bottom line is easily summarized. The data provide no evidence that countries without capital controls have grown faster [or] invested more. . . .” Second, Cooper tells us that “Quinn finds a larger and statistically significant effect of capital account liberalization on growth . . . using [a] more refined measure of capital account liberalization. . . .” I would conjecture that this interesting finding, of which I was not previously aware, arises from the calibration of his measure of capital account liberalization to recognize different degrees of liberalization, and that it is what are usually the early stages of liberalization, that of foreign direct investment and long-term inflows, that yield the benefits that dominate the empirical result. I would be surprised if what are usually the later stages—the liberalization of short-term flows, which is what normally causes crises—is also beneficial. Of course, testing this conjecture is a task for empirical research, but it will take some convincing results from research that draws the relevant distinctions to persuade me to abandon my priors.

Cooper’s final pro-banishment argument concerns the danger that efforts to circumvent capital account restrictions, as with most other restrictions, may erode the rule of law. That is surely a legitimate point, but one that has to be weighed against the cons.

I turn now to consider those cons. The first one is very familiar, namely, the notion that capital mobility imposes a constraint on countercyclical policy under a fixed (or managed) exchange rate. The usual rendition invokes the impossible trinity of an independent monetary policy, a fixed exchange rate, and mobile capital. Cooper’s concern is rather different: in the end what he worries about is the impact of capital mobility on a

floating exchange rate. My own view is that herd-like behavior on the part of investors can complicate macroeconomic management under any exchange rate regime; since all the evidence is that investors (short-term ones, in particular) are indeed prone to herding, this strikes me as an important con. Cooper makes the point that what makes one hope that officials might have a useful impact in countering herd behavior is not that they have superior knowledge but that they have a different objective function.

The second argument against banishing capital controls concerns financial crises and the role of capital mobility as a “wrecking ball,” to use George Soros’ graphic analogy. I will return to this issue, which is central to the current debate, at the end.

I was pleased to see Cooper focus, as a third argument for capital controls, on the danger of capital mobility undermining tax yields. However, I would make a small but critical amendment. Cooper says, “Capital movements become allocationally efficient in a world of widespread potential for tax evasion only if marginal tax rates on capital are harmonized *and* if national tax authorities cooperate sufficiently closely to reduce evasion on capital income to negligible levels. . . .” Surely the word I have italicized should be “or,” not “and.” Unfortunately, that still leaves us a long way from being comfortable that capital mobility will not have a disastrous impact on the tax yield from income on capital.

Cooper also mentions the role of capital mobility in undermining industrial policy, which does not perturb me unduly, and in impeding exchange rate targeting, which does, but which takes us back to his first con argument. He also invokes the analysis of immiserizing growth to argue that even foreign direct investment may be better restricted. One can admit the point in theory, but since trade barriers have come down so much, I doubt if we need to worry much about this danger nowadays.

The last con that Cooper raises is the danger of deliberate market manipulation in small countries. This is not to endorse Malaysian Prime Minister Mahathir’s charge that the West was deliberately seeking to destroy the East Asian economies, although we should indeed worry about the extent to which we have allowed greed to lay them low. To my mind the best example of market manipulation is not the Russian case that Cooper cites, but rather the so-called double play to which Hong Kong fell victim. Apparently some of the big market operators first sold the stock index short and then proceeded to speculate against the currency, on the

argument that even if they failed to force a devaluation, the rules of the currency board system would raise interest rates, which would drive the stock market down. They would thus make money whether or not the Hong Kong dollar were devalued. I find it rather shocking that such behavior is not illegal under some international equivalent of the antitrust laws, and that the perpetrators of such acts are not in jail.

Finally, I want to return to the crisis question, on which it seems to me that the paper fails to challenge an erroneous piece of what has become conventional wisdom. This is the claim that it is fine to liberalize capital movements once the macroeconomic fundamentals are in order, sound prudential supervision of the financial system is in place, and the exchange rate has been floated. I will argue that this advice is fundamentally mis-conceived.

It is absolutely wrong to suppose that good macroeconomic fundamentals (fiscal discipline, low inflation, and a high rate of saving) provide a defense against the sort of crisis we have seen recently. What they defend against is the old type of crisis, as experienced, say, by most of Latin America in the 1980s. Colombia was an exception: the fiscal accounts were in reasonable shape, and it very nearly escaped the crisis. Chile, too, had a fiscal surplus in 1981, despite which it suffered a crisis, just like Mexico in 1994 and East Asia in 1997. In all these cases it was in fact the evidence of good fiscal performance, in conjunction with a strong record of liberalization, that made the international community enthusiastic about the economic potential of the country in question and want to lend money to it. And so those countries took on a lot of short-term, foreign currency-denominated foreign debt, which tended to make their currencies over-valued, and in any event made them increasingly vulnerable to any adverse shock that might come along. So, in the absence of a deliberate attempt to fend off excessive capital inflows, strong macroeconomic fundamentals help a country avoid a crisis in the short run but create the conditions under which a crisis becomes increasingly likely over time. Chile learned that lesson in 1982, which is why it adopted defensive measures in the 1990s and escaped a crisis this time.

Sound prudential supervision of the financial system is to be desired for many reasons, but the critical question is whether it suffices to ensure that a country will be able to borrow from the international capital market when faced with an adverse shock. As I argued earlier, the evidence seems to be that this is at present possible for developed but not for developing

countries. It requires a level of deep integration into, and acceptance by, the international community of a sort that developing countries have not yet achieved, and that they cannot realistically be expected to acquire over a horizon shorter than decades. That means that they will continue in a situation where adverse shocks will impose crises that will be deepened, rather than mitigated, by capital mobility. Until we can be reasonably confident that this has changed, it would be imprudent to dismantle controls on capital movements completely.

Nor does the presence of a floating exchange rate serve to distinguish those Asian countries that suffered a crisis in 1997–98 from those that did not. If one identifies the recent set of crisis countries as those that suffered negative GDP growth in 1998, then Hong Kong, Indonesia, Korea, Malaysia, the Philippines, and Thailand suffered crises, whereas China and Taiwan and the countries of South Asia (Bangladesh, India, Pakistan, and Sri Lanka) did not. What discriminates between those two groups of countries is not exchange rate policy, any more than it is the macroeconomic fundamentals or the effectiveness of prudential supervision or the prevalence of crony capitalism. The one thing that correctly distinguishes one group from the other is whether they had liberalized the capital account and loaded themselves up with excessive debt in consequence. That seems to me an overwhelmingly powerful consideration that ought to be pondered by those who would rush headlong into capital account convertibility.

General discussion: Jeffrey Frankel welcomed Cooper's nuanced discussion of the range of policy measures that can influence capital flows, contrasting it with discussions that simply either support or denounce controls without distinguishing among specific measures. Addressing the choice between temporary and permanent measures, Frankel was skeptical about permanent controls on the grounds that compliance tends to fade over time. He argued instead for using Chilean-type taxes on short-term inflows on a cyclical basis, imposing them when the country is in a boom and removing them, as Chile did last year, when outflows threaten to be excessive. Carmen Reinhart supported Frankel's idea, noting that emerging economies have very limited scope for using conventional counter-cyclical policy: whereas developed economies can relax monetary and fiscal policies in response to a negative shock, emerging economies often have to tighten policies in these same circumstances, which is perverse.

Robert Gordon, however, questioned trying to use such taxes counter-cyclically. He recalled that some attempts to turn the U.S. investment tax credit on and off had been mistimed, and he doubted that the authorities in most developing countries could be more successful.

Alan Blinder supported floating currencies for emerging economies, because fixed exchange rate regimes seemed to invite speculative bubbles arising from unhedged short-term borrowing in foreign currency. Mexico, several Southeast Asian economies, and Russia had all operated fixed exchange rate regimes before their crises, and a lot of people had profited from borrowing in dollars and lending in the domestic currency, until the domestic currency fell. Blinder suggested that it was time to “get rid of this toxic brew” by removing both of its ingredients. The exchange rate regime should move toward a dirty float, and prudential regulations should be introduced to limit short-term unhedged borrowing in foreign currency. The prudential regulations might include higher risk weights and capital charges on short-term borrowing and on borrowing in foreign currency and might be supplemented with Chilean-style taxes. Such regulations might become a part of the IMF code of good behavior and a part of the message that the developing countries hear from IMF missions. Reinhart observed that emerging economies are leery of floating their exchange rates because their currency markets are shallow and their debts largely denominated in dollars. She reasoned that floating is not an option for emerging markets, unless accompanied by some impediments to capital movements. Gordon added that, so long as capital was mobile, the crises could well have occurred with floating rates. The good times would have led to large capital inflows and currency appreciation, to which speculators seeking currency gains might have added. In such a scenario, the eventual collapse and disruption might have been even greater than it was with fixed rates.

Christopher Sims questioned the common verdict that short-term capital movements were one of the main villains in the recent crises. He noted that short-term borrowing had in at least some cases risen toward the end of the boom phase, which suggested that it may have mainly postponed the resolution of problems arising from bad fundamentals. Sims suggested two conclusions for policy. First, the absence of short-term borrowing will not completely eliminate the problems. Foreign investors are likely to get enthusiastic and then to change their minds. As their views shift, asset prices will change dramatically, causing problems whether or not there is short-term borrowing. So taxing short-term inflows could lessen the inten-

sity of crises but should not be expected to eliminate them. Second, because short-term borrowing by banks and other institutions can get balance sheets out of line and cause systemic financial problems, there is reason to be concerned about such borrowing. But this suggests the need for prudential regulations that control the risk of short-term borrowing on balance sheets rather than for interfering with the normal functions of such borrowing by taxing it indiscriminately. Sims conceded that his preferred treatment required enough regulatory expertise to keep track of balance sheets and control the risks of foreign short-term debt.

Ralph Bryant questioned the paper's emphasis on how small the efficiency gains from open capital movements were, suggesting the evidence on this important question was mixed. He suggested that the traditional arguments about efficiency gains from financial intermediation in a purely domestic context, which are widely agreed to be valid and quantitatively significant, are also likely to be valid for cross-border capital flows. As an example, he noted that the use of foreign savings had been very important in the growth of the United States as well as that of Argentina, Australia, Canada, and New Zealand during the nineteenth century. Bradford DeLong joined Bryant in stressing the gains from international capital mobility. He noted that the East Asian economies have been among the fastest-growing in history, which suggests that the marginal product of capital in these countries has been high and is presumably still high today. The challenge is how to both capture the gains from large-scale international capital mobility and avoid the crises that such mobility can bring. DeLong expressed the belief that some of the proposals for capital controls aimed at accomplishing this, such as prudential regulation backed by the incentive of larger IMF loans with less conditionality, made sense in principle. But he questioned whether the internal culture of the Fund could adapt to this new role, and he believed the resources the Fund will have at its disposal will always be insufficient. Martin Baily also addressed the issue of the right architecture for the global financial system. He suggested focusing not on eliminating fluctuations in activity and exchange rates, which he saw as inevitable, but on how firms, financial institutions, and governments could manage through such fluctuations. He noted in particular that fixing the exchange rate does not insulate a country from currency fluctuations. Argentina, which has pegged its currency to the dollar, has recently undergone a large effective revaluation as a result of the devaluation in Brazil, its largest trading partner.

Baily questioned whether capital account liberalization was central to the East Asian crisis. He acknowledged that only countries with open capital markets are vulnerable to a crisis on this scale, but he argued that deep fundamental problems, in particular budget deficits and inefficient investment policies, had interacted with openness to produce the recent crises. He noted that openness to capital does not by itself discipline budget deficits. Russia got into trouble because it supported enterprises that were going broke. It did that under the Soviet regime, then printed money to do it and got hyperinflation, and finally borrowed money overseas to do it. Foreign borrowing, far from providing discipline, kept Russia on this unsustainable path a little longer than would otherwise have been the case. He observed further that if the United States had been a closed economy in the 1980s, it would have had a very hard time running large budget deficits, because of the impact those deficits would have had on interest rates and domestic capital formation.

Carol Graham stressed that the enforcement, coverage, and effectiveness of controls differ across countries in important ways that simple measures cannot capture. Furthermore, countries' different capacities to administer controls and regulations make a big difference in how well regulations work. Some poor developing countries that might be most in need of controls are also the least likely to administer them successfully. In that regard, Graham thought that Chile, with its relatively high level of administrative capacity, was a poor model for other developing countries. Susan Collins supported the need to distinguish carefully among different types of restrictions to capital flows, and she noted that readily available data are inadequate for evaluating their usefulness. She cautioned that, until as recently as 1997, a commonly used measure of capital account restrictions produced by the IMF was defined as an indicator of the presence or absence of controls on resident-owned accounts. It may have provided little information about the ability of foreigners to purchase domestic assets. Perhaps for this reason, there was little correlation between actual capital movements and the IMF measure of openness.

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