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## **Capital Flows to Emerging Markets: Liberalization, Overshooting and Volatility**

by Philippe Bachetta and Eric Van Wincoop

in Sebastian Edwards, ed. *Capital Flows and the Emerging Economies: Theories, Evidence, and Controversies*

(Chicago: University of Chicago Press for the NBER, 2000), 98-103.

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The aim of this paper is to assess the impact of financial liberalization in emerging markets on the dynamics of capital flows to these countries. By positing a cost of absorbing these flows, the authors explain how liberalization can give rise to an “overshooting” of capital inflows and asset prices. In addition, the authors examine whether incomplete information can give rise to a high degree of volatility in capital flows as well as to contagion. They also suggest that deviations in capital inflows from their steady-state levels can be used as a potential signal of future crises.

These are important questions to ask in light of the close linkages between capital flows and financial crises. Furthermore, financial crises, particularly in the domestic banking sector, seem to be closely entwined with financial liberalization and asset price bubbles (see Kaminsky and Reinhart 1999). The Asian crises of 1997-98 certainly attest to the relevance of these issues. Financial liberalization, full or partial, did appear to help explain the cycle of capital inflows and the prolonged lending boom that left these economies highly leveraged and, thus, vulnerable to financial crises. During the boom phase of the capital flow cycle, the ex post evidence is also consistent with an asset price overshooting of the type discussed

in this paper.

In what follows, I will suggest that the analytical framework presented in this paper is extremely useful in understanding foreign direct investment (FDI) and portfolio equity flows to emerging markets in the 1990s. It is also useful for delineating how efforts to liberalize capital markets may have contributed to the boom phase of the capital flow cycle and its ultimate overshooting. The model also provides insights into FDI's comparative resilience vis-a-vis other types of capital inflows following periods of turbulence. This resilience was evident following the Mexican crisis of 1994-95 and the recent Asian crisis as well. This framework, however, is less well equipped to explain the surge in short-term capital flows, be these short-maturity bonds (as in Mexico or Indonesia) or bank loans (as in Korea and Thailand) and their links to financial liberalization. Hence, the framework presented in this paper is, in my view, a very relevant but partial explanation of the capital flow episode of the 1990s.

I will divide my comments into two broad areas. The first briefly deals with the stylized facts alluded to in the paper, while the second focuses on the theoretical model.

### **The Stylized Facts**

Section 3.1 of the paper provides some background information on the evolution of capital flows to emerging markets in the 1990s. This section highlights the increasing importance of portfolio flows to emerging markets

and the role of FDI. These and other points made by the authors are indeed important, but some qualifications of the stylized evidence, as presented in this paper, are in order.

First, while FDI and portfolio flows did surge in the earlier part of this decade, the increase was not universal and much more pronounced in Latin America than in Asia. In the years prior to the crisis, short-term flows to Asia surged, as Japanese and European banks significantly stepped up their lending to this region. Hence, in light of the paper's goal of understanding the role financial liberalization plays in stimulating capital inflows, the authors should also consider discussing the role played by short-term capital inflows during the period they are analyzing. Other papers, which have also modeled the financial liberalization process (see, e.g., Goldfajn and Valdks 1995; McKinnon and Pill 1996) have often stressed the distinctive behavior of banks during the postliberalization period. In particular, it has been shown that, during those periods, banks are inclined to acquire short-term offshore liabilities (capital inflows), that are then lent at home at substantially higher interest rates and longer maturities for a substantial profit. Certainly, the severe liquidity problems that some Asian countries have faced in 1997-98 have only served to confirm the prominent role played by short-maturity debt; the widespread incidence of banking crises have also underscored the central role that banks play in intermediating capital inflows. The increasing skewness in the composition of capital flows toward the short end of the maturity

spectrum has also been linked to the vulnerability of the Asian economies of financial crises (see Kaminsky and Reinhart 1998).

Second, a stylized fact, which is prominently stressed in the background discussion and filters through to the analytical framework, is the assertion that financial liberalization is primarily a feature of the 1990s. Galbis (1993) and Kaminsky and Reinhart (1999) provide detailed chronologies of the process of financial liberalization in most of the emerging market economies considered here. Financial liberalization was well underway in most of these countries by the early 1990s. Among the most documented of these financial reforms were the “big bang” liberalizations of the late 1970s and early 1980s in the Southern Cone. More generally, the removal of interest rate ceilings and directed lending was an ongoing process in the 1980s for several of the Asian and Latin American emerging markets emphasized in this study.

Third, the authors seem to suggest that financial liberalization has been synchronous across the broad range of highly heterogeneous emerging market economies in the 1990s, and thus liberalization has been a key ingredient in the widespread flow of capital to emerging markets in the 1990s. While I fully share the authors’ view of the key importance of financial liberalization as a pull factor, there is little evidence of such widespread cross-country synchronicity of reforms. By the time Argentina and Brazil implemented macroeconomic reforms, many of the Asian economies now in trouble and Chile had been far advanced in this process.

China is particularly difficult to fit in this mold; neither its domestic financial sector nor its external accounts have been liberalized by any reasonable measure-its currency lacks convertibility and its banking sector is bankrupt. A synchronous rise in flows to emerging markets may have other explanations than those that are stressed in this paper. Several studies that have analyzed the determinants of capital flows to emerging markets have found conclusive evidence on the importance of common push factors (see Montiel and Reinhart 1999 for a summary of this literature). Specifically, the decline in U.S. interest rates in the early part of the 1990s and the more dramatic march toward zero of Japanese short-term interest rates were clearly forces that helped propel capital toward Asia and Latin America.

### **The Theoretical Model**

Let us recall that this paper aims to assess the impact of financial liberalization in emerging markets on capital flows to these countries and to explain why liberalization can give rise to the “overshooting” of capital inflows and asset prices. To do so, the authors begin by modeling financial liberalization as the reduction in a tax, which in turn increases the rate of return on physical capital in emerging markets. This approach seems quite sensible, since even in the absence of explicit policy decisions, one can reinterpret the reduction in this tax as the decline in transactions costs associated with new “information-age” technology. Furthermore, some countries

(like Chile and China) have gone to great lengths to encourage FDI through tax breaks and other forms of preferential treatment while shunning short-term and portfolio flows.

In what follows, my discussion of the model will mainly focus on why I think that this type of model is better suited to explain the behavior of FDI and equity flows than the broader capital flow dynamics that the authors discuss in the introduction. This is not to suggest that explaining FDI and equity flows is a trivial feat, since both FDI and portfolio equity flows showed marked increases in the 1990s. Also, while the authors do not actually interpret and exploit some of their findings in this light, this framework also allows us to understand in an intuitively appealing manner the problem of “overinvestment” that characterized many of the Asian economies on the eve of crisis.

The model, however, would have to be substantially amended to shed light on the issue of bond flows and other short-term flows, which were also extremely important in explaining the capital flow surge of the 1990s as well as its subsequent volatility. To understand these other types of flows, some of the assumptions that are made will have to be relaxed. For example, it is assumed that capital outflows from emerging markets are not possible-investment is assumed to be “irreversible.” Table 3C. 1 clearly highlights that reversibility of capital flows is a major issue for emerging markets. Nor is this issue a new one, as the experiences of the early 1980s shown in the table highlight. However, it is true that not all

capital flows are equally vulnerable to these abrupt reversals. Indeed, the kind of physical capital flows that the authors model in this paper (FDI) appear to be relatively resilient following the Mexican 1994 crisis and the Asian crises of 1997-98. Bond flows and foreign bank loans, which are not included in this model, appear to account for the bulk of the observed reversals.

**Table 3C.1 Selected Large Reversals in Net Private Capital Flows (as a percentage of GDP)**

Country, Episode	Reversal
Argentina, 1982-83	20
Argentina, 1994-95	4
Chile, 1981-83	7
Chile, <sup>a</sup> 1990-91	8
Ecuador, 1995-96	19
Hungary, 1995-96	7
Indonesia, 1996-98	5
Malaysia, <sup>a</sup> 1993-94	15
Mexico, 1981-83	12
Mexico, 1993-95	6
Philippines, 1996-97	7
Venezuela, 1992-94	9
South Korea, 1996-98	11
Thailand, 1996-98	26
Turkey, 1993-94	10

*Source:* Calvo and Reinhart (1999).

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

It is also the case that the authors work with a real model, in which there is no money, credit, nor exchange rates. There is also no debt. The introduction of a second emerging market asset, be it money, debt, or both, would clearly allow for a more comprehensive modeling of the capital flows of the 1990s. While there are always trade-offs between tractability and breadth, to understand the capital flows of the 1990s we must also address the issue of debt and bank lending. As we have seen in the cases of Southeast Asia and Korea, bond financing and bank loans accounted for



an important share of capital inflows to this region as well as other emerging markets.

A less pressing, but possibly interesting, extension of this framework would be to relax the assumption that consumption decisions are taken on a period-by-period basis. The reason that this may be a fruitful exercise has to do with the authors' introduction of incomplete information and learning. While I very much like their idea of incomplete information as a possible source of volatility and contagion, this uncertainty is not (in its present form) allowed to feed back so as to affect consumption decisions. In sum, if the authors wish to address the links between financial liberalization, aggregate capital flows, asset price bubbles, and volatility, I would urge them to incorporate other assets, besides physical capital, in their framework. An interesting extension of this type of analysis could also be to build on the financial liberalization story and incorporate a financial intermediary, as in Edwards and Vegh (1997) and Krugman (1998). Of course, attempting to do too many of these things in a single model will no doubt prove messy but it would be highly complementary to the interesting issues that are already addressed in the paper.

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