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CAPITAL CONTROLS, EXCHANGE RATES AND MONETARY POLICY: TOWARDS AN INTEGRATED FRAMEWORK

by

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I. Introduction

It is by now almost a cliche to point to the seemingly ever-growing forces of globalization and international financial market integration, spurred on by financial liberalization and innovation on one hand, and rapidly falling costs of computing and telecommunications on the other. Hackneyed it may be, but the picture this story paints of rapid growth in international capital flows in recent years is largely accurate--even if, from a longer-term perspective, open capital accounts and large capital flows were more the norm historically than the exception, in contrast to the period from the 1930s until quite recently.[1]

Certainly the data are compelling. Net non-official capital flows into developing countries amounted to some $230 billion in 1996 with another $23 billion for transition economies; and while the net volume is expected to be somewhat lower for this year, following the events in South East Asia ($190 billion and $22 billion respectively), this still contrasts with amounts of $44 billion and $14 billion in 1989. Looking at capital flows more broadly, Table 1 shows the growth in key types of flows over the last couple of decades and shows the many-fold increases in both gross inflows and gross outflows, in both portfolio investments and direct investments, and both industrial countries and developing countries. Tables 2 and 3 show related data for specific industrial countries that give a similar picture. Cross-border trading in bonds and equities grew at an annual average rate, in real terms, of approximately 25 percent between 1980 and 1996; cross-border bank lending by something approaching 10 percent; and foreign direct investment only a bit less than that--all significantly more rapid than growth in international trade or GDP.[2] Looking at another relevant indicator, global turnover in major foreign exchange markets in 1995 is estimated to have been over 6 times higher than a decade earlier (Table 4); and to have been 19 times higher than world exports of goods and services, compared to 7 times higher a decade earlier.

Beyond the statistics, a sure sign that this phenomena is not only real, but important, is the efforts within the IMF to come to grips with the implications for the role of that institution. As many of you will be aware, the recent IMF/World Bank Annual Meetings in Hong Kong gave a mandate to the IMF to draft an amendment to its Articles of Agreement, with the aim of strengthening the focus on issues associated with capital flows and, in particular, prudent liberalization of members' capital accounts. Amendments to the IMF's articles, especially major ones, do not happen very often, of course.

How one feels about this big picture probably depends rather a lot on how you feel about markets in general. If you are suspicious about the ability of markets in general to deliver improvements in national welfare, you will very definitely be suspicious of the merits of

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[1]See, e.g., the Annex on "Globalization in Historical Perspective" in the May 1997 issue of *World Economic Outlook*, International Monetary Fund, Washington, DC.

[2]*The Economist*, October 18, 1997.

Table 1. Portfolio and Direct Investment Flows, 1973–94

(*In billions of U.S. dollars, annual averages*)

	Gross outflows				Gross inflows				Net inflows			
	1973–78	1979–82	1983–88	1989–94	1973–78	1979–82	1983–88	1989–94	1973–78	1979–82	1983–88	1989–94
Industrial countries:												
Direct investment	28.6	46.9	88.2	197.3	17.9	36.6	69.3	136.3	-10.7	-10.3	-18.9	-61.0
Portfolio investment	11.8	35.0	126.5	311.4	24.4	51.0	139.4	379.1	12.2	15.9	12.8	67.7
Developing countries:												
Direct investment	0.4	1.1	2.3	11.1	5.0	14.6	15.5	51.2	4.6	13.5	13.2	40.1
Portfolio investment	5.5	17.8	-5.1	10.1	1.3	3.1	4.0	53.9	-4.2	-14.7	9.1	43.8

Sources. Joseph Bisignano, "The Internationalization of Financial Markets: Measurements, Benefits and Unexpected Interdependence," Cahiers Economiques et Monétaires, Banque de France, Vol. 43 (1994), pp. 9–71, and International Monetary Fund, *Balance of Payments Statistics, Part 2.*

Table 2. Gross Foreign Direct Investment plus Portfolio Investment[1]

(In percent of GDP)

	1970–74	1975–79	1980–84	1985–89	1990–93
Belgium-Luxembourg	...	3.4	3.1	14.3	41.5[2]
Canada	1.7	3.4	3.6	6.1	7.2
Denmark	...	0.6	0.9	3.3	7.2
France	...	1.3	2.1	4.1	7.2
Germany	1.2	1.3	1.7	3.2	6.3
Italy	0.9	0.3	0.6	1.7	5.7
Japan	...	0.6	2.6	5.9	3.7
Netherlands	7.3	4.7	6.0	10.9	11.1
Norway	...	5.6	0.4	6.6	2.1
Portugal	...	0.4	1.0	3.6	6.3
Spain	...	0.7	1.2	3.1	6.7
Sweden	1.0	1.2	1.7	5.0	7.0
Switzerland	.	4.5	9.4	14.7	12.8
United Kingdom	3.6	4.0	5.2	14.4	11.9
United States	1.0	1.5	1.4	2.9	3.3

[1]Sum of the absolute value of inward and outward foreign direct investment and portfolio investment.
[2]The figure is for 1990–94.

Table 3. Cross-Border Transactions in Bonds and Equities[1]

(In percent of GDP)

	1970	1975	1980	1985	1990	1995	1996[2]
United States	2.8	4.2	9.0	35.1	89.0	135.3	151.5
Japan[3]	...	1.5	7.7	63.0	120.0	65.1	88.8
Germany	3.3	5.1	7.5	33.4	57.3	169.4	196.8
France	...	.	8.4[4]	21.4	53.6	179.6	229.2
Italy	...	0.9	1.1	4.0	26.6	252.8	453.4
United Kingdom	...	...	...	367.5	690.1	..	..
Canada	5.7	3.3	9.6	26.7	64.4	194.5	234.8

Source: Bank for International Settlements (BIS).
[1]Gross purchases and sales of securities between residents and nonresidents.
[2]January to September.
[3]For 1995, data are based on settlement.
[4]The figure is for 1982.

Table 4. Foreign Exchange Trading

(In billions of U.S. dollars and in percent)

	1986	1989	1992	1995
Global estimated turnover[1]	188	590	820	1190
As a ratio of,				
World exports of goods and services	7.4	13.8	17.4	19.1
Total reserves minus gold (all countries)	36.7	75.9	86.0	84.3

Sources: Bank for International Settlements; and International Monetary Fund.
[1]Daily average turnover, on spot, outright forward, and foreign exchange swap transactions, adjusted for local and cross-border double counting and for estimated gaps in reporting.

Figures are based on surveys of activities in the three largest exchange market centers (London, New York, and Tokyo) in 1986, and markets in 21 countries in 1989 and 26 countries in 1992 and 1995. The London, New York, and Tokyo markets accounted for 57 percent of global turnover in 1989, 54 percent in 1992, and 56 percent in 1995.

allowing large amounts of funds to flow in and out across your national borders at the whim of large foreign--and for that matter, of course, domestic--participants in financial markets. On the other hand, if you take the view that markets do a good job allocating resources to their most productive ends, you will of course be very much inclined to the view that the free flow of capital internationally is likely to benefit all the parties involved.

I do not intend to spend time directly addressing those polar positions, mainly because it seems to me it would be a rather sterile debate. Instead, there is a wide middle ground between these poles, where the issues are much more interesting, relevant and challenging. In any event, it is somewhere in this middle ground that the majority of policymaking and academic views seem to lie. For example, the consensus of the Fund membership appears to be that liberalization of capital accounts is indeed desirable overall, but it carries risks that need to be carefully managed.[3] In particular, close attention needs to be paid to the pace and sequencing of capital account liberalization in relation to supporting macroeconomic, and microeconomic or structural policies and capabilities.

The issues in this middle ground seem to me to fall under three broad headings which, though logically separable perhaps, are nevertheless very closely interconnected. First, there are questions about the interplay between international capital flows and macroeconomic management--monetary and exchange management in particular. How do capital controls and their removal affect macroeconomic policy and, in particular, how are the policy objectives and choices open to policymakers altered?

Second, there are more microeconomic questions about the optimal approach to regulation of international monetary flows. What drives the behavior of international financial markets in normal and less normal times? Do these markets "fail" in some sense--and if so, in precisely what sense? What are the implications for policy as regards the regulation of international financial markets and flows, and how effective are regulatory constraints on capital flows likely to be? Are price-based measures, rather than quantitative restrictions, likely to be more effective?

Third, there are issues about the appropriate transition towards liberal capital markets, especially for countries that are not amongst the most advanced economies. I would distinguish this set of issues from the previous two in the following way. The first two sets of issues have more to do with the precise end-points of a liberalization process, whereas here, we are considering issues about the pace and sequencing of the process of moving towards the end-point of liberal capital markets. Even if the exact nature of the desired end-point of the liberalization process may be somewhat unclear or open to debate, the transition for many countries is generally in a well-understood direction. Especially in the context of liberalizing significantly repressed financial sectors, there is a considerable amount of progress that can

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[3]See the Declaration of the Interim Committee at the 1997 IMF/World Bank Annual Meetings.

be made along the transition path before it is essential to know the exact nature of the desired end-point.

In Sections II-IV of the paper, I will discuss these three sets of issues in turn. The theme of the paper is the interlinkages between these issues, and--though some flavor of it will inevitably be apparent--it is not intended to be a detailed discussion of the costs and benefits of capital account liberalization per se. There are numerous other examples of that. In Section V of the paper, I will conclude by briefly discussing the relevance of these issues for the IMF, and how the Fund is proceeding to address them.

II. The Macroeconomic Policy Perspective

The ability of a government to pursue specific macroeconomic goals through managing the conditions in money and exchange markets depends fundamentally on the central bank's monopoly position with respect to the supply of domestic base money. Like any monopolist, the central bank can set either the price or the quantity of its product, but not both (at least not in the absence of direct controls over money and exchange markets). Unlike other products, however, in the case of money, there are two distinct but related aspects of "price" that are relevant --the exchange rate, or the interest rate. And again, the central bank can set one of these prices independently, but not both.

Putting these constraints together, it is clear that in unrestricted markets, the central bank can independently set only one of the exchange rate, interest rate or quantity of base money. Once the central bank has set one directly, the others will be determined by markets through international interest parity conditions on the one hand, and the demand for domestic base money relative to supply, on the other hand. Some writers have called this condition "the impossible trinity". The "impossible trinity" means, in a nutshell, that monetary and exchange rate policies amount to one and the same thing. More specifically, that they constitute only one policy instrument, and that they therefore can only be effectively and efficiently oriented to one policy objective at any one time.

Governments, however, have a range of objectives to meet and a range of different interest groups to keep more or less satisfied, or at least not too dissatisfied. It is not too surprising therefore, that they may sometimes attempt to meet more than one objective through monetary and exchange management, notwithstanding that those objectives may be fundamentally in conflict, in the shorter-term at least. In particular, there is a tension between the role of the exchange rate (jointly with other policies) in maintaining international competitiveness, and its role in promoting macroeconomic stability, including low (but not negative) inflation.[4] The usual case, traditionally, has been a wish to maintain a given nominal exchange rate, in the face of significant outflows, without bearing the full economic and political costs of doing so through the higher interest rates, fiscal tightening and/or

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[4]See, e.g., Edwards (1995), and Obstfeld and Rogoff (1995).

structural reforms that are typically required. In the modern era of globalized capital markets, however, perhaps a more common phenomena--with a few notable recent exceptions-- has been the dilemma often associated with significant capital inflows. In these circumstances, there is often a wish to avoid nominal exchange rate appreciation but at the same time an unwillingness to accept the inflation risk that may follow from the monetary effect of the capital inflows.[5]

In their attempt to meet multiple objectives, it would be essentially only by coincidence that the authorities choose policy settings (exchange rate levels, interest rate levels and/or base money levels) that are mutually consistent, and in line with the levels the market would have delivered.[6] In the absence of direct controls, the pursuit of multiple, conflicting objectives through monetary and exchange management will generally lead to inconsistencies and distortions that create incentives for profitable speculation or arbitrage. At best, some if not all of the authorities' policy intentions would be thwarted by market reactions; at worst, the inconsistencies would be severely punished.

This being the case, resort to exchange controls to limit market reactions of the above sort can be very tempting as a "quick fix". They appear to hold the promise of easing the trade-offs the authorities have to make, and reconciling conflicting internal and external objectives in monetary and exchange management, at least in the interim. This assumes, of course, that the controls are in fact sufficiently effective--a major issue to which I will return in the next section of the paper. Indeed, in the post-World War II intellectual environment, this view of exchange controls was largely the mainstream one. Restricting capital flows was seen as a means to preserve the "autonomy" of monetary policy--specifically, its ability to pursue low interest rate policies to encourage growth, while maintaining a fixed exchange rate. Even after the generalized move to floating exchange rates internationally, the tendency of rational foreign exchange markets to "overshoot", á la Dornbusch, was sometimes seen as a renewed justification for maintaining capital controls, as was more microeconomic concerns about market efficiency and rationality (see below).

The accelerating move away from exchange controls, in contrast, has reflected the conjunction of two streams of thought in economic policymaking. First, that improved and sustainable growth performance require maximum efficiency in the use of resources, and an

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[5]The literature on capital inflows is quite extensive--see Schadler et al (1993) for an overview.

[6]And even if they happened to be mutually consistent at one time, it is quite unlikely that the policy settings would still be mutually consistent at a later time. Indeed, if the authorities could succeed in directly setting each element of the impossible trinity in a manner that continually maintains mutual consistency, the point of doing so would be quite unclear--it would seem to have no advantage over directly setting one element, and allowing the market to set the others in response.

unfettering of market allocation processes to achieve this. In this context, capital account liberalization is simply the cross-border financial analog of domestic financial and economic liberalization. Second, that macroeconomic management needed to shift from a basically short-term focus to a medium-to-longer term focus, emphasizing sustainability of government debt positions, and containment of inflation pressures on a lasting rather than intermittent basis. Reliance on capital controls (and other direct controls), however, gave governments an attractive easy way out that and tended to lead to delays in addressing fundamental medium-term policy weaknesses, with the result of an even more painful adjustment to be made in the future. Moreover, as industrial country experience in the 1970s especially showed, this changed approach to macromanagement required the policy framework to build credibility with and confidence amongst market participants (financial, goods and labor markets). This point too required capital account liberalization. As Shafer succinctly points out, it would be fundamentally contradictory to seek to build credibility with market participants, and at the same time to restrict their ability to act on their assessments by freely managing their own financial affairs.[7]

On this view, international financial markets are a disciplining force that do not restrict the ability of national authorities to follow sound, medium-term policies: they restrict domestic policy independence essentially only in the sense that they penalize attempts to follow unsound or mutually inconsistent policies, and delays in adjusting policies to fundamentally address new problems as they arise. As a result, a willingness to liberalize capital markets can be seen as a signal of commitment to sound policies in future (since unsound ones will be punished), and also to refrain from reintroducing capital controls.[8] Assuming the signal itself is credible, this is likely to have benefits in terms of reducing risk/uncertainty premia in interest and exchange rates (and encouraging inflows) in a manner analogous to measures like central bank independence designed to address the well known inflation bias or "time inconsistency" problem in monetary policy.[9]

Of course, policymakers do not always appreciate that discipline, especially where previously favorable market sentiment turns sour as it focuses on deep rooted but unaddressed problems such as weaknesses in banking sectors, or corporate balance sheets and governance. As Fischer (1997) notes, when trouble comes, policymakers are not necessarily happy to admit that the capital markets were only the messenger, delivering a verdict on their performance.

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[7]Shafer (1995) contains a very useful history and analysis of industrial country experience with capital controls and their liberalization.

[8]Bartolini and Drazen (1997) formalize one aspect of this argument.

[9]See Blackburn and Christensen (1989), for example, for a detailed discussion.

III. Microeconomic Perspectives

A. Exchange Rates and Fundamentals

The desirability of market discipline of course assumes that the market has basically got its analysis of economic prospects and policies more or less "right", at least most of the time. Notwithstanding the macroeconomic perspective, capital controls might conceivably be legitimate responses if there is really something "wrong" in the way foreign exchange markets work. Certainly, there is a common view that, along with other financial markets, exchange markets sometimes display excessive volatility, and specifically may tend to react late, but then react very rapidly rather than smoothly, and may be subject to contagion. While those observation seem to fit the facts for currency crisis episodes at least, by itself they says little about what causes such behavior and what policy measures, if any, are appropriate to address it beyond the standard prescription to address fundamental policy weaknesses. In particularly, views differ quite sharply on the extent to which markets act rationally and efficiently (which however is not the same thing as saying they do not make mistakes from time to time), and it is fair to say that a number of key questions about exchange market behavior are not yet satisfactorily resolved to the point of consensus.

One key strand here is the modeling of exchange rate determination in relation to "fundamentals" such as relative prices. The generally accepted conclusion of empirical work on exchange rate determination, at least until recently, has been that models of exchange rates based on economic fundamentals have neither explained nor forecast exchange rates any better than a random walk model. For example, in respect of PPP, while there has been some evidence of a weak form of PPP in long run data, the implied adjustment to equilibrium has been found to be very slow.[10] Some recent work, however, gives grounds revisiting that conclusion and gives grounds for some cautious renewed optimism on fundamentals-based models. MacDonald (1997), for example, argues that model specification and the econometric methods used have had a crucial bearing on the findings (or lack thereof) in previous literature, and goes on to demonstrate evidence of sensible and significant long-run relationships, as well as useful shorter-run dynamics, between exchange rates and terms of trade effects, fiscal balances, net foreign assets and real interest rates as key fundamental determinants. He also notes related work by himself and Marsh (forthcoming) that models departures from PPP in terms of interest rate developments and that produces "impressive out-of sample forecasts". Another recent example supporting the view that exchange rate movements can be explained by efficient or rational adjustments to fundamentals is work in a similar vein by Johnston and Sun (1997).

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[10]See, inter alia, MacDonald and Taylor (1992), and Frankel (1996).

B. Efficiency and Rationality

A second relevant strand focusses more directly and in more detail on short-term market behavior.[11] The starting point is the empirical rejection of at least the simpler version of the efficient markets hypothesis (EMH), and the associated finding that the forward foreign exchange rate is a biased and inefficient predictor of the future spot rate. The usual interpretation of this is that market participants are risk averse and that there is a non-constant risk premium. However, tests for the existence of such a premium have received only mixed support to date and some authors find this concept rather problematic, because it risks being tautological. Nevertheless, the time-varying risk premium seems very plausible intuitively.

Another possible interpretation is that there is a problem with the expectations hypothesis that, together with risk neutrality, jointly underlies the simple EMH. This has lead to examination of possible explanatory factors like the "peso problem" (where markets place a small probability on a large future change in fundamentals); "rational speculative bubbles" (movements not based on fundamentals but possibly based on some form of "herd behavior"); and information processes that are "inefficient" or at least different from normally specified models, such as reliance by market participants on "technical analysis" rather than "fundamental analysis".

Work in these areas raises fascinating issues that are indeed potentially critical for public policy formulation. The reason is that optimal policy responses need to be based on a good understanding of the nature of the problem to be addressed--i.e., if the market is "failing" in some sense, policymakers should know in exactly what sense this is the case, and why, before designing an appropriate response. For example, even if markets do behave in ways similar to the above explanations, it does not follow at all that such behavior is irrational or inefficient in a world of uncertainty and limited, heterogenous or costly information. There are a number of authors who have been working in this area, in respect of both foreign exchange markets and other asset markets. An interesting recent example is some work in the Bank of Canada that finds that though chartists seem to dominate foreign exchange market trading for much of the time, this is typically in periods that are relatively tranquil and smoothly trending. In contrast, the less frequent periods where fundamentalists dominate trading are associated with greater turbulence. But this turbulence is associated with re-equilibration rather than distortion--i.e, it is times where fundamentalists view of the path of fundamentals has changed sufficiently, or where the exchange rate has drifted sufficiently far from what is justified by the fundamentals, that arbitrage to correct the discrepancy will be profitable.[12]

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[11]The references in the preceding footnote also provide useful brief reviews in this area.

[12]R. Vigfusson, "Switching between chartists and fundamentalists: A Markov regime-switching approach", as reported in Murray (1997). Murray notes that this work seems to carry an interesting implication: that rather than "leaning against the wind" in the foreign

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In short, then, the jury is still very much out on the question of what drives exchange market behavior both in more normal times and in times of currency crises. Until a more compelling consensus view emerges, policymakers will need to be extremely cautious that in reacting to market developments they do not seek quick fixes based on a view that markets are "failing" relative to standards derived from models of market behavior that are themselves flawed, because based on incomplete and imperfect knowledge of important aspects of actual market behavior.[13] Certainly, none of this is to deny that markets may make mistakes--the important issue however, is whether they consistently make similar mistakes. Nor is to deny that they may act (rationally) on incomplete or erroneous information. That is the nature of the world. What is important in this regard, however, is that the authorities do as much as they can to improve the information available to markets--information both as to the authorities' own actions and intentions, and as to the state of key factors such as the state of the banking and corporate sectors.

C. Circumvention and Enforcement of Capital Controls

Even if a policymaker is convinced that the exchange market is failing in an important sense, it is not at all clear that capital controls, particularly of the quantitative kind, are a particularly effective tool of restraining market behavior in a desirable way. Circumvention of capital controls is a substantive issue both conceptually and empirically. Conceptually, the issue arises because capital controls do nothing by themselves to address the underlying concerns that are driving market behavior--in other words, the factors which created the incentives for moving capital have not been addressed.

Faced with the continuing incentive to move capital, market participants will endeavor to circumvent capital controls up to the point where the expected costs of doing so offset the expected benefits. Those costs include the costs of finding loopholes in the capital controls and rechanneling or repackaging flows to take advantage of them. Given the fungibility of financial flows, these costs may not be all that large, but in any event they are likely to include legal and other advisory services. Such expenditures are privately profitable, but socially wasteful. In addition, to the extent that circumvention embodies breaches of the capital control regulations, and not just the legitimate exploitation of loopholes, the private costs of circumvention would include the monetary, reputational and other cost of being caught--as in the economics of crime, this would include the cost of the penalty per se, adjusted for the probabilities of successful detection and prosecution.

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[12](...continued)
exchange market as central banks often do, "leaning with the wind" might be considered instead, to hasten the re-equilibration process.

[13]For an interesting discussion of "market failure" and "model failure" in a more general context, see Taumanoff (1984).

From the point of view of the authorities, maintaining effectiveness of the controls in the face of the market's incentives to circumvent them requires additional, socially costly expenditures on administration, enforcement and strengthening of the controls, including attempts to close loopholes as, if not before the market discovers and exploits them. Typically, this is a game in which the regulators are always playing catch-up. The incentives for them to stay ahead of the market are seldom as strong as those the market face; and their ability to respond flexibly to re-allocate or expand their resources as required to do this, is typically more limited than the market's. What is sometimes seen over time is a sort of whirlpool effect. An initial set of capital controls may require continuing rounds of augmentation and expansion to close off loopholes successively exploited by the market; administrative and compliance costs rise; and the network of controls becomes more complex and less transparent, especially if the regulators endeavor to maintain exemptions or exceptions for specially favored groups.

Certainly, as an empirical matter, there is ample evidence internationally that capital controls lose their effectiveness over time. See, amongst many others, Edwards (op cit) and Wong (1997) for a brief review of the literature on de facto capital mobility, with particular reference to a sample of Asian-Pacific economies; Shafer (op cit) on industrial country experience; and Schadler et al (op cit) for some other countries. Another interesting recent example is Cardoso and Goldfajn (1997), whose work on capital controls in Brazil implies that the controls in that country have had a half-life, in terms of effectiveness, of around half a year. In the case of the modern phenomena of problematic capital inflows, it is notable that in a number of countries that have tried to restrict the rate of inflow through direct controls (usually in order to reduce pressures for exchange rate appreciation), some measure of nominal exchange rate flexibility has nevertheless proved unavoidable eventually (for example, Chile and the pre-attack Czech Republic). More generally, as Obstfeld and Rogoff (op cit) note, it is very likely that circumventing or evading capital controls in particular countries has become progressively easier in the context of increasingly integrated and liberal financial markets globally.

In public economics in general, there is often a presumption that price-based measures (taxes or subsidies) are more efficient and effective policy responses than direct regulatory restrictions on quantities, since they have a more direct impact on the incentive structure for the affected transactions. Probably the best known proposal to impose a tax on international capital movements is the "Tobin tax", put forward with the intention of putting a certain amount of "sand in the wheels" of speculative foreign exchange transactions.[14] In principle, a Tobin tax on foreign exchange transactions might be able to be set low enough to be almost negligible for exporters and importers, and for longer-term investors, while still imposing a

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[14]Other tax-based measures include (in effect at least) reserve requirements specifically applied to foreign currency inflows, with no or low remuneration, in a few countries like Chile--but, as already noted, it is not at all clear how effective these measures have been in practice, given that large inflows have continued.

very substantial penalty (at an effective annual rate) on short-term transactions--though even here, there is no clear presumption that increased transaction costs will reduce volatility.[15] More important, however, is issue of evasion once again. Unless all countries adopted the same structure, foreign exchange trading would simply move to where it is not taxed (Garber and Taylor, 1995)--in the absence of other binding restrictions, trading in a particular currency certainly does not need to take place within the borders of the country involved.

I do not mean to say, by all of this, that capital controls can never be effective. Controls will slow down the rate at which domestic financial markets become integrated with international ones, and the rate at which international interest parity conditions make the constraints of the "impossible trinity" binding for macroeconomic policy. By the same token, of course, they will also slow down the pace at which the domestic economy can acquire the benefits of capital liberalization.

The important point though, is the need for compatibility between the underlying economic objectives of the authorities and the incentives their policy framework creates in practice. If the incentives created for the market by the overall policy environment are such as to promote capital flows, inward or outward, the direction of the trend will, as above, be towards reduced effectiveness of those controls.[16] How quickly that sort of effect becomes visible depends on the specifics of each country's situation. Broadly speaking, however, the more out of line the macroeconomic incentives are with the authorities' wish to reduce capital flows, the more quickly controls will start losing effectiveness, other things being equal. Conversely, if the policy environment creates incentives that are compatible with policymakers' ultimate objectives, capital controls would be nonbinding and would serve little purpose.

IV. The Transition Towards Capital Account Liberalization

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[15]Obstfeld and Rogoff note evidence that stock price volatility, for example, does not fall with higher transactions costs.

[16]In addition to the broader incentives created by the overall economic environment, governments sometimes employ specific policy instruments that provide direct incentives for certain types of capital flows through explicit or implicit subsidies. Reserve requirements on domestic banks that penalize domestic currency intermediation significantly more than foreign currency intermediation are a case in point. Forward exchange transactions undertaken by the authorities can be another example if, e.g., the central bank effectively undertakes to sell foreign exchange forward at a subsidized rate--i.e., one that is more appreciated than market counterparts themselves would do, given interest differentials (a major issue in the build up to the Thai crisis). While capital inflows are generally assumed to be beneficial, the justification for directly subsidizing them is not at all clear, and may well contribute to a more severe turnaround in market sentiment at a later date than otherwise.

Implicitly at least, much of the discussion above has been oriented towards economies with reasonably even if not fully developed financial markets; reasonably even if not completely sound financial institutions; and where the legal and regulatory framework, and the authorities' policy implementation capacity are also sufficiently well developed. Especially where these conditions are not met, the transition to capital account liberalization raises important issues. They are important, in particular, because although international capital markets may give policymakers the benefit of the doubt for a while, they will sooner or later punish severely significant policy inadequacies, inconsistencies and errors; and because once the liberalization process gets to a certain point, it will start to become increasingly difficult to make remaining capital controls effective, for the reasons already discussed. Thus, a strategy of capital account liberalization needs to pay close attention to the co-requisites, if not pre-requisites, in other aspects of the policy and regulatory environment relevant to capital movements.

At the outset, I should note that these considerations need to go beyond what one sometimes sees in the earlier academic literature about sequencing of reforms (real before financial sector reform, current account before capital, long term flows before short-term flows; a stable and sustainable macro environment and realistic real exchange rate, etc). There are some very valid points in such analyses, but they tend to be too abstract and miss important parts of the story. As Guitián (1995) for example notes, waiting for favorable macroeconomic conditions and policies to come about before liberalizing capital flows may mean going without the benefits of that liberalization indefinitely, whereas pushing ahead with the liberalization may actually make an important contribution to the process of improving the macroeconomic (as per Section II above). Similarly, Quirk et al (1995) note that relatively early liberalization may be useful to limit the ability of vested interests to delay or derail reforms on a broader front, may promote efficiency in the domestic financial sector by promoting competition and may allow domestic parties to diversify activities and portfolios more efficiently. They also note, as regards decontrol of long-term versus short-term capital flows, that there is some evidence that long-term flows are not necessarily more stable than flows through instruments with short maturities.

At the same time, however, it seems abundantly clear that some minimum level of favorable domestic economic and policy conditions should be put in place more or less simultaneously with, if not in advance of capital liberalization, to provide reassurance that factors that might cause international investors to take flight are being addressed appropriately and in a sustainable and consistent fashion. The factors I mentioned previously--legal and regulatory frameworks, financial sector soundness and level of development, and policy implementation capacity--need to be adequately satisfied. But what is "adequately satisfied"? There does not yet seem to be a particularly clear, specific answer on this, so that it is difficult to draw clear-cut lessons about the desirable pace and sequencing of reforms for individual countries. Clearly, some form of balance between two extremes is necessary, so that (as Guitián notes) capital liberalization can be undertaken with less than optimal preconditions, but not conditions so far away from optimality that the sustainability of that opening, and the

credibility of monetary, exchange rate, fiscal and other policies in an open environment are destroyed.

What does seem clear, though, are a couple of broader principles. In particular, the issue of appropriate pace and sequencing of capital liberalization is not so much one about which measures should be in place before other measures, as it is about the need for that liberalization to be seen as one part of a broader policy strategy, including both microeconomic and macroeconomic policies. The key test, for reasons already noted, is whether that broader package of policy is sufficiently comprehensive and internally consistent (i.e., incentive-compatible). Johnston et al (1997) come to a similar conclusion from a recent review of the experiences of Chile, Indonesia, Korea, and Thailand. In addition, they stress the relationship between capital account liberalization and domestic real and financial sector liberalization: liberalization of direct investment flows as associated with real sector reforms, including a more general move to greater contestability and competition; liberalization of portfolio flows as part of the removal of interest rate controls and unnecessary or unhelpful controls on domestic financial institutions, as well as the opening up to contestability and competition in financial markets.

V. Summary and Concluding Remarks

Capital account liberalization needs to be seen within an integrated framework, both when looking at the desired end-point of a liberalization process, and when considering the desirable transition towards that end-point. There are several levels at which that statement applies. First, at the macroeconomic level, there needs to be consistency between macroeconomic policies and objectives, and especially between monetary and exchange rate management, if the benefits of free capital markets are to be maximized and the costs and risks minimized. At the same time, the liberalization of capital markets may be an important part of the process of macroeconomic stabilization because it imposes an obligation not just on current governments, but also on future governments, to adopt and continue to maintain sound macroeconomic policies in the face of changing circumstances. A willingness to liberalize capital accounts is therefore tantamount to a signal of commitment to sound, medium-term oriented economic policies--a willingness to tie one's own hands, in effect, by accepting market disciplines that will penalize policies that have longer-term costs for the economy even though they may have shorter-term gains for some parties.

Second, capital account liberalization also needs to be seen in the context of consistent microeconomic and institutional policies that address the competitive efficiency and soundness of both the domestic financial sector and the real sector. It also needs to be seen in the context of the microeconomics of financial market behavior--views that exchange and other markets are irrational and need to be restrained through capital controls are perhaps understandable at times of crisis, but there is as no compelling logic or evidence to support this view. There remains a great deal of interesting and challenging work for our profession to do before we can be confident that we have sufficiently good, and widely accepted

economic models of financial market behavior, and in the absence of that, resort to capital controls on the basis of irrational market behavior is as likely to do damage as it is to help.

Third, and in any event, a major issue is the effectiveness of capital controls. Scope for circumvention is not just a second-order practical issue, that can be conveniently ignored at a conceptual level. On the contrary, the possibility of circumvention should be integrated explicitly at the conceptual level. The key linkage is the nature of the incentives created by the overall policy environment, and the associated incentives for circumvention. Indeed, if there is one key message that comes out of seeing capital account liberalization in an integrated framework, it is the need to minimize, and if at all possible avoid, incompatible incentives.

There is also another level at which integration applies. This is integrating capital liberalization more fully into the evolving role of the IMF. As I mentioned at the outset, the IMF has just been given the mandate, by its membership, to amend its Articles of Agreement to incorporate capital account liberalization as an objective of the Fund. In recent years the Fund has, as a matter of practice, sought to generally promote capital account liberalization,[17] but the membership has taken the view that the existing Articles do not sufficiently cater for the Fund's responsibility to oversee the international monetary system when that system is increasingly shaped by capital rather than current transactions.[18] The current Articles allows freedom for members to maintain or impose capital controls, and even indicate that the Fund may request a borrowing member to impose capital controls. This, of course, is in quite marked contrast with the treatment of current transactions, where the desirability of moves to convertibility have been encapsulated in IMF jurisdiction, for example, from the start.[19]

It is important to note that such an extension is not intended to push capital liberalization at any cost, or in any circumstances. Far from it. Rather, the intention is to promote orderly and sustainable liberalization, adequately supported by sound macroeconomic (including exchange rate) policies and appropriate microeconomic measures (not least in regard to building sound financial systems that can withstand the effects of fluctuations in capital

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[17] The Fund has also been putting ever-increasing emphasis on the need for countries' authorities to improve transparency both of their own operations and the conditions in banking and corporate sectors, so as to reduce the possibility that sudden bad news, or the suspicion of it, triggers major market movements.

[18] See Quirk et al (op cit) for a discussions of the considerations lying behind that view.

[19] Guitián (op cit) explains the rationale for that approach in the environment at the time the Bretton Woods institutions were established

flows).[20] As explained by Fischer (1997), the amendment is intended to facilitate the establishment of a universally applied code of conduct in the application of capital controls, and to enable the Fund to determine macroeconomic, balance of payments or structural considerations that require adherence to, or permit exemptions from, obligations relating to capital liberalization--this being of particular importance given that the Fund may be called upon to finance the balance of payments problems caused by capital movements.

Work is now underway to define exactly how an extention of Fund jurisdiction to capital transactions would be operationalized. Inter alia, this work is focussing on issues such as the scope of transactions covered, the nature of transitional arrangements for restrictions existing at the time of ratification of the new Articles, and temporary approval policies.[21] At the same time, the Fund is continuing to strengthen its role in advising members on issues related to capital account liberalization through its surveillance activities and its technical assistance.

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[20]The Managing Director of the Fund, for example, has publicly described the planned amendment as bold in vision, but cautious in implementation.

[21]Under present jurisdiction, for example, new current account restrictions may be approved by the Fund on a temporary basis where justified for balance of payments reasons--something similar would probably be reflected in the new arrangements. Approvals for new restriction might also be envisaged to reflect market and institutional evolution and prudential reasons.

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