

Issues Regarding the Composition of Capital Flows¹

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Introduction

International capital flows can take many forms, from foreign direct investment (FDI) to loans to bonds to bank credits to equity, originating in either the public or the private sector and being channeled to either the public or private sector, where the latter may constitute either banks or other financial institutions or corporates or individuals. The characteristics of capital flowing in these different forms can differ markedly, and it is therefore important to borrowing countries to have an appreciation of the range of options and of the costs and benefits of the alternatives available. The aim of this paper is to provide a guide to the issues involved in choosing among alternative forms of capital flow.

The paper starts by developing a taxonomy of the alternatives. It proceeds to present some statistical facts about recent capital flows, and then offers some stylized facts about the typical experience of a country in terms of which forms of capital flow are important at which stages of development. It then examines the characteristics of the alternatives, in terms of cost, conditionality, risk-bearing, access to intellectual property, and vulnerability to capital flow reversal. The paper concludes by asking what policy is able to do to influence the choice among the alternatives, and what it would be well advised to do.

A Taxonomy

Capital flows can be categorized in a number of ways: by the direction in which capital flows, by the type of lender or borrower, by the legal form of the contract governing the flow, by maturity, and so on. Since the principal interest of this conference is in countries that neoclassical theory leads one to expect to be capital importers, we will focus first and mainly on capital flows into countries, delaying a brief consideration of capital outflows until the end.

A first distinction is in terms of the type of lender. The possibilities are:

- foreign governments
- multilateral development banks (MDBs), among which one may include the IMF for present purposes²

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- foreign non-financial corporations (which are important in this context mainly in providing, or arranging for, supplier credits to finance sales of their capital goods)
- foreign banks
- other foreign financial institutions (including pension funds, insurance companies, mutual funds, investment banks, and hedge funds, the two latter nowadays being grouped under the label “highly leveraged institutions”, HLIs, despite the fact that they are not always highly leveraged)
- foreign individuals (not in practice of much significance)
- foreign non-governmental organizations (NGOs).

A similar array of possibilities exists on the borrowing side, except that there is no equivalent to MDBs.

In terms of the legal form of the contract, the possibilities are:

- a grant
- a loan
- an equity stake (a) with control, which is foreign direct investment (FDI); or (b) without control, which is portfolio equity investment. It is a matter for debate as to how large an equity stake is needed to give control and thus to justify the label FDI. Clearly 51% is sufficient, but effective control is often possible with a much smaller stake. The conventional dividing line, which is to some extent arbitrary, is 10%, at least in the United States.³

Maturity can vary from overnight (which is important in the inter-bank market) to infinite (as used to be the case with British consols) or indeterminate (as is the case with an equity stake, which lasts indefinitely unless and until the holder decides to sell his stake).

A similar taxonomy is possible with regard to capital outflows from developing countries. The main difference is that there is again no analogy to MDBs among the sources of finance⁴. However, MDBs should be included (in principle) among the foreign borrowers to whom residents may lend money.

Some Facts

Unfortunately it has not proved possible to develop a statistical picture of capital flows that corresponds to the preceding taxonomy. I have therefore drawn on the estimates

² Although the International Monetary Fund (IMF) is not normally classified as an MDB, its Poverty Reduction and Growth Facility provides medium-term development finance.

³ For convenience, purchasers of equity claims will be included under the term “lenders” in this paper.

⁴ This statement needs qualification. Some oil-exporting countries created joint or even national institutions to lend government funds to poorer developing countries during the era of oil surpluses in the 1970s (e.g. the Arab Fund for Economic Development, the Kuwait Fund). And a number of developing countries subscribe to some multilateral initiatives; e.g., 43 developing countries, including ones as poor as Bangladesh, subscribe funds to the IMF’s PRGF/HIPC Trust.

constructed by the Institute of International Finance, whose figures give a much less detailed decomposition of capital flows.

Table 1 presents their estimates for capital flows to emerging markets during the second half of the 1990s, plus a forecast for the year 2000. The decomposition is first between private and official sources of capital flows. Within private flows, there is a disaggregation between bank loans (and “other”), portfolio investment (both bonds and portfolio equity), and FDI. Similar figures are shown for the two regions of the developing world toward which capital has so far flowed on a major scale, both of which have already experienced serious debt-related crises, namely East Asia and Latin America.

It is particularly instructive to look at what happened in East Asia during the crisis of 1997-98. Private capital flows collapsed, primarily because of a massive swing in bank lending from an inflow of over \$110 billion in 1996 to an outflow of over \$50 billion in 1998. Portfolio investment also declined, from an inflow of \$17 billion in 1996 to one of only \$5 billion in 1998, but had already recovered to close to the 1996 level by 1999. FDI, in contrast, remained essentially constant during the period. Official flows actually increased, from under \$10 billion to over \$50 billion, between 1996 and 1998, reflecting the crisis lending of the IMF and the MDBs.

The Latin American crisis peaked later than that in East Asia, when Brazil was forced to float at the beginning of 1999. There was also a large reduction in bank lending in that year, which was combined with a proportionately much larger swing in portfolio investment than in East Asia and an actual increase in FDI. Official flows declined as compared to 1998, but remained positive, whereas they had been negative in the pre-crisis years.

The following conclusions would seem to be warranted. Official capital varies in a stabilizing way. FDI provides a pretty stable source of finance. Portfolio investment tends to accentuate crises, but the biggest source of instability comes from the variations in bank lending.

Stylized Facts

It is pretty clear that the least developed countries have the fewest options regarding access to capital flows, while the richest countries can choose from the full menu. Indeed, it seems that a very poor country usually has access only to official finance and two forms of private finance, namely FDI directed to the exploitation of its natural resources on the one hand, and to trade credit, including supplier credit, on the other. It is not difficult to infer why these two forms of credit should be available when others are not. The exploitation of natural resources can offer very high returns when the resources in question are rich enough, encouraging an investor to shoulder the high risks of operating in a country with a poor legal system and the high costs imposed by lack of infrastructure. So far as trade credit is concerned, the risk involved in financing a poor country's exports is not large, inasmuch as the exports can serve as collateral, while import finance is available because exporters find it worthwhile to accept some measure of risk in the cause of increasing their sales. (Supplier credit is frequently supported by

government export credit insurance.) It is obvious why official finance is of key importance in such a context, such as that still present in much of Africa.

The next form of finance to become available is typically bank finance in the form of syndicated credits to the sovereign. Initially banks are reluctant to extend loans on other than short maturities, but as a borrower establishes its reputation with the markets, so banks become willing to contemplate progressively longer maturities (at a price, in terms of a higher interest rate for longer term loans). FDI also tends to become available for purposes other than resource exploitation (notably serving the domestic market and/or supplying manufactures to export markets) at about this phase of development. This is roughly where the middle income countries were at the time that the debt crisis erupted in 1982.

The next stage, experienced by most middle income countries (plus India) in the 1990s, involves a further diversification of the accessible sources and destinations of finance, to include also portfolio equity and bonds, bringing with them new investors, notably pension funds and mutual funds. Private sector borrowers start to access foreign banks, and to issue foreign bonds, and to have their shares traded on developed-country stock markets. Portfolio equity tends to be available only to countries with a functioning stock market, which used to be largely a prerogative of relatively rich countries, although there has been a tendency in recent years for equity markets to develop in lower income countries than was formerly the case. Bond finance tends to start with short maturities, just like bank credit does, but then to extend to longer maturities as the market gains familiarity with, and confidence in, the borrower.

The final stage involves access to at least one additional market, namely the inter-bank market. New financial instruments tend to emerge within the country, such as certificates of deposit and commercial paper, and these attract foreign buyers. In addition, a range of additional actors (such as investment banks and hedge funds) become active, dealing in some of the new instruments as well as those previously available. This is the stage which all the industrial countries have now reached, and which Korea appeared to be entering prior to its 1997 crisis.

A Comparison of Five Characteristics

As already indicated in the Introduction, I consider five dimensions to be of key importance in distinguishing among the various forms of capital flow: cost, conditionality, risk-bearing, access to intellectual property, and vulnerability to capital flow reversal. These will be discussed in turn.

Cost. Official capital (plus the limited sums provided by foreign NGOs) tends to be cheapest, especially (obviously) when in the form of grants or highly concessional loans. But even the “commercial” terms on which the MDBs lend in their regular operations include an important element of subsidy, as the IFIAC Report (2000) went to great length to demonstrate. The guarantee provided by the developed members of the MDBs in the form of their callable capital enables the MDBs to borrow and on-lend on AAA terms which no developing country could hope to replicate. Supplier credit may also involve

some concessional element, although the Berne Union has in recent years curbed the competition among its members to win export orders by offering cheap credit.

At the other extreme is believed to be FDI. There are no official estimates of the return to FDI, but a conservative estimate of the return on US FDI is about 12.4%. This takes the return as consisting of the reported direct investment receipts of \$102.8b. (in 1998) and adds half of the reported license and royalty fees of \$36.8b., and deflates by the book value of \$980.6b. The market value is undoubtedly larger than this; but then one should add the year's increase in market value to the return. Other figures probably under-estimate the rate of return (e.g. because transfer pricing is used to reduce reported profits).

Rates of return on portfolio equity tend to be extremely variable, reflecting the volatility of stock markets in general and those of developing countries in particular. But the fact that markets demand an equity risk premium implies that one would expect that on average the return on portfolio equity would be higher than that on loan capital, essentially because the lenders are taking more of the risks. One reflection of this is that dividends tend to be low when a country is confronting macro problems, thus redistributing the foreign exchange cost of servicing foreign capital toward times when one would expect the country to be in a better position to pay. Since a large part of the return also consists of increases in the value of shares, the cost of debt service also tends to be delayed, presumably to a time when the country's marginal rate of time preference will be lower.

It is not clear that there is any systematic difference between the cost of bank loans versus bonds. What is clear is that there is a strong tendency for borrowing on longer maturities to be more expensive than short-term borrowing.

Conditionality. The most explicit conditionality is that required by the MDBs, especially by the IMF. The conditionality required by the World Bank and the regional development banks is also at times of the macroeconomic character typical of IMF programs, or it may be related to sectoral policies, or it may still at times be confined to the design and implementation of a particular project. But whatever the project or program, it is always accompanied by the need to negotiate terms with the MDB in question. The desire to escape from the tutelage of the MDBs is usually reckoned to have been one of the factors that drove the explosion of bank lending in the 1970s. Those of us who have worked for the MDBs and believe that their conditionality is by and large well-conceived regard this desire as having been a costly mistake, however understandable. Bilateral grants or loans may also have a series of conditions attached to their disbursement.

The other form of lending that sometimes comes with something akin to conditionality is FDI, which may involve a negotiation between the host country government and the multinational contemplating an investment. But in this case the conditionality may be two-way: while the multinational may (for example) make its investment conditional on stipulated improvements in infrastructure, the host country may also (for example) impose performance requirements.

Other forms of capital inflow are free of any conditionality, except perhaps for the requirement that the borrower implement the project supposedly being financed. (The word “supposedly” reflects the fact of fungibility.)

Risk-bearing. The parties to an investment financed by foreign capital presumably have some more or less well-defined expectations regarding the revenues that will result from the investment and the costs that will be involved in servicing the foreign capital at the time when the investment is contracted. But since we live in an uncertain world, the actual revenue and cost streams will typically differ from those expected at the time when the contract is agreed. The question is: who will reap the benefits if the revenues are larger or the costs smaller, or conversely who will suffer if revenues are smaller or costs larger, than was expected at the time of the contract?

One may break down these risks into three components. “Commercial risk” refers to the risk of the revenue stream being different to that anticipated, as a result of higher or lower prices or sales or (non-financial) costs. “Interest risk” refers to the risk of interest rates in general being different from those anticipated, which would result in a fixed interest rate being more or less advantageous to the lender than anticipated, or to a variable interest rate imposing larger or smaller costs on the borrower. “Exchange rate risk” refers to the possibility of the exchange rate between the borrower’s currency and the lender’s currency varying from that anticipated, which would mean (*ceteris paribus*) that a given stream of debt service payments would be worth more or less to the lender, or would cost more or less than expected to the borrower. Let us consider who bears these three risks under various forms of capital flow.

Almost all official flows, with the exception of investments by the IFC or analogous regional institutions, concentrate commercial risks on the borrower. The same is true of supplier credits, and of bank loans and bonds to sovereigns. Loans and bonds to private sector borrowers allow commercial risk to be passed on to the lender only in the most extreme circumstances, when the borrower declares bankruptcy. Equity flows, both direct and portfolio, are very different in this respect: commercial risk is assumed by the lender. The flow of profits, and thus the income of the lender, depends upon the trading outcome of the borrower. In addition, changes in expectations of future commercial outcomes influence the value of the assets held by the lender: this is particularly obvious in the case of portfolio equity, but the same would be true of FDI if it were marked to market.

Equity investors also bear interest risk. The location of interest risk on loans depends upon whether the loan carries a fixed or floating (i.e., periodically adjustable) interest rate. A fixed interest rate places this risk on the lender, who receives an above-market stream of interest if the market interest rate falls below that expected at the time of the contract, but suffers correspondingly in the event of an interest rate rise. A variable interest rate relocates that risk to the borrower, who benefits in the event of lower than expected interest rates and suffers in the event that interest rates rise.⁵ Most

⁵ Strictly speaking one should be referring here to real rather than nominal interest rates. Thus a higher nominal interest rate that reflects higher inflation that inflates the borrower’s receipts and non-financial costs equally will leave the borrower’s and lender’s net worth unchanged (though it will still have a real effect in reducing the effective maturity of the loan). This suggests that variable interest rates are an effective way of reducing the risk of both borrower and lender when the main source of interest risk stems

official loans carry a fixed interest rate, which places interest risk on the lender. Most bank loans, and nowadays many bonds as well, carry a floating interest rate, which passes the risk to the borrower.

Equity investors also carry exchange rate risk, although their real transactions may provide an effective hedge against this risk. In virtually all other cases the exchange rate risk is carried by the borrower, since developing countries are rarely able to borrow substantial sums in their own currency.

The bottom line reflects a point made by Kenneth Rogoff (1999) in a recent article. Equity investments are a good way of shifting risk from the borrower to the lender.

Intellectual Property. Ever since the work of Stephen Hymer (1960), economists have regarded the distinguishing feature of FDI as being that the multinational corporation brings with it access to one form or another of intellectual property: technology embodied in patents or know-how, trademarks, foreign markets, or managerial expertise. Without some form of intellectual property to exploit, it is difficult to understand how a foreign corporation could expect to get the upper hand over local firms with their natural advantage of greater familiarity with local circumstances.

The only other forms of capital flow that might bring some of the advantages of access to intellectual property are official capital and that originating with NGOs. Both the MDBs and some NGOs like to regard themselves as having special expertise in access to, and the ability to transfer, knowledge.

Vulnerability to Capital Flow Reversals. The series of financial crises that developing countries have experienced since the outbreak of the debt crisis in 1982 have compelled the conclusion that one of the major disadvantages of capital mobility is that it makes countries vulnerable to a peremptory reversal in the flow of capital. Conventional wisdom has long held that some forms of capital flow are much more liable to rapid reversal than others. This view was challenged in a paper by Claessens, Dooley, and Warner (1994), who failed to find statistically significant differences in the time series properties of different forms of capital flow (FDI, portfolio equity, long-term, short-term, banks, government, and private). But in his discussion of this paper, Guillermo Calvo presciently pointed out that the authors' estimates of volatility (which essentially focused on the second moment of the time series) might fail to give due weight to what is of most importance, the possibility of occasional major disruptions (which are measured by higher moments in the time series). To judge by what happened in East Asia during its recent crisis (see Table 1), where FDI was largely maintained while bank capital reversed on a grand scale, it is indeed proper to worry much more about the volatility of some forms of capital flow than of others.

from variations in inflation. Of course, an even more effective strategy is to index the loan to inflation, which avoids shortening the maturity of the debt when inflation increases and also distinguishes correctly between interest changes that reflect changes in inflation from those stemming from real factors.

FDI has indeed traditionally been regarded as the most stable form of capital inflow, and recent experience has done nothing to undermine this view. This is not to say that multinationals will refrain from shifting working balances among currencies depending on their view of macroeconomic prospects, but one may doubt whether such shifts will be large relative to the total sum sunk in capital investment. Official capital flows have also traditionally been viewed as relatively stable, and proved to be contracyclical in the most recent crisis.

Table 1 suggests that bank lending is at the other extreme, since it constituted the principal component of the capital flow reversal in East Asia. The same thing was true in the debt crisis. Common sense (and received wisdom) would suggest that short-term bank loans are likely to be more unstable than long-term loans, an expectation that would again seem to have been reinforced by the evaporation of inter-bank credit lines experienced by Korea in late 1997. One reason that Claessens, Dooley and Warner failed to find any distinction in volatility based on maturity may be that they lumped trade credits in with other short-term credits extended by banks. In fact trade credits are one of the least volatile sources of finance, despite the fact that each individual credit is short-term, because they are constantly renewed as new trade transactions need to be financed. It is the residual item, bank claims that have a short term to maturity that are not trade-related, that conventional wisdom holds to be particularly volatile.

Concern is often expressed about the potential volatility of other claims that can be sold quickly, including portfolio equity and long-term bonds as well as short-term instruments like CDs and commercial paper. Table 1 does indeed show a reversal in the flow of portfolio investment to East Asia in 1997-98, although on nothing like the scale (even relative to the size of the preceding flow) as in the case of bank lending. There is an important reason why one should expect less volatility in the case of portfolio equity than in the case of short-term loans: the *price* of the relevant asset (shares) can adjust, rather than all the adjustment taking place in the volume. Indeed, if a shock has the same impact on the future expectations of domestic and foreign investors in shares, then one would expect that *all* the resulting adjustment would show up in a change in share prices, with no consequences for capital flows or exchange rates. (One can also argue that the stock market is a good place to absorb the impact of changes in expectations, because the links from the stock market to the real economy tend to be weak in the short term.) It is only when foreign investors lose their nerve about the prospects for a country or region in a way that domestic investors do not, as in East Asia in 1997, that one has to expect an impact on capital flows.

Much the same analysis applies to long-term bonds, whose price also fluctuates in response to changes in expectations in such a way as to ensure that the total stock of bonds continues to be willingly held. However, nominally long-term bonds sometimes include put options, giving the holder the right to demand early repayment at his discretion on certain dates. If such dates coincide with a crisis, then the loan tends to disappear just when it is most needed, as happened in Korea in late 1997.

Table 2 offers a summary of the judgments expressed above. It shows that official capital tends to be cheap but subject to conditionality, which is another way of saying that it may bring some limited intellectual capital with it. While it does not involve risk-sharing, neither is it subject to capital flow reversals: indeed, MDB lending

at least tends to be stabilizing. The counterpart to these attractions, from the standpoint of the borrower, is that official capital is rationed by the limited supply available. FDI is expensive but the borrower gets some very real advantages in return for that: risk-sharing, access to intellectual property, and minimal exposure to the danger of capital flow reversal. Portfolio equity also tends to be expensive, but it too has good risk-sharing properties and relatively limited exposure to capital flow reversal. Loans (including supplier credits), from banks or otherwise, have no conditionality, no risk-sharing properties, and bring no access to intellectual property. Supplier credit is relatively cheap and not vulnerable to sudden reversal, though it has an additional danger that will be taken up in the next section. Other loans come with a commercial interest rate that tends to be higher the longer the maturity, but a longer maturity (and absence of put options) limits exposure to capital flow reversal in bad times.

Policy Issues

The critical question in determining whether it would be desirable to influence the composition of capital flows is whether the interest rate varies enough between different forms of capital flow as to leave the borrower indifferent among them. I am not aware of anyone who has answered that question rigorously, but my own view is quite unambiguously that the more expensive forms of capital inflow are well worth the additional cost that they entail. A somewhat higher interest rate pales into insignificance in comparison to the cost of a major crisis.

The next question is whether it is feasible to take actions that would influence the form of the capital flow. This is a question that is best answered by examining specific proposals intended to have such an influence. Let me therefore discuss five such measures, the first four of which have already been demonstrated by experience to be feasible.

Sovereign Borrowing. Governments can certainly influence the form of their own borrowing. They can make sure that they borrow their full entitlement from the MDBs, rather than being seduced by the temptation to avoid conditionality, and nowadays it is increasingly possible to be able to increase their entitlement by adopting good policies. Within limits they can increase the maturity of their borrowing, by being prepared to pay higher interest rates. And they can certainly avoid including put options in the loans they contract.

Supplier Credits. Governments can also decide whether and to what extent to allow their parastatals to finance their investment by supplier credits, which most exporting countries are all too ready to provide, subject only to some check on the sovereign creditworthiness of the borrowing country. Moreover, it is relatively easy to limit the access of private sector borrowers to supplier credit as well, if that seems desirable. There are many sad examples of countries that have got themselves into a debt problem by excessive resort to supplier credit, and it is therefore an important policy issue, especially in countries with

limited access to the international capital market, to establish an appropriate stance toward supplier credit.

Like any other form of foreign borrowing, supplier credit has the potential to benefit a country if it finances additional productive investment with a rate of return greater than the borrowing cost. But things can go wrong in three ways:

- if the credit is used to finance bad investment projects that do not generate enough extra output to cover the cost of debt service;
- if it is used to evade proper scrutiny of investment projects which therefore end up costing more than they should have done (e.g. with higher capital costs more than offsetting the nominal interest saving that may accompany supplier credit);
- if the extra output does not generate additional foreign exchange receipts and the country builds up an excessive burden of debt service in consequence.

.One can assume that a private sector borrower would take care to avoid the first and second dangers, implying that the government should limit its activities to monitoring the debt service burden being accumulated and curtailing access of the private sector to supplier credit only if this were becoming excessive. This would never occur if the projects being financed are designed to generate or save foreign exchange (assuming incentives to be reasonably reflective of real scarcities), but could occur if the investment were financing nontradables. Public sector access to supplier credit merits much closer monitoring: there are too many examples of cases where parastatals have used access to supplier credit to evade normal scrutiny and implement uneconomic projects or allow their costs to be inflated. Investment standards for public projects should not be relaxed just because of potential access to supplier credit.

Prudential Requirements on Banks. Since bank lending has the worst historical record in terms of running away when the going gets rough, it is prudent to restrict reliance on bank credit, especially short-term bank credit (other than trade credit). At the very least, this means avoiding artificial encouragement of short-term borrowing from foreign banks, such as was provided in Thailand by the special advantages given to the Bangkok International Banking Facility in the mid-1990s. But it can involve much more than this. Specifically, financial institutions can be limited in the unmatched foreign currency positions that they are allowed to hold. So long as developed country financial institutions remain chronically averse to holding assets denominated in the currencies of emerging markets, this will limit how much foreign borrowing can be intermediated through the financial system. That still leaves open the possibility that excessive sums will be lent by foreign banks directly to the corporate sector, as happened in Indonesia, but it will provide an effective constraint on the more usual channel.

There seems no reason to question the practicality of such a measure. Prudential requirements are a regular part of the process of bank regulation and supervision. The number of financial institutions is sufficiently small, and well-defined, to make it possible to ensure that all the potential actors are regularly examined for compliance. Nor would it be difficult to police a measure which placed a much more severe limit on the unmatched position in short-term credit than on loans with a longer maturity (at the time the obligation is incurred).

A well-regulated and supervised financial system can also limit the damage that is done if a currency crisis actually materializes, as well as reducing the danger of such a crisis occurring in the first place. Prudential supervision is a no-brainer.

Unremunerated Reserve Requirements. Chile is the best-known example of a country that succeeded in influencing the composition of its capital inflows by imposing an unremunerated reserve requirement (URR; known in Spanish by the more elegant term “encaje”) on capital inflows. For some years in the mid-1990s anyone bringing loan capital⁶ into Chile was obliged to deposit 30% of the value of the loan in the central bank for one year, without receiving any interest payment on that deposit. This reduced the return to be gained from holding short-term assets, and, since the deposit was independent of the term of the asset being held, the reduction in the rate of return was greater the shorter the maturity of the asset. (However, an investor rolling one short-term asset into another was not obliged to renew the deposit, so the additional cost was not as great as suggested by the simplistic calculation, e.g. that the return on holding a one-year asset was reduced by 30%.)

There has evolved a substantial literature evaluating the success of the Chilean URR. Much of it is negative about the impact of the URR, specially as regards its impact on the exchange rate, capital flows, and, to a lesser extent, on its ability to allow Chile to hold higher interest rates than would otherwise have been possible. My own view is that this scepticism is overdone, as I have argued in detail elsewhere (Williamson 2000). Nevertheless, even adherents of the view that the URR has been ineffective in increasing Chile’s monetary independence concede that it has been effective in extending the maturity of Chile’s foreign debt. This is true specifically of Edwards (1999), Gallego, Hernandez and Schmidt-Hebel (1999), and De Gregorio, Edwards and Valdes (2000). Thus Chile’s “price-related” form of capital controls deserves to be included among the methods of influencing the composition of capital inflows that experience has shown to be effective. It is a measure that can be used to supplement a regulation that limits the unmatched foreign currency exposure of financial institutions in a way that will cover foreign investors prepared to acquire local currency assets and domestic corporations prepared to borrow in foreign currency. These two measures together can be expected to give a country a substantial defence against the sort of capital surge that many emerging markets have experienced soon after first accessing the international capital market.

A Special Foreign Exchange Market for Pension Funds? In a paper dealing with the relationship between pension funds, capital controls, and macroeconomic stability, Helmut Reisen and I were once asked to consider the rationale for creating a special foreign exchange market for pension funds (Reisen and Williamson 1997).⁷ We were not very sympathetic to the proposal, despite arguing that it would be administratively feasible, given that pension funds are well-defined and highly-regulated legal entities. I now believe that the proposal deserves reconsideration.

⁶ Foreign equity inflows were subject to a minimum holding period of one year.

⁷ An alternative technique for achieving the same objective would be to limit domestic pension funds to portfolio swaps with foreign pension funds.

A first issue is whether Reisen and I were correct in endorsing its administrative feasibility. It is one thing to regulate one's own pension funds, but foreign pension funds would presumably invest indirectly, via mutual funds, whenever the special rate stood at a premium, if the regime applied only to them. Hence I conclude that it would be necessary to include mutual funds along with pension funds as being required to invest through this special market.

One reason that we gave for rejecting the proposal is that it would preclude a country benefiting from a resource transfer financed by net purchases of portfolio equity on the part of foreign pension (and mutual) funds. It is indeed true that a strict version of the proposal would imply that capital inflows from foreign pension and mutual funds could be no larger than the capital outflows that domestic pension funds were able and willing to finance. Even if one accepts the logical case for small countries to encourage their pension funds to invest heavily in foreign securities (Kotlikoff and Seeger 2000), on the ground that this will reduce the vulnerability of the nation in general and its retirees in particular to country-specific shocks, one would expect net inflows at the market exchange rate in the next decade or two. This is because pension and mutual funds are already close to maturity in developed countries and therefore hold large stocks of assets, a part of which will be redeployed to emerging markets as these become integrated into the global capital market. In contrast, pension funds in most developing countries are still at a very early stage of development, so that even if they invest a large proportion of their assets abroad this will not match the inflows that could be expected. A large premium on the local currency in the special pension/mutual fund market would therefore be needed to choke off the excess demand for inward investment at the market exchange rate.

On second thoughts, it is difficult to see why a country should make a point of principle of insisting that this rate should float freely. Why should not the authorities be allowed to intervene in this market, notably by supplying domestic currency and buying foreign exchange when there is an excess demand for inward investment at the market exchange rate? One possible reason is that the country may be suffering a capital surge, and trying to limit capital inflows. But in that event allowing a premium in a separate market for pension and mutual funds could be a useful instrument in limiting the excessive capital inflow. Where the authorities do not confront such a dilemma, it would seem both possible and sensible for the authorities to intervene to keep the special rate close to the normal market rate.

The other reason that Reisen and I gave for rejecting the proposal was that the conjunctural problem to which it was addressed was non-existent. I am no longer convinced of this. Portfolio equity did contribute to the capital flow reversal in East Asia. There is evidence that mutual funds have had a destabilizing impact and have helped spread contagion in Latin America (Kaminsky, Lyons, and Schmukler 1999). While pension funds are not the same as mutual funds, they are sufficiently similar that one may wonder whether they would come any better out of a similar examination. Hence I would think that the ability to let the special rate go to a discount during a crisis might be able to play a useful role in limiting the impact of a crisis, just as the ability to let it go to a premium might help cope with a capital surge.

Concluding Remarks

I thus have five proposals that seem to be feasible and to make sense, and that are directed to influencing specific forms of capital flow, which amounts to influencing the composition of capital flows. I would not wish to leave the impression that these are the only forms of capital control that merit consideration. For example, I strongly favour all developing countries emulating Singapore in retaining a requirement that domestic currency loans (above a low threshold) to foreign borrowers be subject to administrative approval. This is an important impediment to HLIs creating the sort of havoc that they were doing prior to the collapse of LTCM, as recorded in the Report of the Market Dynamics Study Group (Financial Stability Forum 2000). I also believe that it is necessary for countries to retain the right to impose capital outflow controls in the sort of emergency where Malaysia applied them in 1998, and indeed I suspect that we may reach the point where a short standstill enforced by such controls is a routine accompaniment of IMF crisis lending. Finally, I would regard it as prudent to retain an obligation to report capital flows, both to enable the authorities to know their true international debt situation and to limit the widespread tax evasion that otherwise tends to accompany the development of international capital mobility.

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Table 1
Net Capital Inflows to Emerging Markets

(Billions of US dollars)

	1996	1997	1998	1999*	2000*
Emerging Markets					
Total private capital inflows	327.9	265.7	147.8	148.7	193.1
Bank loans and other	202.5	124.7	16.2	-7.1	39.6
Portfolio investment	33.7	25.7	13.7	17.0	33.7
Foreign direct investment	91.7	115.3	117.9	138.8	119.8
Net official inflows	7.6	38.9	52.8	11.9	9.1
Total inflows	335.5	304.6	200.6	160.6	202.2
Asia and the Pacific					
Total private capital inflows	176.3	67.9	5.8	39.3	59.4
Bank loans and other	113.7	10.0	-54.3	-30.2	-12.6
Portfolio investment	17.2	6.0	4.9	14.9	18.4
Foreign direct investment	45.4	51.9	55.2	54.6	53.6
Net official inflows	5.0	36.7	31.2	4.3	8.3
Total inflows	181.3	104.6	37.0	43.6	67.7
Latin America					
Total private capital inflows	97.3	107.7	97.5	68.8	89.6
Bank loans and other	48.9	45.6	47.0	7.3	34.3
Portfolio investment	12.7	13.2	1.6	-5.0	7.8
Foreign direct investment	35.8	48.8	48.9	66.5	47.6
Net official inflows	-10.5	-2.6	15.7	5.5	-1.9
Total inflows	86.8	105.1	113.2	74.3	87.7

*Estimate

Source: Institute for International Finance *Capital Flows to Emerging Market Economies*

Table 2**A Summary of the Properties of Different Forms of Capital Flows**

Form of Capital Flow	Cost	Conditionality	Risk-Sharing	Intellectual Property	Vulnerability to Reversal
Official					
MDBs	Low to sub-commercial	Yes	Only interest risk	Some	Stabilizing
Bilateral	Zero to low	Usually	Only interest risk	Some	No
Private					
FDI	Highest	Possible	Yes	Yes	Minimal
Portfolio Equity	High	No	Yes	No	Limited
Supplier Credit	Sub-commercial	No	No	No	No
Bank Credit:					
Syndicated	Commercial	No	No*	No	Yes, depending on maturity
Trade Credit	Commercial	No	No	No	Minimal
Inter-bank	Commercial	No	No	No	Extreme
Bonds	Commercial	No	No*	No	Yes, depending on maturity

* Except that a fixed interest rate places interest risk on the lender.

Source: See text.