

Regulatory Challenges for Source Countries of Surges in Capital Flows

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I The Growth of Portfolio Investment in Developing Countries

One of the more surprising developments in international financial markets over the last decade has been the growing role of foreign portfolio investment as a channel for international capital flows to developing countries. This is not, however, the first time there has been an abrupt shift in channels or in the volume of flows to these countries (see Table 1). From 1977 to 1982, for example, commercial bank lending was the dominant channel and the largest lenders were US multinational banks lending primarily to middle-income countries, particularly (but not only) in the Western Hemisphere. Although loans were also the primary channel for flows to Asia in this period, the World Bank and the regional development banks provided a larger share of total lending to low-income Asian countries and to Africa than did commercial banks. Foreign direct investment was an important channel for flows to all regions in these years but portfolio investment was relatively unimportant and largely involved bond issues in the Euromarkets by a few of the more creditworthy developing countries.

The second oil price increase in 1979, the ensuing recession in the industrialised countries and the shift in US macroeconomic policy in the period from 1979 to 1982 ushered in a new and difficult decade for developing countries. The Mexican debt crisis in 1982 quickly escalated into a Third World debt crisis that involved a large number of countries, particularly in Latin America, the Caribbean, Africa and Eastern Europe. It is interesting that most Asian countries did not suffer a debt crisis in the 1980s.

Between 1983 and 1989 there was a marked decline in net international

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Table 1 Capital Flows to Developing Countries¹
(in billions of dollars)

	All Developing Countries	Asia	Western Hemisphere	Other Developing Countries ²
1977-1982				
Total net capital flows	183.0	94.8	157.8	-69.6
Net foreign direct investment	67.2	16.2	31.8	19.2
Net portfolio investment	-63.0	3.6	9.6	-76.2
Bank lending & other	178.8	75.0	116.4	-12.6
1983-1989				
Total net capital flows	61.6	116.9	-116.2	60.9
Net foreign direct investment	93.1	36.4	30.8	25.9
Net portfolio investment	45.5	9.8	-8.4	44.1
Bank lending & other	-77.0	70.7	-138.6	-9.0
1990-1994				
Total net capital flows	524.5	260.5	200.5	63.5
Net foreign direct investment	195.5	117.0	59.5	19.0
Net portfolio investment	218.0	62.0	133.0	23.0
Bank lending & other	111.0	81.5	8.0	21.5

Notes:

- 1 Flows exclude exceptional financing.
- 2 Includes countries in Africa, Eastern Europe and the Middle East. Excludes capital-exporting countries such as Kuwait and Saudi Arabia.

Source: IMF, *International Capital Markets*, August 1995.

capital flows to developing countries, largely due to the very high negative net transfer of financial resources from Latin American countries to commercial banks. Foreign direct investment (FDI) was the only channel for net capital flows into Latin American countries in these years. FDI increased in other developing countries as well, particularly in Asia. Asian countries remained attractive to the international banks that continued to lend – especially to Japanese banks who had opportunities to invest growing surpluses of Japan's current accounts, and had incentives to follow Japanese direct investors into rapidly developing countries in Asia.

The slowdown in international capital flows to developing countries in the 1980s contributed to larger flows to industrialised countries, particularly the United States, while the decline in international bank lending encouraged the growth of the Eurobond market as a source of financing for corporations and governments of OECD countries. As the Eurobond market became the dominant channel for international capital flows and an increasingly attractive substitute for more expensive domestic markets in some industrialised countries, it became more difficult for countries with

low credit ratings to attract external capital. Although Middle Eastern countries issued large amounts of international bonds in this period, external bond markets were closed to most developing countries. International investors' growing interest in foreign equities also diverted flows away from developing countries in this period as more funds were invested in the US, UK and Japanese stock markets.

As the industrialised countries shifted into recession in 1989-1990, and particularly as US interest rates fell, there was once again an abrupt shift in the direction of international capital flows with substantially larger flows to developing countries. By 1993, the aggregate net inflow to developing countries was 2% of world saving, up from 0.8% in 1990 (IMF, 1995). As Table 1 shows, the growth in net foreign portfolio investment in all developing countries in 1990-1994 was extraordinary and flows to Latin America were predominantly through this channel. In the late 1980s, portfolio flows to Latin America averaged \$3 billion annually; by 1993 they had increased to \$56 billion (an increase of 1,700%), although they also fell in 1994. In the same period, portfolio flows to Asia grew from \$1 billion in the late 1980s to \$25 billion in 1993 (an increase of over 1,900%), although they fell in 1994 (Griffith-Jones and Cailloux, 1997). In parallel, the capitalisation of emerging markets doubled between 1987 and 1990 and grew at an even more rapid pace in the years 1991-1994 (see Table 2). Moreover, emerging markets' share of world market capitalisation jumped almost three-fold from 4% in 1987 to 11.6% in 1993. By 1994, stock market capitalisation in relation to GDP in Chile, Hong Kong, Malaysia and Singapore was comparable to that of the United States and the United Kingdom; in Mexico and Korea it was even larger than in Germany and France (BIS, 1995).

Developments Contributing to the Growth of Foreign Portfolio Investment

The increased flows of securities investment from industrialised countries to emerging markets was made possible by a number of developments in

Table 2 Emerging Markets Capitalisation
(in trillions of dollars and percentages)

	1987	1988	1989	1990	1991	1992	1993	1994
In trillions of dollars	0.3	0.5	0.7	0.6	0.75	0.8	1.57	1.93
As a share of world capitalisation (percent)	4.1	5.0	6.3	6.5	7.5	8.8	11.6	-

Sources: International Finance Corporation, *Emerging Stock Market Factbook*, various issues; and IMF, *International Capital Markets*, August 1995.

all the countries involved. One critical development was a marked change in investment patterns in the national markets of the major industrialised countries in the 1980s. The so-called institutionalisation of savings – that is, the choice of pooled funds held by pension funds, life insurance companies, mutual funds and investment trusts as repositories for the majority of savings – increased the share of funds invested in securities and enhanced the role of institutional investors compared to that of depository institutions. In the United States, for example, the share of total financial sector assets held by institutional investors rose from 32% in 1978 to 52% in 1993, while the share of depository institutions fell from 57% to 34% over the same period (Federal Reserve System, *Flow of Funds*, various years). There were equally dramatic increases in assets of institutional investors in other G-7 countries as well. Measured as a percentage of GDP, their assets doubled over the period from 1980 to 1992 in the United Kingdom, Germany and Japan, and almost doubled in Canada (see Table 3). By 1993, the assets of UK and US institutional investors had risen to 165% and 125% respectively of GDP. They continued to increase in the mid-1990s and are projected to continue doing so.

As the assets of institutional investors expanded, their diversification strategies increasingly resulted in an expansion of cross-border investments. Cross-border transactions in bonds and equities among the G-7 countries (excluding the United Kingdom) rose from 35% of GDP in 1985 to 140% in 1995 (BIS, 1996). This was possible because all industrialised countries had removed exchange controls in the 1980s and were adopting full capital account convertibility by the early 1990s. Similarly, the shift toward foreign portfolio investment in emerging markets became possible when many developing countries began to relax exchange controls and open their capital account at the end of the 1980s and the beginning of the 1990s. These actions increased opportunities for cross-border investment by residents of all countries. Institutional investors increasingly saw international diversification as beneficial, which made them willing to take up these opportunities. Drawing on modern portfolio theory, a number of studies using long-term data showed that investors free to choose foreign assets can obtain a significantly better risk/return trade-off than if they are restricted to assets from one country (Fischer and Reisen, 1994). Also it has often been argued that diversification into developing country markets is particularly beneficial, especially because there is low correlation of returns yielded between the emerging stock markets themselves and in relation to developed stock markets (while OECD stock markets are quite highly correlated). Also, on average developing countries are expected to grow faster than developed ones, leading to higher dividend growth and share price increases (Reisen and Williamson, 1994).

Table 3 Assets of Institutional Investors
(in billions of dollars and percentages)

	1980	1988	1990	1991	1992	1993
Canada	93.2	257.0	326.2	373.0	376.4	–
Germany	164.7	442.6	626.5	677.9	763.5	811.8
Japan	244.3	1,458.7	1,649.5	1,835.4	1,972.1	–
United Kingdom	345.1	991.7	1,208.2	1,353.6	1,432.0	1,553.4
United States	1,606.9	4,316.1	5,220.8	6,516.0	7,182.9	8,008.4
Total	2,454.2	7,466.1	9,067.2	10,755.9	11,726.9	–
In percentage of GDP						
Canada	35.2	52.2	56.8	63.3	66.1	–
Germany	20.3	37.1	41.7	42.7	42.7	47.4
Japan	23.1	50.3	56.3	54.8	53.8	–
United Kingdom	64.1	118.3	123.5	133.8	137.1	165.3
United States	59.3	88.1	94.5	113.9	119.0	125.6

Source: IMF, *International Capital Markets*, August 1995.

Another critical development that contributed to the rise in foreign portfolio investment over the last decade was the worldwide wave of privatisations initiated by the Thatcher government in the United Kingdom in the early 1980s that culminated in the restructuring of Third World economies and formerly centrally planned economies in the 1980s and 1990s. Privatisations of state enterprises in a growing number of countries greatly expanded the menu and volume of financial instruments available in national equity and bond markets for purchase by foreign portfolio investors.

The US Role in Foreign Portfolio Investment

Over the last two decades, the United States has continued to be both a major recipient of, and source for, international capital flows. There were large net capital inflows into US markets throughout the period 1982-1994, and substantial inflows of foreign private portfolio investment in every year from 1985 to 1994, though with quite sharp fluctuations, except for 1990 when there was a small outflow (see Table 4). The US experience with surges of foreign investment in the 1980s created problems similar to, but less severe than and with less severe impact on the domestic economy, those experienced by some emerging market countries in the 1990s: an overvalued currency, rising current account deficits and a boom in consumption that led to a massive increase in domestic debt. The aggregate debt of US borrowing sectors – government, households and businesses –

Table 4 Net Changes in Portfolio Investment in the US by Foreign Investors and in US Residents' Purchases of Foreign Securities
(in billions of dollars and percentages)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Foreign Official											
Treasuries	4.7	-0.8	34.4	43.4	41.7	0.3	29.6	14.8	18.5	49.0	30.7
Other Securities	-2.8	-1.7	-2.1	0.5	-1.2	3.2	-0.9	2.7	3.2	6.7	3.6
Total	1.9	-2.5	32.3	43.9	40.5	3.5	28.7	17.5	21.7	55.7	34.3
Foreign Private											
Treasuries	23	20.4	3.8	-7.6	20.2	29.9	-2.5	18.8	36.9	24.1	33.8
Other Securities	12.6	51.0	70.9	42.2	26.3	39.6	1.6	35.1	29.9	79.9	58.6
Total	35.6	71.4	74.7	34.6	46.5	69.5	-0.9	53.9	66.8	104.0	92.4
Total Foreign Portfolio Investment	37.5	68.9	107.0	78.5	87.0	73.0	27.8	71.4	88.5	159.7	126.7
US Purchases of Foreign Securities (outflow)	-4.8	-7.5	-3.3	-4.5	-7.8	-21.9	-28.8	-44.7	-46.4	-142	-49.8
Memo Items:											
Total Foreign Net Capital Inflows	102.5	129.9	221.2	211.5	221.3	214.5	105.3	83.3	153.9	248.5	291.4
Foreign Portfolio Investment as a % of Total Net Foreign Capital Inflow	36.6	53.0	48.9	37.1	39.3	34.0	26.4	85.7	57.5	64.3	43.5
Total US Private Net Capital Outflows	-22.3	-31.4	-98.0	-76.0	-84.1	-127.0	-44.1	-59.9	-68.1	-183.0	-131.0
US Foreign Portfolio Investment as a % of Total US Private Net Capital Outflows	21.5	23.9	3.4	5.9	9.3	17.2	65.3	74.6	68.1	77.5	38.0

Source: Federal Reserve System, Board of Governors of the, "US International Transactions," In: *Federal Reserve Bulletin*, various issues.

more than doubled in the seven-year period from 1983 through 1990, from \$5.4 trillion to \$10.9 trillion (Federal Reserve System, *Flow of Funds*, various years). This was, obviously, an unprecedented development in US financial history.

Just as the explosion of debt in the United States would not have been possible without sizeable increases in net capital *inflows*, sizeable increases in capital *outflows* from the US in the early 1990s (particularly of portfolio flows) to developing countries – especially dramatic in the case of Latin American and later to Asian countries – would not have occurred if US institutional investors had not played a dominant role in channelling funds. While net capital outflows from the United States in the period 1990-1992 were not large compared with earlier years, the share of the total attribut-

Table 5 Net Assets of Emerging Markets Mutual Funds
(in millions of dollars)

	1988	1989	1990	1991	1992	1993	1994
Equities	5,857	9,975	13,320	19,180	29,531	84,102	123,849
of which:							
Global	900	1,350	2,300	3,750	5,040	18,033	34,977
Asia ¹	4,437	7,435	9,240	11,575	18,823	55,472	71,889
Latin America ²	520	985	1,455	3,525	4,862	9,741	14,706
Europe ³	–	205	325	330	806	757	1,430
Africa and Middle East	–	–	–	–	–	99	847
Bonds	275	500	900	1,700	3,750	5,954	8,149
Total Funds	6,132	10,475	14,220	20,880	33,281	90,056	13,1998

Notes:

- 1 Includes regional funds and the following individual country funds: China, Hong Kong, India, Indonesia, Korea, Malaysia and Singapore, Pakistan, Philippines, Taiwan Province of China, Thailand, Viet Nam.
- 2 Includes regional funds and the following individual country funds: Brazil, Chile, Mexico.
- 3 Includes regional funds and the following individual country funds: Hungary, Russia, Turkey.

Sources: IMF, *International Capital Markets*, August 1995.

able to foreign portfolio investment was unprecedented. Foreign portfolio investment accounted for over 65% of total US net private capital outflows from 1990 through 1993, falling to only 38% in 1994 (see Table 4).

Major sources for foreign portfolio investment in developing countries were the predominantly US-based emerging markets mutual funds, which led the surge in investment in emerging market equities. Information on mutual funds' assets suggests that they were the dominant channels for portfolio flows to Asia and an important channel for Latin America (see Table 5). The combined assets of *all* closed and open-ended emerging market funds grew from \$1.9 billion in 1986 to \$131 billion at mid 1996; a high proportion of these funds were US based (World Bank, 1997). These trends have meant that emerging markets are accounting for a rising proportion of international investment by mutual funds. More than 30% of new international investment by US mutual funds went to emerging markets during 1990-1994 (World Bank, 1997).

US pension funds have followed, investing through mutual funds or directly on their own account. Even though they began investing more recently in emerging markets, according to the World Bank (1997), allocations of US pension funds to emerging markets are now comparable with those of mutual funds. Reportedly, US pension fund investments in emerging markets, including investments made on their behalf by mutual funds,

Table 6 Industrialised Country Securities Investment Flows in Emerging Markets
(in billions of dollars and percentages)

	1987	1988	1989	1990	1991	1992	1993
Africa	-0.74	-0.21	-0.28	-0.34	-	3.52	-0.49
Asia	1.97	0.42	2.21	1.02	4.60	7.37	13.37
Europe	0.25	1.24	1.66	0.68	0.92	3.20	8.42
Middle East	0.37	4.56	1.10	0.68	0.92	0.64	2.48
Western Hemisphere	-1.23	0.42	-1.10	18.21	24.85	32.67	56.46
Mexico	-0.99	1.04	0.28	3.40	12.88	17.94	28.23
All Emerging Markets	0.62	6.33	3.59	20.25	31.29	47.40	80.24
Memorandum Items:							
Industrialised country foreign securities investment flows	123.40	207.50	276.40	170.10	306.80	320.30	495.30
Investment flows in emerging markets as a percentage of industrialised country foreign securities investment flows	0.5	3.1	1.3	11.9	10.2	14.8	16.2

Sources: International Finance Corporation, *Emerging Stock Markets Factbook*, various issues; and IMF, *International Capital Markets*, August 1995.

have been a significant factor in propping up investment in emerging markets during 1994 and 1995. This may indicate that flows originating in pension funds are less volatile than those originating in mutual funds. More information and data are required than are currently available on flows from mutual funds and pension funds to emerging markets and their interactions, particularly since these evolve so rapidly, and since systematic information is so scarce.

Additional evidence of the dramatic increase in foreign portfolio investment to developing countries in the 1990-1993 period is shown in the regional breakdown of all industrialised country securities investment flows to emerging markets in Table 6. There was a four-fold increase in total annual flows to all emerging markets in these years with a nine-fold increase in flows to Mexico. The rapidity of the shift in both the volume and channel of flows is indicated by the rise (from 0.5% in 1987 to 16.2% in 1993) in the share of total industrialised country foreign securities investment flows invested in emerging markets. A very rapid increase had occurred in 1990 when there was an \$18 billion foreign securities investment inflow into emerging markets in the Western Hemisphere after net outflows from this region in previous years and despite an overall drop of \$100 billion, or 62%, in total industrialised country foreign securities flows as the OECD countries moved into recession. Both the scale and abrupt-

ness of the inflow into Latin America in 1990 announced the nature of the problems associated with this channel for capital flows to developing countries.

Surges of capital flows to developing countries pose two major sets of challenges to those countries' economic authorities. First, they pose important policy dilemmas for the macroeconomic management of large inflows, particularly to avoid surges leading to overvalued exchange rates and excessive expansion of the money supply (French-Davis and Griffith-Jones, 1995). Second, they pose the risk of sharp reversal, should conditions (economic or political) in the country and/or in the international economy change, as was illustrated dramatically by the Mexican peso crisis (Griffith-Jones, 1997). Preliminary empirical evidence indicates that there is a 'hierarchy of volatility', and that securitised flows may be more volatile than medium-term bank loans since – provided the markets are liquid – the stock of securitised flows can leave a country in a few hours, whereas in the case of medium-term bank loans, even in a very serious crisis like the 1982 debt crisis, the stock of the debt cannot leave the country. Speed of inflows (and especially outflows) is further facilitated by technological developments, like computers. Furthermore, the speed with which capital moves in and out of countries also seems related to the growing importance of global institutional investors described above, which would imply that flows to emerging markets are now mainly driven by liquidity and short-term performance considerations rather than the more long-term banking relationship of the past.

As a consequence of the increased speed with which capital moves in and out of countries, there is a growing asymmetry with other markets, e.g. goods markets or labour markets, which makes the adjustment process more difficult. Also, there is a growing asymmetry between speed of movements in capital flows, and the slower speed with which the political process can respond to such movements. The speed with which the assets of these institutional investors have grown, combined with the fact that this growth coincided with a period of liberalisation of financial markets, has implied that flows originating from those global institutional investors are almost completely unregulated in their source country, particularly with regard to market risks. We will return to this issue below.

II Effects of Capital Inflows on Developing Countries' Macroeconomic Policies

After the Mexican peso crisis in 1994, discussions focused on how developing countries should handle capital inflows. The Bank for International

Settlements (BIS) 1995 *Annual Report* stated that it is "... now widely agreed that prudence in liberalising capital inflows implies that short-term operations should not be free until the soundness of the domestic financial system is assured." As the IMF noted, most developing countries that experienced inflows had already taken measures to limit their impact because of concern about the effect of exchange rate appreciation on the competitiveness of their tradable goods sectors and because the volatility of capital flows increases the vulnerability of their financial systems (IMF, 1995).

The measures adopted by various countries to cope with surges of capital flows included sterilising intervention through open market operations or increases in reserve requirements, increasing exchange rate flexibility and discouraging certain types of capital inflows. BIS and IMF evaluations of their experiences concluded that sterilisation policies had proved to be short-lived and their effectiveness in mopping up liquidity tended to cause a rise in interest rates that preserved the incentive for capital inflows. A flexible exchange rate policy presented other problems. While it gave more control over monetary aggregates and exerted downward pressure on inflation, it resulted in real appreciation and a deteriorating current account position. It also led to surges in lending over which the central bank had no control if inflows entered directly through portfolio investment instead of being intermediated by the banking system. Thus, given the limitations of monetary policies in cushioning the impact of capital inflows, several emerging market countries (e.g. Chile, Colombia, Brazil, Indonesia, Malaysia, the Philippines and Thailand) imposed or retained measures to discourage certain types of capital flows during the first half of the 1990s (BIS, 1995; IMF, 1995; French-Davis and Griffith-Jones, 1995). It is interesting that the IMF (1995), the World Bank (1997), and the BIS (1995) now explicitly recognise that despite some limitations, measures taken by recipient governments to discourage short-term capital flows may play a positive role if they are part of a package of policy measures that lead to sound macroeconomic fundamentals. Therefore, it has become fairly widely accepted that regulation by recipient countries of excessive surges of capital can be a desirable policy.

However, no complementary action by source countries has been taken to regulate potentially volatile flows from them, even though such regulation would both protect their domestic investors (especially, but not only the less informed retail investors) and discourage excessive surges of potentially volatile capital flows to developing countries. The proposal developed below falls into mainstream, current regulatory thinking which sees risk-weighting as the key element in regulation

It is also in the mainstream of current theoretical thinking on capital markets. Stiglitz has highlighted how the existence of asymmetries of

information gives rise to market imperfections, thereby casting doubt on the first fundamental theorem of welfare economics, i.e. that markets are efficient. Stiglitz has shown that when markets are incomplete and information is imperfect, the actions of individuals have externality-like effects on other individuals who fail to take these into account. As Mishkin (1996) shows, securities markets are particularly imperfect, largely because asymmetries of information are acute. This leads to profound adverse selection problems since low-quality firms will be more eager to issue securities. Furthermore, the possible market solution to this problem – the private production and sale of information – leads to the free-rider problem: since individuals who do not pay for the information can still use it, there is not enough private production and sale of information and adverse selection remains a problem. More importantly, the free-rider problem makes it less likely that securities markets will act to reduce incentives to commit moral hazard. Monitoring and other measures are needed to reduce moral hazard, to help lenders prevent borrowers from taking risks at their expense; because monitoring and other measures are costly, the free-rider problem discourages this kind of activity in securities markets.

A valuable insight deriving from the asymmetric information analysis is that because moral hazard and adverse selection problems are endemic to all market situations, the market failures are pervasive in the economy. Intervention by governments (e.g. through taxes or regulation) is potentially desirable in most sectors. However, the practical information needed by governments to implement corrective measures may not be available, or the cost of administering such measures may exceed the benefits where market distortion is small. Thus, Stiglitz' conclusion that governments should focus attention and efforts to those instances where large and important market failures occur seems very reasonable; it highlights imperfections of capital markets as a prime example. International capital markets are particularly prone to substantial market imperfections given the serious degree of asymmetric information.

Why would source countries need to regulate international capital market flows, and why is it not sufficient for recipient countries to do so, particularly since these flows are a larger proportion of the latter's economies? There are two specific reasons why source countries should take measures to discourage potentially unsustainable short-term capital flows coming from them. First, even recipient countries – like Chile and Colombia – which have deployed a battery of measures to discourage or limit short-term capital inflows have, on occasion, found these measures insufficient to stem massive inflows with problematic effects on variables such as exchange rates. Second, some important recipient countries do not discourage short-term capital inflows or do so insufficiently. Particularly if com-

bined with inconsistent macroeconomic policies, this may lead to a crisis. This is not only costly for the recipient country and its people (especially the poorer sectors of the population), but it may also result in the source country government acting as a lender of last resort in order to protect its own investors and also to avoid a damaging crisis in the recipient country which could spread to other emerging markets. This was illustrated by the scale of the massive financial package put together by the international financial community during the Mexican peso crisis. To make it less likely that such a lender of last resort facility will be used again and reduce 'moral hazard' on the part of institutional investors, i.e. discourage excessively risky investment in the expectation that there will be a bail-out if things go wrong, source countries will need to impose some additional regulatory and/or disclosure restrictions on institutional investors. Furthermore, given the important shift in the channel for savings toward institutional investors and the growing diversification of these investors into emerging markets, there is also a case for new regulatory strategies in source countries to protect retail investors who put their savings in mutual funds and who are beneficiaries of pension funds.

III Proposals to Increase Market Stability of Portfolio Flows to Developing Countries

In the past it was thought that regulatory strategies for banks were very different from those appropriate for securities markets. In the United States, for example, requirements for disclosure of material information and the prevention of fraud were considered essential and sufficient to protect the public, promote public confidence in securities markets and thereby enhance market stability. Similar criteria exist in the other developed economies. While requirements for diversification are applicable to mutual funds, liquidity requirements such as levels of cash reserves or the requirement for insurance coverage to promote confidence are not. Nor is enough consideration given to the impact of national macroeconomic developments (known by securities regulators as 'market risk' and including variables such as exchange rates and interest rates) on securities markets. The effect of 'market risks', i.e. of national macroeconomic developments and international factors such as US interest rates, are particularly crucial for determining the evolution of securities markets in developing countries.

Now, however, views on the appropriateness of certain soundness strategies for mutual funds are changing, and the importance of 'market risks' for institutional investors is increasingly stressed by securities regulators. Even so, institutional investors and regulators continue to evaluate market

risks poorly in emerging markets. This is mainly because substantial investments in emerging markets are relatively recent and asymmetries of information are large. Nevertheless, since institutional investors have assumed a dominant role in financial markets, and as the distinctions between banks and mutual funds become less clear, strategies promoting public confidence in banks are beginning to be adapted to the needs of mutual funds.

Strategies to Provide Liquidity

The most important of these adaptations is contained in legislation enacted in the US in 1991 (12 CFR, 201.3 (d)). This legislation permits any individual, partnership or corporation to borrow from Federal Reserve Banks using US government securities as collateral if the failure to lend would adversely affect the economy. It also permits loans against collateral other than US government securities with the affirmative vote of five of the seven members of the Federal Reserve Board of Governors. In short, the 1991 Act not only gives securities markets explicit access to the lender of last resort, it also expands the types of collateral against which the Federal Reserve can lend in an emergency to include corporate stocks and bonds – securities in which banks cannot invest depositors' funds under current US law.

The enactment of this measure resulted largely from the 1987 and 1989 market declines, and it reflects concerns about the potential damage such declines may have on the US economy. Certainly, as former Federal Reserve Board Chairman Marriner Eccles noted in the 1930s, there is no source of liquidity in an emergency "... except that liquidity which can be created by the Federal Reserve or the central bank through its power of issue ..." (US Congress, 1935: 194). Nevertheless, central banks have historically – and rightly – used their emergency powers sparingly, and the 5-member approval requirement suggests that interventions to halt a market disruption would be weighed carefully and occur infrequently.

The market itself is concerned about assuring that sources of liquidity for mutual funds are available under volatile conditions that may not be viewed as damaging to the US economy; that is, circumstances which would not activate Federal Reserve Bank resources. As part of its highly successful strategy to compete with banks for US (and, increasingly, foreign) savings, US mutual funds have marketed their shares as virtually payable on demand. Next day settlement of redemptions is now standard practice even though mutual funds are only required to redeem shares within a 7-day period or, if a broker or dealer is involved in the transaction, within a 3-day period. The problem for the industry is that if a fund must sell

securities, the current 3-day settlement requirement results in a 2-day gap between outflows for redemptions and the receipt of funds from sales. Similar concerns about redemption and settlement risks are being expressed in the UK and in international organisations. Particularly in the US, the industry has become increasingly concerned about establishing back-up sources of liquidity such as interfund lending using repurchase agreements within a family of funds, the creation of money market 'fund of funds' within a family of funds and committed lines of credit from banks. As explained by one large family of funds, "With the increased specialisation and internationalisation of mutual fund portfolios, the industry is appropriately giving greater attention to alternative methods for funding redemptions during periods of market volatility" (SEC, March 1995). The US Securities and Exchange Commission (SEC) has also indicated greater concern about liquidity in this context. It now "... urges money funds to monitor carefully their liquidity needs in light of the shorter settlement period ...", and consider the percentage of the portfolio that will settle in three days or less, the level of cash reserves and the availability of lines of credit or interfund lending facilities (SEC, March 1996).

Certainly the time gap between redemptions and settlement of securities sold has highlighted the importance of liquidity and focused investor interest on the level of cash reserves of individual funds or types of funds (McGough, 1997). But the concern is heightened by the potential for increased redemptions during a market decline. One securities firm found that 40% of mutual fund shareholders surveyed said they would sell some or all shares in equity funds if the market fell 15% or more (Kinsella, 1996). Others believe that shareholders would simply move to other types of funds and then back into stocks as the market stabilised. Even so, the disparity between the timing of redemptions and settlement would create a scramble for funds that might exacerbate price declines.

These developments and the discussions involving US mutual funds indicate that alternative sources of liquidity for securities investment funds is a priority issue – even when a fund's portfolio is invested in domestic assets. The problem becomes greater when cross-border holdings are involved, particularly holdings in emerging market countries. Market volatility and/or disruptions will certainly continue to prompt abrupt shifts in foreign portfolio investment in emerging markets (as occurred in the Mexican peso crisis and, more recently, in the Asian currency crises), resulting in adverse effects on their economies. Thus, arrangements for managing the liquidity needs of US mutual funds could have significant benefits for developing economies in that they could discourage excessive, too rapid outflows. Such arrangements could also serve as a model for similar strategies in other developed countries.

The US experience to date suggests two potential solutions to the liquidity problem. One solution, purely market based, would be to use the 'fund of funds' created by the enormous Fidelity family of funds – \$416 billion in assets mid-1996 (Gasparino and Jereski, 1996) – as a model for the industry as a whole (SEC, August 1996). This would allow all mutual funds to buy shares in an 'umbrella' or 'top' fund whose shares would not be sold to the public. The 'fund of funds' would invest in highly liquid money market instruments which would be sold to redeem the shares of mutual funds seeking liquidity to fund redemptions by public shareholders. In addition, the 'fund of funds' would be authorised to invest for short periods in the shares of funds that had exhausted their redemptions, up to a given amount (proportional to the size of their portfolios) if other means for funding redemptions were unavailable.

One problem with using the Fidelity model is that market declines and disruptions may affect all participating institutions at the same time. Moreover, its contribution to maintaining public confidence in markets may be limited; unlike deposit insurance for banks, this type of liquidity facility will not guarantee that shares can be redeemed without losses. Nevertheless, if it were seen as contributing to public confidence in a market recovery, it could reduce shareholder redemptions and thus cushion the downward spiral of price declines that make a market recovery and the restoration of confidence more difficult.

The issue of confidence is becoming more important given the growing share of national savings held by mutual funds in the United States – 10% of total credit market assets held by financial sectors at year-end 1994, up from 8.4% in 1991 (Federal Reserve System, *Flow of Funds*, various years) – and the increasingly large shares held by comparable institutions in other OECD countries. The potential loss of value of such a large share of the US public's savings in a market disruption would certainly have serious consequences for the economy that would precipitate some form of intervention by the Federal Reserve Board. If that were to happen, a facility like the 'fund of funds' would give the central bank more time to assess the situation, making it less likely to miss the point at which prompt action might halt the downward spiral of share redemptions and securities sales and moderate the price decline. However useful, it would therefore seem that this first solution is insufficient to cope with the scale of the problem, particularly as it affects emerging markets.

Proposal of a Prudential Capital Charge

The Federal Reserve's authorisation under the 1991 Act suggests a second solution: to require that some portion of mutual funds' cash reserves be

placed in the form of interest-bearing deposits in commercial banks as a prudential capital charge. Such deposits would constitute a first line of defence for access liquidity in the event of a significant market decline. They would also reduce market volatility associated with the timing of settlement, particularly in situations of large redemptions.

The use of the term ‘capital charge’ in discussions of liquidity facilities for mutual funds refers to their particular structure as intermediaries for direct investment. Because shareholder capital backs 100% of the invested assets, the normal capital or provisioning requirements applicable to banks are not directly applicable to mutual funds. Nevertheless, the need for defined sources of liquidity for mutual funds has become more apparent as their role in financial markets has expanded and concern about the ability of shareholder withdrawals to precipitate serious market disruptions or declines has increased.

The imposition of capital charges on mutual funds, in the form of required, segregated cash reserves deposited in commercial banks to ensure defined sources of liquidity, may also contribute to removing distortions in the financial industry by reducing the cost advantage currently enjoyed by mutual funds in competing with banks to attract savings. Making the capital charge comparable to the capital adequacy requirements that apply to banks in OECD member countries would tend to lower earnings for some mutual funds that do not maintain adequate levels of cash reserves since interest bearing deposits may earn less than other financial assets in which funds invest. At the same time, the introduction of an industry-wide standard would tend to increase investor confidence and attract a larger volume of funding over time. Also, it would provide a structure that would make the current key element in regulation – risk weighting – applicable to mutual funds. Furthermore, and most important, it would reduce volatility and risks of reversibility of institutional investors’ flows to developing countries. Increased stability in flows would be beneficial to developing countries and increase the likelihood that those countries remain open to such flows. Smoother flows would also reduce the chances of foreign exchange crises, thus giving greater protection to investors. The somewhat lower returns would be more than compensated by smaller volatility of returns.

Similarly for emerging market economies, the requirement of cash reserves on mutual funds assets invested in them could increase their costs of raising foreign capital, but this would be compensated by the benefit of a more stable supply of funds at a more stable cost. Indeed, often during and after currency crises, the cost of external funds for emerging markets can become very high or even infinite (implying that the country may, for a time, be totally unable to raise any funds on the markets).

Introducing a risk-weighted capital charge for mutual funds would

require that these (and perhaps other) institutional investors perform risk analysis under standards provided by regulatory authorities which, in the United States, would result from consultations among officials of the Federal Reserve Board, the Securities and Exchange Commission and the Treasury. In the case of cross-border investments, weights should be given to the views of market analysts such as credit rating agencies as well as the views of international agencies such as the IMF and BIS in assessing countries' macroeconomic performance. This would provide guidelines for defining macroeconomic risk and for its measurement in determining the appropriate level of cash reserves. Thus, cash reserves would vary according to the macroeconomic risks of different countries.

The guidelines for risk analysis by institutional investors themselves should take into account such variables as the ratio of a country's current account deficit (or surplus) to GDP, the level of its external debt to GDP, the maturity structure of that debt, the fragility of the banking system, as well as other relevant country risk factors. Factors such as custody-related risks (which already greatly concern securities regulators) could be included where relevant. It is important to use sophisticated analysis in order to avoid the unnecessary and arbitrary stigmatising of countries. The views of the Federal Reserve, the Treasury and of the IMF and the BIS should be helpful in this respect, especially given their substantial experience with foreign exchange crises and their causes.

The fact that the level of required cash reserves capital charge would vary with the level of countries' perceived 'macroeconomic risk' would make it relatively more profitable to invest more in countries with good fundamentals and relatively less profitable to invest in countries with problematic macro-fundamentals. If macroeconomic fundamentals in a particular country were to deteriorate, investment in that country would decline gradually, and this would – hopefully – force an early correction of macroeconomic policy. Once this happened, flows would resume. The smoothing of flows would hopefully discourage massive and sudden reversals of flows as occurred in the Mexican peso crisis and, more recently, in the Asian currency crises.

Given the dominant role and rapid growth of institutional investors in the US and UK market, both of these proposals – a liquidity facility structured as a 'fund of funds' and the imposition of risk-weighted cash requirements capital charges on mutual funds – could be adopted first in these two countries without creating significant competitive disadvantages. However, given the growth of these sectors in other industrial countries, efforts to harmonise such measures internationally need to be given priority for discussion at the global level by the International Organization of Securities Commissions (IOSCO).

Finally, it is important to stress that additional regulation of mutual funds should be symmetrical with regulation of other institutions (e.g. banks) and other potentially volatile flows, e.g. excessive short-term bank credit (see Witteveen's paper in this volume). I emphasise mutual funds because these funds are clearly under-regulated in comparison with other financial institutions. Because the growth of mutual funds is so recent, particularly in relation to their increased investment in emerging markets, additional regulation is needed.

The Need for Better Disclosure

A third strategy to diminish market volatility and systemic risk of mutual funds as well as enhance protection of investors is improved disclosure. The case for transparency is particularly strong for institutions like mutual funds since investors in those institutions are not protected by mechanisms like deposit insurance. While there is a great deal of support for improved disclosure, progress in most countries has been slow and insufficient.

Based on the need to assist investors in mutual funds in making an informed investment decision, the US Securities Exchange Commission presented a comprehensive proposal to improve the description of risks in April 1995 (SEC, 1995). The SEC requested comments and suggestions both from the industry and the investors.

Before 1995, mutual funds were already required to discuss the main risk factors associated with investing in the fund in their prospectuses. One of the SEC's concerns was that lengthy and highly technical descriptions of policies and investments may make it difficult for investors to understand the total risk level of a fund. Also, according to the SEC, "funds provide only the most general information on the risk level of the fund as a whole". Therefore the SEC proposed to improve disclosure requirements to improve the communication of fund risks to investors. The SEC stresses that risk factors include those that are peculiar to the fund as well as those that apply generally to funds with similar investment policies.

The SEC justifies need for better disclosure on three grounds. First, average Americans place growing reliance on funds to meet key financial needs, such as retirement and college expenses. Understanding the risks of their investment in mutual funds is therefore crucial for them. In 1994, 31% of US households owned shares in a mutual fund, up from 6% of households in 1980 (Investment Company Institute survey); in the mid-1990s these ratios have increased even further. Second, new ways of describing risks may improve investor understanding of risks associated with increasingly complex instruments. Third, information needs have grown due to the proliferation of numbers and type of funds. Furthermore,

the rapid international diversification of assets also poses new disclosure needs, even though the SEC did not make this point explicitly.

In its initial document, the SEC requested comments on:

1. goals of risk disclosure, e.g. risk of loss of capital versus risk of variability of returns as dominant concerns;
2. narrative and non-narrative (such as quantitative measures) graphs and risk disclosure options;
3. quantitative measures of risk, including measures of total risk, market risk and risk-adjusted measures of performance; and
4. the relative merits and limitations of three different quantitative risk measures: historical, portfolio-based and risk objectives or targets.

In the context of our analysis, it is interesting that the SEC (1995) document recognises that requiring disclosure of a quantitative risk measure may affect portfolio management, e.g. by causing fund managers to adopt more conservative investment strategies. In the context of flows to developing countries, this could have mainly positive effects as better informed investors would be less likely to rush in and – especially – out of developing countries. Thus, the objective of increasing the stability of flows would more likely be met even though there may be a cost in somewhat lower flows.

As a result of these consultations (which led to 3,700 comment letters) and its analysis, the SEC has recommended shorter, more readable “profile prospectuses”. Indeed, investors will be given the option of receiving those documents instead of the longer, more detailed forms they have received until now. Also, the SEC is likely to recommend that new profile prospectuses compare the fund’s returns with general market indexes and that the full prospectus sent to investors is more readable.

However, the SEC has not included certain items of disclosure that many investors and commentators seek, but that the fund industry opposes, such as the requirement that funds list their ten largest holdings and a discussion by the management of what affected fund performance the previous year. More broadly, there is criticism that the SEC disclosure requirements are not specific enough since the fund can decide what information is relevant to its risk profile. In a second stage, the SEC may press for more information if it thinks certain kinds of material information were not disclosed, but this process of additional information is on a one-to-one basis (not systemic) and it applies only to funds that the SEC believes failed to fully disclose. The fact that the SEC has lost three important cases in court, on the grounds that they exceeded their authority under the securities act, may make it difficult for the SEC to push for more specific system-wide disclosures.

To conclude, better disclosure can play an important role not just in

investor protection, but also in smoothing investment flows. Efforts like the recent one by the SEC are very valuable. In some cases, appropriate disclosure requirements may be difficult to impose by regulators due to pressures from the industry, however, even in an ideal world with no pressures from the industry on regulators, it is very difficult to design an optimum disclosure package given the conceptual complexities involved and especially given the problem of asymmetric information (Mishkin, 1996). Insufficient attention seems to be placed on specific disclosure requirements referring to specific risks originating from investments in emerging markets. In particular, the question that has not even started to be asked is to what extent are market risks (that is risks attributable to general economic conditions) different for emerging markets and for developed markets.

IV Conclusions

We can conclude that better disclosure of risk is valuable but insufficient. It needs to be complemented by other measures to achieve better investor protection as well as less volatility of flows – which is particularly damaging for developing countries. Two possible, complementary measures have been discussed: market-based improvements of liquidity, and risk-weighted capital charge cash requirements. Naturally other proposals or variations of the present proposals could be considered, but what is clearly important is that meaningful measures should be taken to help stabilise capital flows to emerging markets. Given the evolution of the markets, it is also important to stress that past strategies, such as prohibiting investment in certain markets, are no longer appropriate. Such prescriptive rules could have some potentially negative effects on both investors (who could lose some profitable opportunities) and some emerging market economies since their access to portfolio flows could be curtailed either in general, or abruptly in times of macroeconomic difficulties. The measures suggested here would seem better suited to the new circumstances since more gradual changes in cash requirements would contribute to a greater smoothness of the level of flows. Such smoothness is the desired objective for the developing economy, and it would also give greater protection to developed country investors. Furthermore, risk-weighted capital charge cash requirements for institutional investors is consistent with modern mainstream regulatory thinking which views risk weighting as the key element in regulation.

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