Global Liquidity and Financial Flows to Developing Countries: New trends in emerging markets and their implications

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Abstract

After a slump in cross-border financial flows of capital in the years following the Southeast Asian financial crisis, capital flows to developing countries have seen a robust revival in recent years. This paper attempts to examine: (i) the factors responsible for this revival and surge in capital flows into developing countries; (ii) the qualitative changes in financial integration that are accompanying this surge; and (iii) the impact that this surge is having on financial volatility and vulnerability, macroeconomic management and growth, in countries that have been "successful" in attracting such flows.

It argues that in the wake of financial liberalization that facilitates cross-border flows of capital, supply-side factors rather than the financing requirements of developing countries, explain the surge. Financial liberalization and the globalization of finance, have also resulted in changes in the financial structure—the markets, institutions and instruments that define the global financial architecture. Increasingly a small number of centralized financial institutions intermediate global capital flows and the investment decisions of a few individuals in these institutions determine the nature of the "exposure" of the global financial system. This has implications for the accumulation of risk in markets where agents tend to herd. Unfortunately, unregulated entities making huge profits on highly speculative investments are at the core of that system.

Associated with this increasing risk, are changes in the business practices and motivations of financial firms that reduce the role of finance in ensuring broad-based economic growth. Together with the constraints on fiscal, exchange rate and monetary policy set by large capital flows, this can limit the prospects of long-run, non-inflationary growth as well.

Keywords: Global liquidity, financial flows, capital surge, financial structure, financial fragility, exchange rate, monetary management, fiscal policy, finance and economic growth

After a slump in cross-border flows of capital in the years following the Southeast Asian financial crisis, international financial flows have seen a robust revival in recent years. If measured in terms of the sheer magnitude of cross-border transactions, finance capital has grown exponentially during the current decade. Further, a set of qualitative changes that has accompanied this quantitative expansion has transformed the nature of the financial integration of developing countries with their developed country counterparts.

This paper attempts to examine: (i) the factors responsible for this revival and surge in capital flows into developing countries; (ii) the qualitative changes in financial integration that are accompanying this surge; and (iii) the impact that this surge is having on financial volatility and vulnerability, macroeconomic management and growth, in countries that have been "successful" in attracting such flows. Besides data from developing countries as a group, evidence from one country that epitomizes the effects of the recent surge in capital flows, viz., India, is used to illustrate the effects that recent trends have on macroeconomic policy and growth.

Measuring the absolute size of globally dispersed finance capital is indeed a difficult proposition. Given the diversity of agents, instruments and markets and the lack of transparency in certain over-the-counter markets, it is extremely difficult to gauge the size of the corpus that functions as international financial capital. But the available figures do point to galloping growth in the global operations of financial firms.

One obvious form it has taken ever since the international lending boom of the late 1970s is the start and expansion of operations of international banks in less developed countries, especially the so-called "emerging markets". The net result has been an increase in the international assets of the big banks of the developed world. This trend has only gained strength in recent years. At the time of the East Asian crisis (end of June 1997), 23 countries reporting to the Bank of International Settlements, reported that the international asset position of banks resident in those countries stood at $9.95 trillion, involving $8.6 trillion in external assets after adjusting for local assets in international currencies (Bank of International Settlements, Monetary and Economic Department, 1997). By June 2007, when 40 countries were reporting, this had risen to $33.71 trillion, with external assets totaling $29.98 trillion (Bank of International Settlements, 2007). This expansion in international asset position was not only the result of the increase in the number of reporting countries.[1] The trend was visible in countries that reported on both dates as well. Thus, the international assets of UK-based banks had increased from $1.5 trillion to $6.1 trillion, and that of US banks from $0.74 trillion to $2.8 trillion.

But this was not all. Increasingly non-bank financial firms—pension funds, insurance companies and mutual funds—have emerged as important intermediaries between savers and investors. According to a Bank of International Settlements study (Committee on the Global Financial System, 2007, p. 5), the total financial assets of institutional investors stood at $46 trillion in 2005. Of this, insurance firms accounted for close to $17 trillion, pension funds for $12.8 trillion and mutual funds for $16.2 trillion. The United States dominated, accounting for as much as $21.8 trillion of institutional investors' assets, while the United Kingdom was far behind

[1] Very often, countries that were not reporting have been chracterised by small or negligible international exposure of banks operating from within their borders. There have been exceptions, such as the Republic of Korea that joined the countries reporting to the BIS only in 2005.

at just $4 trillion. Here too, growth has been rapid with total assets more than doubling between 1995 and 2005 from $10.5 trillion in the US and $1.8 trillion in the case of the UK. The assets of autonomous pension funds in the US, for example, rose from $786 billion in 1980, to $1.8 trillion in 1985, $2.7 trillion in 1990, $4.8 trillion in 1995, $7.4 trillion in 2000 and $8 trillion in 2004 (Organization for Economic Cooperation and Development, 2001 and 2003)

Besides these institutions there are other less regulated and opaque institutions, particularly highly leveraged institutions like the hedge funds and private equity firms, which directly manage financial assets for high net worth individuals, besides the institutional investors themselves. Assets managed by around 9000 surviving hedge funds are now placed at around $1.6 trillion (Financial Stability Forum, 2007). And, according to one study, private equity assets under management were nearing $400 billion in the United States and just under $200 billion in Europe. Private equity expansion is also reportedly strong with aggregate deal value growing at 51 percent annually from 2001 to 2005 in North America.[2]

Transactions other than in debt and equity by these entities have also risen rapidly. In 1992, the daily volume of foreign exchange transactions in international financial markets stood at $820 billion, compared to the annual world merchandise exports of $3.8 trillion or a daily value of world merchandise trade of $10.3 billion. According to a recent BIS report (Bank of International Settlements, Monetary and Economic Department, 2007, p. 5) the average **daily** turnover (adjusted for double-counting) in foreign exchange markets rose from $800 billion in 1992 to $1.5 trillion in 1998, before declining to $1.2 trillion in 2001. It then rose to $1.9 trillion in 2004 and sharply to $3.2 trillion in 2007. With the average GDP generated globally in a day standing at close to $100 trillion in 2003, this appears to be a small 3 per cent relative to real economic activity across the globe in that year. But the sum involved is huge relative the daily value of world trade. In 2006, the annual value of world merchandise exports touched $11.8 trillion, while that of commercial services trade rose to $2.7 trillion. Thus the daily volume of transactions in foreign exchange markets exceeded the annual value of trade in commercial services and was close to a third of the annual merchandise trade.

More significant is the trade in derivatives. In June 2007, the notional value of outstanding over-the-counter derivatives was placed at $516.4 trillion, up from $169.7 trillion in June 2003. The BIS estimates (Bank of International Settlements, Monetary and Economic Department , 2007, p. 10) that the average daily turnover of *exchange-traded derivatives* amounted to $6.2 trillion in April 2007, as compared with $4.5 trillion in 2004, $2.2 trillion in 2001 and $1.4 trillion in 1998. In the over-the-counter (OTC) derivatives market, average daily turnover amounted to another $2 trillion in 2007 at current exchange rates (as compared with $1.2 trillion, $575 billion and $375 billion respectively in 2004, 2001, and 1998). Thus total derivatives trading stood at $8.2 trillion a day, which together with the $3.2 trillion daily turnover in foreign exchange markets adds up to $11.4 trillion. This almost equals the annual value of global merchandise exports in 2006.

[2] Figures from Bloomberg and Schumer, 2006.

Flows to developing countries

This massive expansion of finance capital has been accompanied by a substantial increase in capital flows to developing countries. Net external financing flows[3] which had fallen from $360.1 billion in 1997 to $173.5 billion in 2002, has since risen sharply to $785.5 billion in 2006. While foreign direct and portfolio investment increased from $153.8 billion in 2002 to $446.7 billion in 2006, net external borrowing rose from $10.9 billion in 2001 to 294.5 billion in 2006. Thus underlying the surge was an expansion in both investment and debt flows to developing countries.

Table 1: Developing Countries and Other Emerging Markets: External financing, 1997-2006

$ billion	*1997*	*1988*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Balance on Current Account	-85.6	-113.4	-21.2	85.8	39.4	77.3	147.6	212.6	428	544.2
Net external financing	360.1	265.9	230.7	240.3	182.2	173.5	311	479.6	607	785.5
Non-debt-creating flows	197.7	185.7	184.8	202.1	171.4	151.3	190	283.6	371.1	491
Capital transfers	19.8	6.4	9.5	21	1.9	-2.5	7.7	8.3	5.6	44.2
Foreign direct investment and equity										
Security liabilities	177.9	179.3	175.3	181.1	169.5	153.8	182.3	275.2	365.5	446.7
Net external borrowing	162.4	50.2	45.9	38.2	10.9	22.2	121	196	235.9	294.5
Borrowing from official creditors, of which:	13	42.7	34.5	-8.1	24.1	10.6	0.7	-6.4	-50.9	-64.5
- credit and IMF loans	3.3	14	-2.4	-10.9	19	13.4	1.7	-14.9	-39.9	-30.1
- borrowing from banks	9.6	9.4	-13	-10.9	-12.5	-18	13.8	30.8	40.1	57.8
- borrowing from other private creditors	139.9	28.1	24.3	57.2	-0.8	29.6	106.4	171.6	246.6	301.2

[3] As defined by the IMF in its World Economic Outloook database, external financing is the sum of—with opposite sign—the goods and services balance, net income and current transfers, direct investment abroad, the change in reserve assets, the net acquisition of other assets (such as recorded private portfolio assets, export credit, and the collateral for debt-reduction operations), and the net errors and omissions.

Note: External financing is defined as the sum of—with opposite sign—the goods and services balance, net income and current transfers, direct investment abroad, the change in reserve assets, the net acquisition of other assets (such as recorded private portfolio assets, export credit, and the collateral for debt-reduction operations), and the net errors and omissions. Thus, net external financing, according to the definition adopted by the IMF, measures the total amount required to finance the current account, direct investment outflows, net reserve transactions (often at the discretion of the monetary authorities), the net acquisition of non-reserve external assets, and the net transactions underlying the errors and omissions (not infrequently reflecting capital flight).

Sources: Statistical Appendices, International Monetary Fund, *World Economic Outlook*, Biannual, various issues

Two features reflected by these figures that are considered reassuring are the large and dominant share of non-debt creating investment flows and the dominance of foreign direct over foreign portfolio investment in equity flows. Since direct investment is assumed to consist of investment aimed at establishing a productive presence in the host country, it is perceived as being "long term" in nature. This s contrasted with portfolio flows that are more in the nature of "hot money" flows looking for quick returns in the stock market.

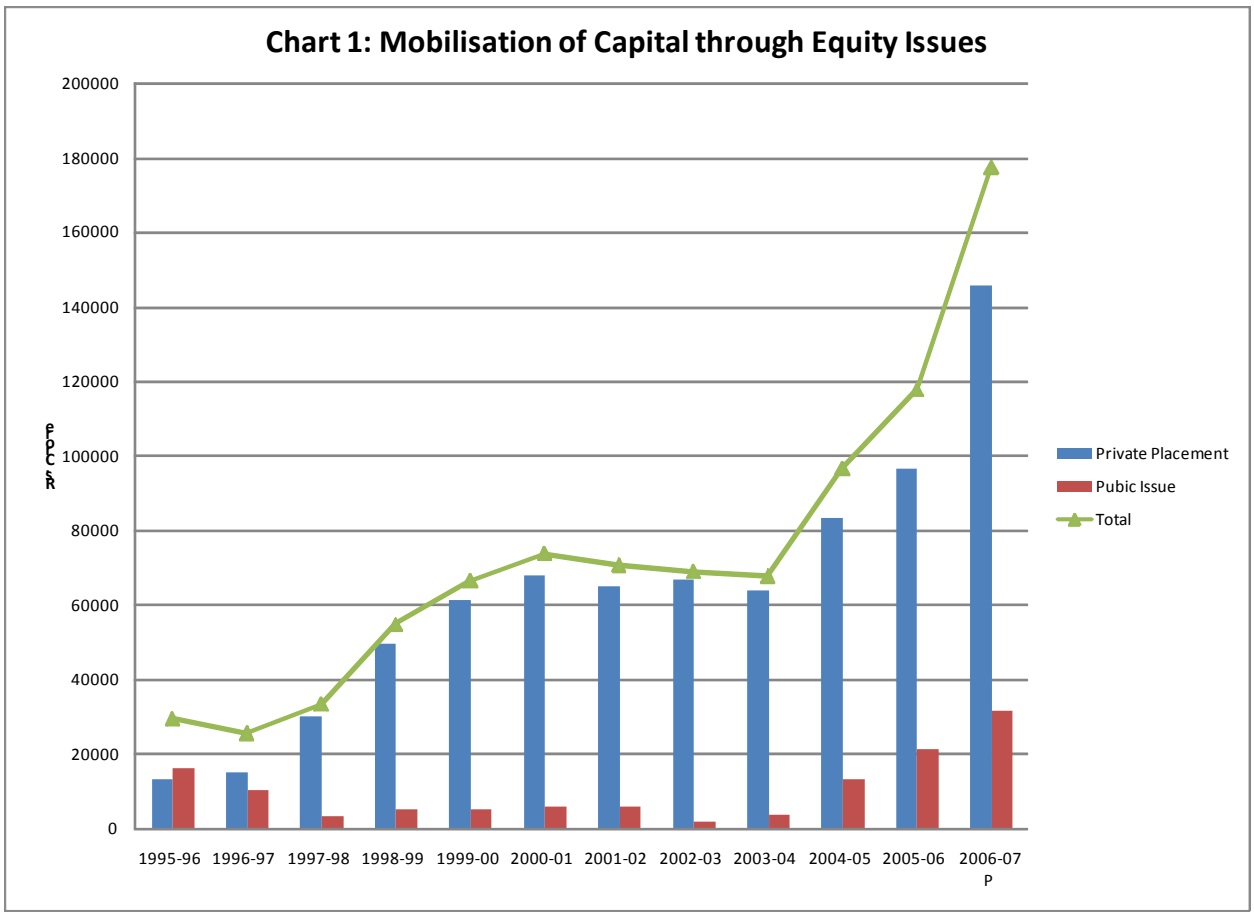
In actual fact, however, the distinction between direct and portfolio investment is more notional than real. With countries adopting the IMF definition, any investment by a single foreign investor in more than 10 per cent of the equity of a host country firm is interpreted as direct investment. However, with regulations regarding foreign portfolio investment having been relaxed in most developing countries and the volume of capital looking for portfolio investment opportunities having increased substantially, a number of acquisitions motivated by "portfolio" considerations involve purchases of a more than 10 per cent equity stake by a single investor. These acquisitions, whether made through the stock market or through negotiated purchases of stakes in listed or unlisted firms by private equity investors, are not driven by long run considerations, but by the desire to garner large returns from capital gains. Thus, just as in the case of portfolio investment and debt, there is an element of volatility built into direct investment flows as well.

Do developing countries need this capital?

While the search for higher, risk premia-driven interest rates and larger capital gains underlies the surge in capital flows, the evidence is clear that these flows are not required by most developing countries for balance of payments financing purposes. Between 2002 and 2006, when external financing to developing countries and emerging markets (as defined by the IMF) rose from $174 to $786 billion, developing countries and emerging markets as a group (as defined by the IMF) recorded consistent current account surpluses, with the surplus rising from $77.3 billion to $544 billion. What is more, a few developing countries received a major share of external financing, and these were the countries that were recording either small deficits or large surpluses on their current account.

The one argument that still sounds credible is that such flows help finance the investment boom that underlies the acceleration of growth in developing countries. If the evidence from a successful emerging market like India is any indication, there does seem to be a semblance of

truth to this argument. Between 2003-04 and 2006-07, which was a period when foreign institutional investor (FII) inflows rose significantly and stock markets were buoyant most of the time, equity capital mobilized by the Indian corporate sector rose from Rs 676.22 billion to Rs 1,771.7 billion (Chart 1).



Source: Reserve Bank of India, *Handbook of Statistics on Indian Economy, 2007*, Tables 77 and Table 82. Available at http://rbidocs.rbi.org.in/rdocs/Publications/DOCs/80257.xls and http://rbidocs.rbi.org.in/rdocs/Publications/DOCs/80262.xls. Accessed January 2, 2008.

Not all of this was raised through equity issued in the stock market. In fact a predominant and rapidly growing share amounting to a huge Rs.1,455.71 billion in 2006-07 was raised in the private placement market involving negotiated sales of chunks of new equity in firms not listed in the stock market to financial investors of various kinds such as merchant banks, hedge funds and private equity firms. While not directly a part of the stock market boom, such sales were encouraged by the high valuations generated by that boom and were as in the case of stock markets made substantially to foreign financial investors.

One obvious consequence of FII investments in stock markets and unlisted firms is that the possibility of take-over by foreign entities of Indian firms has increased substantially. This possibility of transfer of ownership from Indian to foreign individuals or entities has increased with the private placement boom, which is not restrained by the extent of free-floating shares available for trading in stock markets. Private equity firms can seek out appropriate investment

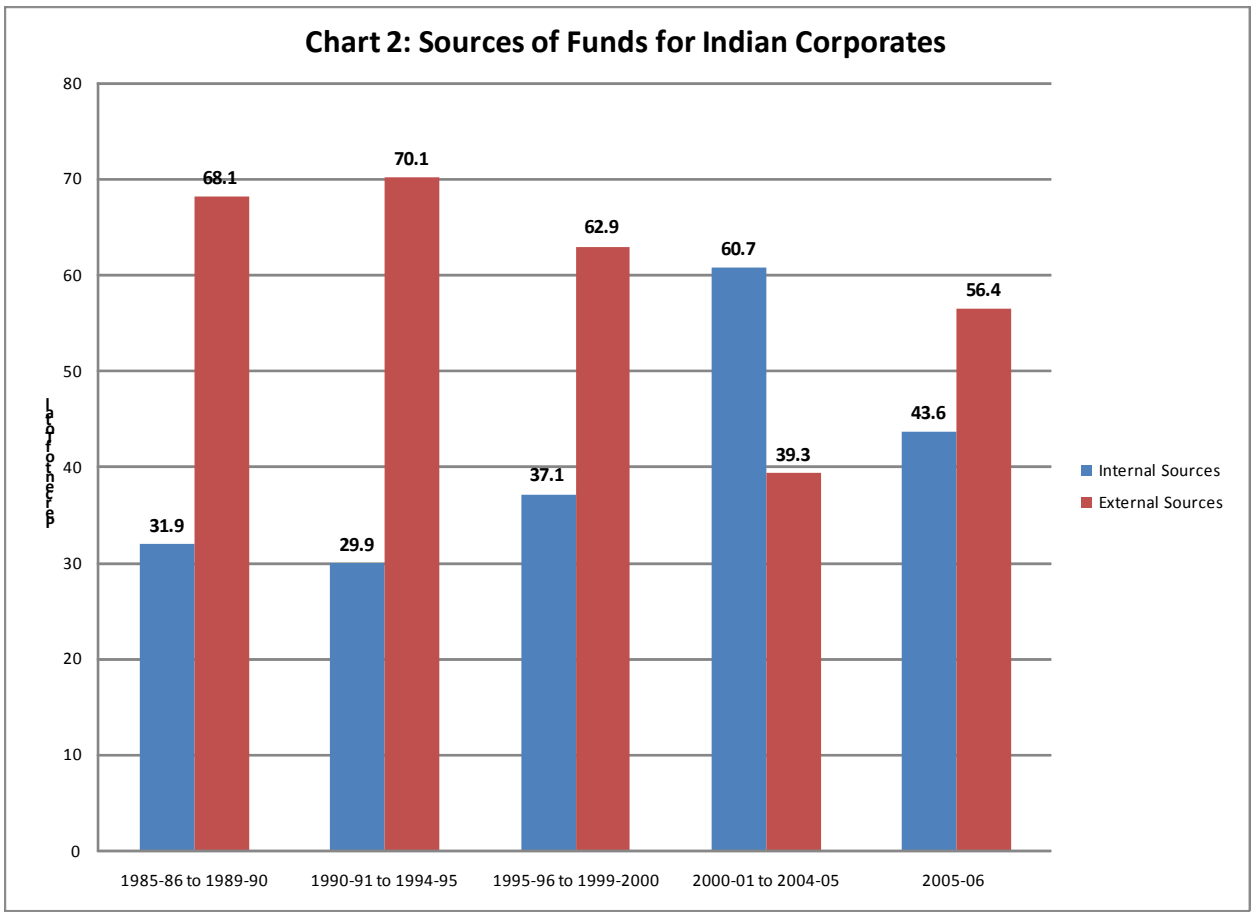
targets and persuade domestic firms to part with a significant share of equity using valuations that would be substantial by domestic wealth standards and may not be so by international standards. Since private equity expects to make its returns in the medium term, it can then wait till policies on foreign ownership are adequately relaxed and an international firm is interested in an acquisition in the area concerned. The rapid expansion of private equity in India suggests that this is the route the private equity business is seeking given the fact that the potential for such activity in the developed countries is reaching saturation levels.

The point to note, however, is that these trends notwithstanding, equity does not account for a significant share of total corporate finance in the country. In fact, internal sources such as retained profits and depreciation reserves have accounted for a much higher share of corporate finance during the equity boom of the first half of this. According to RBI figures (Chart 2), internal sources of finance which accounted for about 30 per cent of total corporate financing during the second half of the 1980s and the first half of the 1990s, rose to 37 per cent during the second half of the 1990s and a record 61 per cent during 2000-01 to 2004-05. Though that figure fell during 2005-06, which is the last year for which the RBI studies of company finances are as yet available, it still stood at a relatively high 56 per cent.

Among the factors explaining the new dominance of internal sources of finance, three are of importance. First, increased corporate surpluses, resulting from enhanced sales and a combination of rising productivity and stagnant real wages. Second, a lower interest burden, resulting from the sharp decline in nominal interest rates, compared to the 1980s and early 1990s. And third, reduced tax deductions, because of tax concessions and loopholes. These factors have combined to leave more cash in the hands of corporations for expansion and modernization.

Along with the increased role for internally generated funds in corporate financing in recent years, the share of equity in all forms of external finance has also been declining. An examination of the composition of external financing (measured relative to total financing) shows that the share of equity capital in total financing that had risen from 7 to 19 per cent between the second half of the 1980s and the first half of the 1990s, subsequently declined 13 and 10 per cent respectively during the second half of the 1990s and the first half of this decade. There, however, appears to be a revival to 17 per cent of equity financing in 2005-06, possibly as a result of the private placement boom of recent times.

What is noteworthy is that, with the decline of development banking and therefore of the provision of finance by the financial institutions (which have been converted into banks), the role of commercial banks in financing the corporate sector has risen sharply to touch 24 per cent of the total in 2003-04. In sum, internal resources and bank finance dominate corporate financing and not equity, which receives all the attention because of the surge in foreign institutional investment and the media’s obsession with stock market buoyancy.



Source: Reserve Bank of India, *Report on Currency and Finance, 2006-07*, Mumbai: Reserve Bank of India, Chapter 7, Table 7.5, p. 268.

Thus, the surge in foreign financial investment is important more because of the impact that it has on the pattern of ownership of the corporate sector rather than the contribution it makes to corporate finance. This challenges the defence of the open door policy to foreign financial investment on the grounds that it helps mobilize resources for investment. It also reveals another tendency associated with such a policy: the threat of widespread foreign take over.

Supply-side Influences

If the requirements of developing countries are not responsible for the surge in capital inflows, what are the determining influences? There is reason to believe that the capital flow to developing countries (before netting out the investment of their large reserves in external markets) was driven more by supply-side push rather than developing country demand. It is no doubt true that this capital could not have crossed borders without relaxed regulations regarding the inflow of foreign equity and debt in the developing countries. But liberalization has not ensured large inflows either in all countries or at all times in countries that have become the target of such flows. It appears that an expansion of liquidity in the international financial system

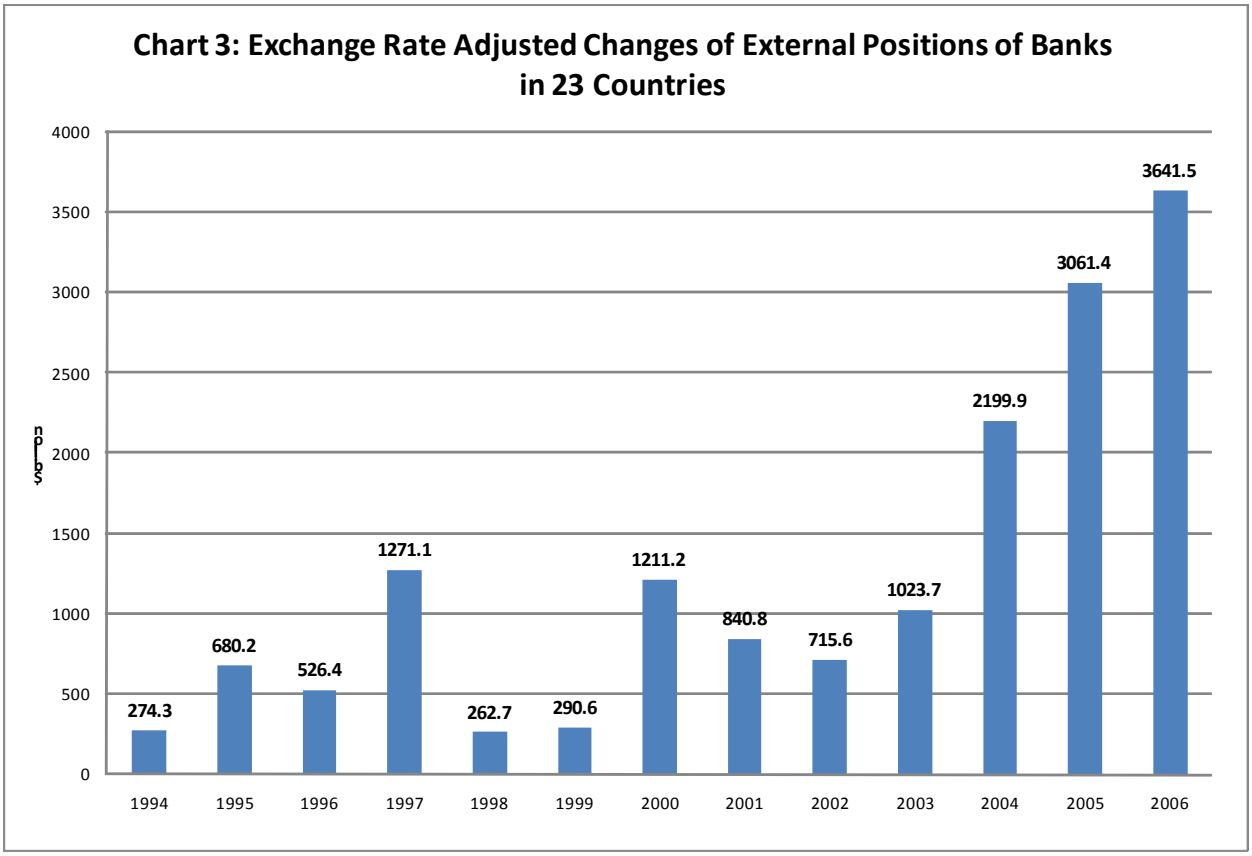
has driven funds into emerging markets, as it did at the time of the debt crisis in the 1980s and the East Asian crisis in 1997.

Markets are liquid when those who hold assets can sell them at a price that does not imply a significant loss, so as to access the cash they need to meet other commitments. Given its definition, measuring liquidity is near impossible. But, as is well recognized, a market is more liquid when there are more investors active in that market. So the volume of transactions occurring in markets is an indicator of the extent of liquidity in the system. Despite the diversified and complex nature of financial markets today, the banking sector sits at the centre of the financial system, mobilizing and allocating much of the capital that goes to determine the overall state of liquidity. Based on that perception, researchers have used changes in the external or international exposure of banks in different reporting countries as an indicator of trends in global liquidity (Fornari and Levy 2000). Since the debt crisis, the Bank of International Settlements has encouraged banks located in different countries to report their international exposure through an official system, with institutions from 40 countries reporting currently. As noted earlier, the number of reporting countries has increased over time making the absolute figures incomparable. However, continuous figures are available from 1994 for 23 reporting countries.

When we examine those figures it becomes clear that there has been a sharp increase in global liquidity (as proxied by the international exposure of banks) in the period after 2002 (Chart 3). Having touched a low of $716 billion that year, the exchange rate-adjusted changes in the external asset positions of banks in these 23 countries registered a more than five-fold nominal increase to touch $3.6 trillion in 2006. This compares with a previous peak of $1.3 trillion touched in 1997 at the time of the Southeast Asian financial crisis. It hardly bears stating that when global liquidity is increasing at this rate, liquidity in the countries in which these banks are located would be rising as well. They are not merely recipients of flows from banks located elsewhere, but the domestic exposure of banks normally tends to rise along with their international exposure, even if the rise in levels of cross-border inter-bank flows results in a rise in the ratio of such flows relative to the corresponding measure of domestic liquidity.

Experience from previous crises, especially the Southeast Asian crisis of 1997, suggests that a rapid expansion of international liquidity results in an increase in the proportion of speculative positions taken by market participants and a decline in credit quality. In particular, increased cross-border flows can be accompanied by complex carry trades, with money flowing from locations, markets and instruments where returns are low to targets offering high returns. This can lead to speculative bubbles in one or more locations. In addition, cross-border flows increase the potential for “contagion”—the international transmission of the effects of financial instability.

For example, apropos 1997, a Bank of Italy study found that: “In the period between 1995 and 1997, global interbank activity expanded rapidly, characterized … by net outflows from Japan. During this period, the banking system of the industrial countries (excluding Japan) played the role of intermediary in the reallocation of flows, having made loans to offshore centres that were nearly equal to fund-raising from Japan ($50 billion). The flows to emerging economies were enormous: $150 billion to banks and $130 billion to non-bank agents. Large capital flows (around $100 billion) were recorded in favour of non-bank agents located in offshore centres, among which some non-bank financial intermediaries such as hedge funds are also probably included.” (Fornari and Levy 2000: 2).



Sources: Bank of International Settlements, *BIS Reporting Banks: Summary of International Positions*. **BIS Quarterly Review: International Banking and Financial Market Developments**, Various Issues. Available at http://www.bis.org/publ/quarterly.htm.

There is reason to believe that similar developments were occurring in the course of the more recent liquidity surge. Between June 2003 and June 2007, total foreign claims of banks in all reporting countries increased by 112 per cent with respect to developed countries, 102 per cent with respect to offshore centres and 163 per cent with respect to developing countries (Table 2). There is a high degree of concentration of flows to developing countries in Europe and the Asia-Pacific. Flows to offshore centres and developing countries from different developed country locations increased by between 100 and 240 per cent over this four year period. This implies that though instability has currently affected the market for mortgage loans and mortgage-backed securities, the problems created by an excessive expansion of liquidity affects all favoured investment locations including developing countries in Europe and the Asia-Pacific.

Table 2: Percentage increase in exposure to different locations by nationality of banks, 2003-2007

Claims vis-à-vis	Total foreign claims	Japan	U.K.	U.S.	Other
All countries	115.5	65.9	122.1	118.1	119.8
Developed countries	112.0	54.8	122.0	116.0	116.4
Offshore centres	102.2	105.4	69.8	150.0	110.1

Developing countries	163.2	118.7	240.5	114.0	165.1
Africa & Middle East	154.6	88.5	399.7	164.0	98.1
Asia & Pacific	181.2	111.2	244.2	204.4	169.6
Europe	267.9	392.4	251.3	192.8	271.9
Latin America/Caribbean	74.0	74.9	108.6	39.1	82.3
Intl organizations	-13.7	...	-71.7	...	42.3
Unallocated	-61.0	...	-70.1	...	-60.9

Sources: Computed from data available in Bank of International Settlements, *BIS Reporting Banks: Summary of International Positions*. **BIS Quarterly Review: International Banking and Financial Market Developments**, Various Issues. Available at http://www.bis.org/publ/quarterly.htm.

Not surprisingly, in the recent surge in capital flows to developing countries, almost all emerging markets, especially those in Europe and the Asia-Pacific have experienced an increase in inflows, with attendant buoyancy in their stock and real estate markets. These inflows have implied the accumulation of speculative positions by many investors, including highly leveraged ones. One possible indicator of that tendency is that, while the outstanding values of all kinds of international assets held by banks have doubled during the recent surge (2003-2007), derivative contracts, especially over the counter derivative contracts have increased by much more (Table 3).

What this suggests is that the problems arising from the sub-prime loan crisis and the collateralized debt obligations associated with sub-prime loans reflects the unravelling of one set of problems created by the liquidity spiral of recent years. The other, which could have and can still unravel is the excessive exposure, encouraged by excess liquidity, of international investors and lenders in a few developing countries and the securitized assets that have been built on that exposure. That is a supply-side push of capital into the stock, credit and real estate markets in emerging markets could have created a second source of fragility in the international financial system besides the US sub-prime market.

Table 3: Changes in Outstanding Positions for Key International Financial Assets ($ billion)

	June 2007	June 2003
Total external asset positions of banks	29980.5	14853.8
Claims on banks	19094.6	9663.6
Claims on non banks	10886	5190.2
External Loans	21920	11130.7
International debt securities	20878.3	10268.7
International money market instruments	1114.3	519.3
International bonds and notes	19764	9749.5
OTC derivatives (notional value)	513407	169678
Exchange-traded derivatives		
Futures	31676.9	13930.5
Options	65006.7	24286.6

Sources: Bank of International Settlements, *BIS Reporting Banks: Summary of International Positions*. **BIS Quarterly Review: International Banking and Financial Market Developments**, December 2003 and December 2007. Available at http://www.bis.org/publ/quarterly.htm.

This is of significance because the lesson from the sub-prime loan crisis is that when suspect loans result in default of payments, those loan assets and the securitized obligations that have been built on them become suspect as well, resulting in a drying up of demand for such assets. Holders of such assets who want to sell, even if at a loss, to meet commitments that fall due, find there are no takers, so that a financial world that was till recently awash with liquidity suddenly turns illiquid. This has happened with only one segment of the market experiencing a doubtful loan or investment problem. If the build-up of speculative positions in other markets that was also associated with the recent surge in liquidity generates new problem loans and investments, the transformation from liquidity excess to liquidity squeeze may be far too severe for central bankers and government to resolve without much damage.

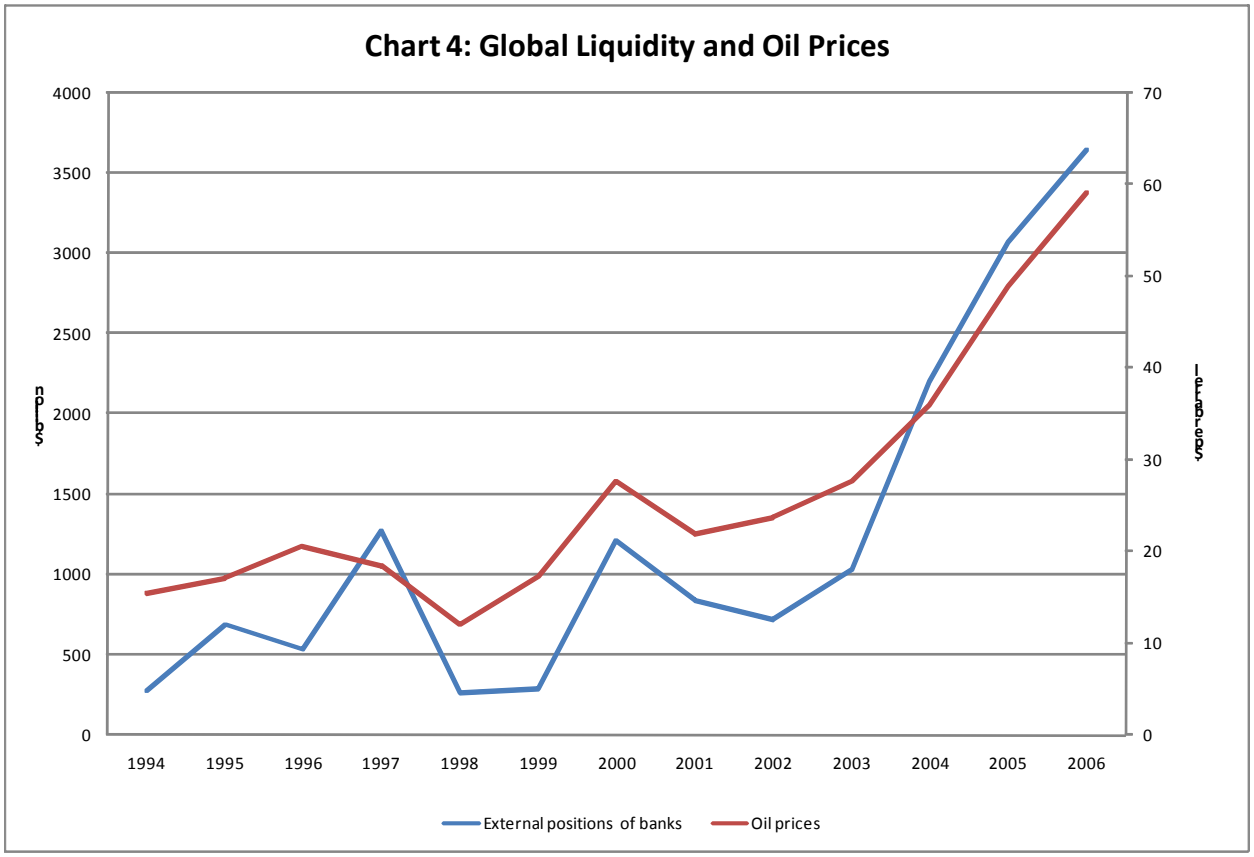
Determinants of Liquidity Movements

What needs investigating, therefore, is the set of factors that led to the liquidity build up in the first place. One factor is of course a sudden accumulation of foreign exchange surpluses with a few countries and firms, resulting from an increase in oil prices, for example. With these oil surpluses looking for investment opportunities finding their way to financial markets, an excess liquidity syndrome may result. In fact, there is a close association between the movements of oil prices and the build of global liquidity in recent years (Chart 4), with a correlation coefficient of 0.97 between the two variables. But this is only one fortuitous development contributing to liquidity. Moreover, since speculation touches commodities as well, the direction of causation also moves from liquidity to oil prices, as it does the other way around.

There are three other factors that could have possibly played a role in influencing the level of liquidity. The first is the long term tendency inherent in the dynamic of the contemporary global system for an increase in liquidity. The liquidity capital that drives this supply-side push of capital to emerging markets originates in the transformation of capitalism that has occurred under the tutelage of neoconservative ideologies. The growing inequality characterizing an unregulated capitalism, in which wages stagnate while productivity and profits rise, has resulted in the accumulation of vast sums of capital in the hands of a few investors in the metropolitan centres of global capitalism.[4] These gains are lightly taxed by governments that are not committed to appropriating a part of the surpluses of the rich to improve the welfare of the poor. Lower down the ladder, investment capital accumulates with mutual and pension funds in which less protected populations deposit the savings they put aside to insure their future. The lack of state-funded welfare in today's more liberalized and open capitalism is forcing the middle classes in the developed countries to save by subscribing to these funds that have become important sources of financial capital. Financial firms in the developed countries leverage capital

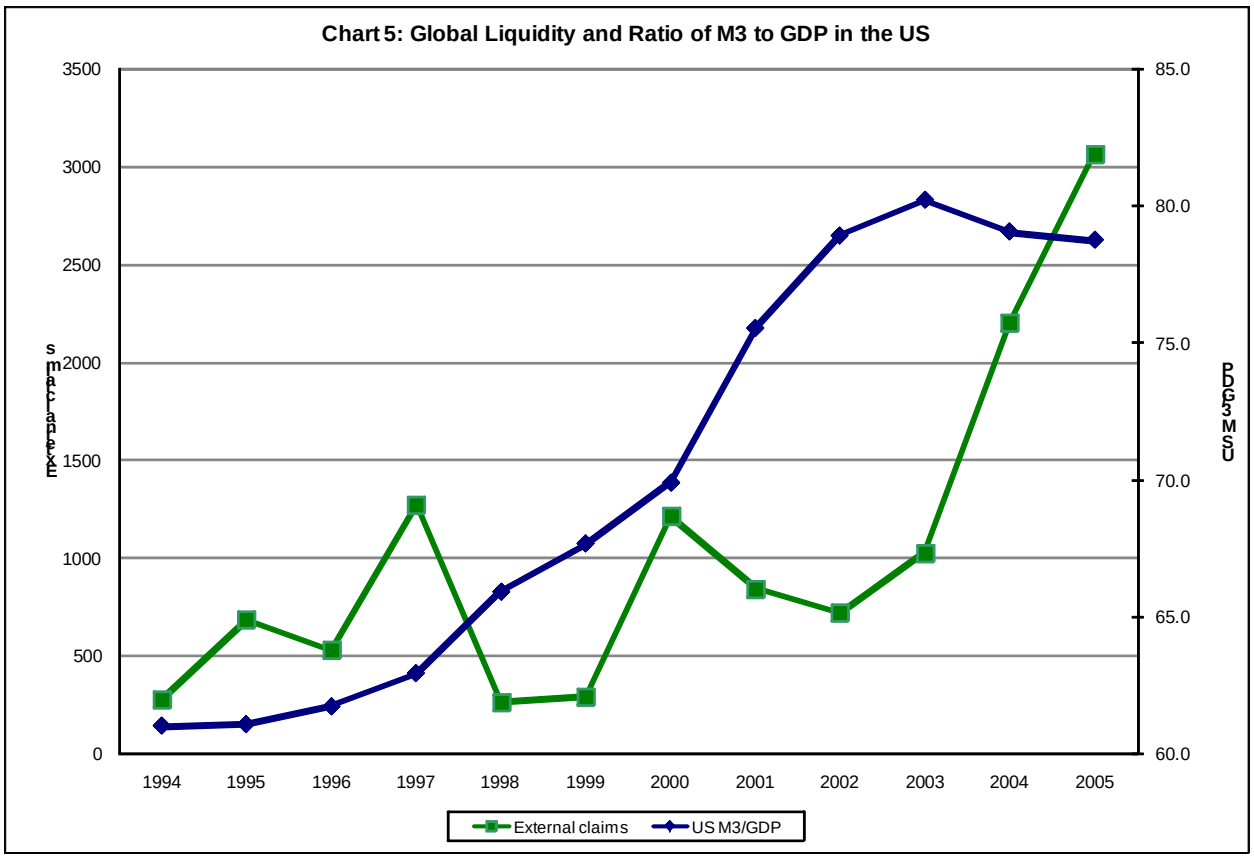
[4] For example, the wealthiest 1 per cent of Americans reportedly earned 21.2 per cent of all income in 2005, according to data from the Internal Revenue Service. This was an increase in share relative to the 19 per cent recorded in 2004, and exceeded the previous high of 20.8 per cent set in 2000, at the peak of the previous bull market in stocks. As compared with this, the bottom 50 per cent earned 12.8 per cent of all income, which was less than the 13.4 per cent and 13 per cent recorded in 2004 and 2000 respectively. (Ip, 2007)

from these sources by borrowing huge sums and use the resulting corpus to indulge in financial speculation.



Sources: Global liquidity figures from source quoted in Chart 3. Oil prices from U.S. Energy Information Administration. Available at http://tonto.eia.doe.gov/dnav/pet/hist/r1300 3a.htm. Accessed 20 December 2007.

A second reason for the liquidity build-up noted by many observers is a tendency in recent years for developed country central banks to adopt an easy money policy aimed at encouraging credit-financed spending in housing and consumer goods markets that keeps demand buoyant and GDP growth at "acceptable" levels. Considering the experience of the US, which is at the centre of the global financial system, while the relationship between formal measures of money supply (M3 to GDP ratio) and the global liquidity index is not perfect, there does appear to be a significantly strong (correlation coefficient of 0.57) positive relation between domestic monetary conditions in the US and global liquidity in recent years (Chart 5).

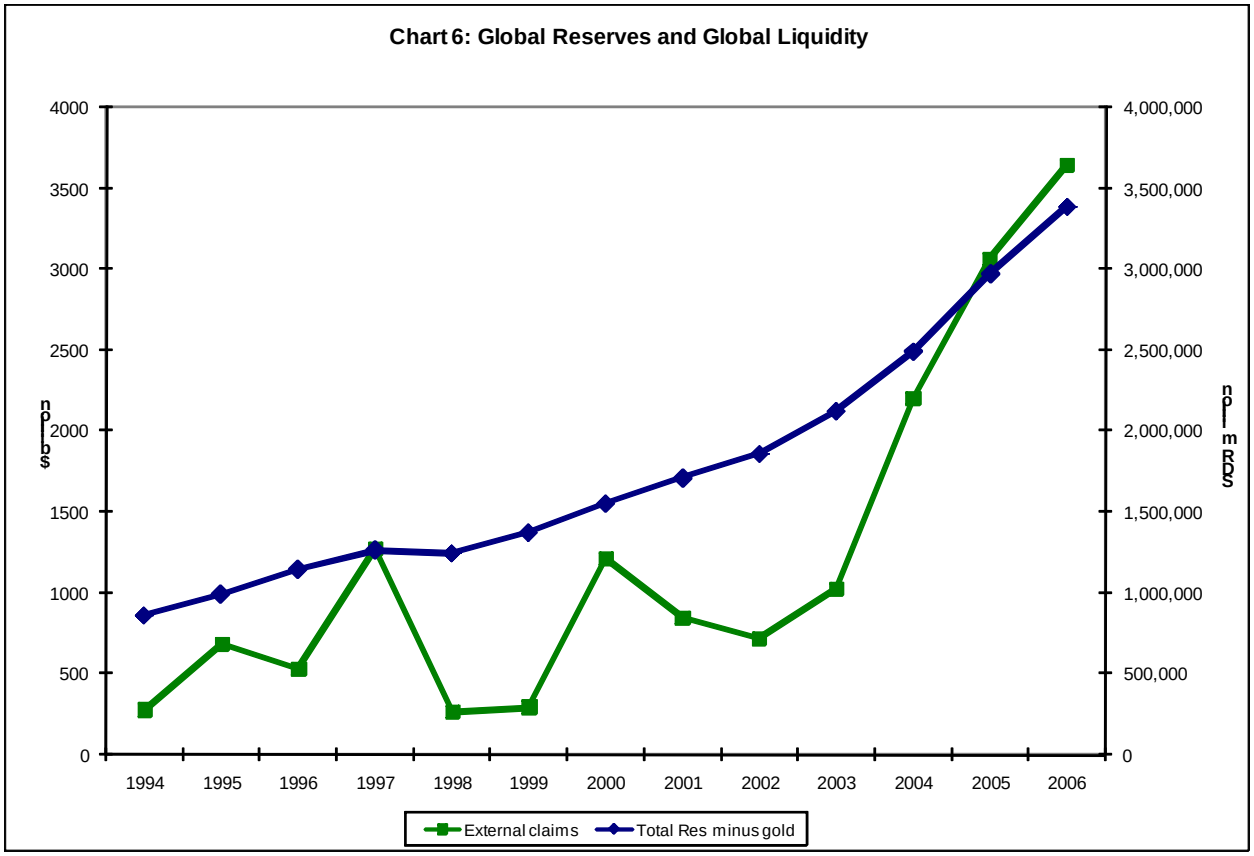


Sources: Global liquidity figures from source quoted in Chart 3. US monetary aggregate M3 from US Federal Reserve Board. Available at http://www.federalreserve.gov/releases/h6/HIST/h6hista.pdf. Accessed 20 December 2007. (The Federal Reserve discontinued issue of M3 figures as of March 23, 2006.)

Finally a third reason could be that developing countries that were adversely affected by or threatened by the financial crises of 1997 and thereafter have turned more cautious about the use of foreign exchange. This in most cases has involved maintaining investment rates below domestic savings rates to generate current account surpluses in the balance of payments, or, where current account deficits existed, making sure that not all capital inflows in a more liberalized environment were exhausted through current or capital expenditures. The net result has been a huge build up in foreign exchange surpluses in developing countries which in myriad ways find their way to financial centres in the developed countries, only to partly return as investments in emerging markets. That is, the crisis generated by excess liquidity in the past results in an environment that contributes to a new round of liquidity accumulation. Chart 6 tracks the relationship between global reserves and global liquidity and shows a strong relationship between the two (correlation coefficient 0.92).

This reverse flow of capital essentially means that excess savings in emerging markets are being "recycled" in ways that puts the responsibility of allocating that capital in the hands of a few financial decision makers located in metropolitan centres of global capitalism sitting at the apex of a concentrated global financial system. For example, according to reports, in the wake of China's decision to invest a part of its foreign exchange surpluses in funds managed by the Blackstone (private equity) group, much of this capital flowed back as investment into firms located in China itself, feeding a spiral that leaves the problem of large surpluses unresolved.

More recently, much has been made of the rise of sovereign wealth funds in developing countries, epitomized by the China Investment Corporation (CIC), that are seen as a challenge to financial institutions from the developed industrial countries, especially the US and UK, which have traditionally dominated global finance. What this ignores is the fact that a significant part of the investments by these sovereign wealth funds is in global financial intermediaries or the funds they manage.



Sources: Global liquidity figures from source quoted in Chart 3. Global Reserves (excluding gold) figures from IMF, *International Financial Statistics Online*.

Consequences of supply-side capital flow pressures

When liquidity accumulates in the international financial system, financial firms not only are under pressure to keep money moving to earn returns from spreads, but in the more liberalized financial environment of today "innovate" new products, to profit from the situation of excess liquidity. One consequence of the desire to keep money moving is that at different points in time one or another group of developing countries is discovered as a "favourable" destination for foreign financial investors. Increased competition and falling returns in the developed countries are also encouraging financial firms to seek out new opportunities in emerging markets. This supply side push can translate itself into an actual flow only when developing countries as a group, and the so called emerging markets among them, relax controls on the inflow of capital and the repatriation of profits and investment as well as liberalize their financial systems to accommodate international players and their operating strategies. In practice, despite the East Asian crisis and the number of other similar crises that have followed it in other parts of the

world, and the evidence that such crises result from more open capital accounts, developing countries have competed with each other to attract these inflows by opting for financial liberalization.

Capital flows to developing countries: New trends

Overall, the willingness to accommodate supply-side pressures has had rather dramatic implications for capital flows to developing countries. The first of these is an acceleration of financial flows to developing countries precisely during the years when as a group they have been characterized by rising surpluses on their current account. Total flows touched a record $571 billion in 2006, having risen by 19 per cent on top of an average growth of 40 per cent during the three previous years. Relative to the GDP of these countries, total flows, at 5.1 per cent, are at levels they touched at the time of the East Asian financial crisis in 1997. (Figures in this section are from World Bank, 2007)

A second feature is the acceleration of the long term tendency for private flows to dominate over official (bilateral and multilateral) flows. Private debt and equity inflows, which had risen by 50 per cent a year over the three years ending 2005, increased a further 17 per cent in 2006 to touch a record $647 billion. On the other hand net official lending has in fact declined over the last two years, partly because some developing countries have chosen to make advance repayments of debt owed to official creditors, especially the IMF and the World Bank. Once flows between private lenders and borrowers or private investors and firms dominate, the implicit sovereign guarantee associated with lending to governments or providing government guaranteed credits no longer exists, increasing the probability of default.

The third feature is that after a period immediately following the 1997 crisis, when debt flows had almost dried up, in recent years both equity and debt flows to developing countries have risen rapidly. Net private debt and equity flows to developing countries have risen from a little less that $170 billion in 2002 to close to $647 billion in 2006, an almost four-fold increase over a four-year period. While net private equity flows, which rose from $163 billion to $419 billion dominated the surge, net private debt flows too increased rapidly. Bond issues rose from $10.4 billion to $49.3 billion and borrowing from international banks from $2.3 billion to a huge $112.2 billion. What is more, net short-term debt, outflows of which tend to trigger financial crises, has risen from around half a billion in 2002 to $72 billion in 2006. According to BIS statistics, syndicated loan agreements signed by developing country borrower rose after the immediate post-1997 slump, from $6.9 billion in 2002 to $237.9 billion in 2006. This compared with the previous peak of $129.2 billion in 1997.

The fourth feature, which is a corollary of these developments, is that there is a high degree of concentration of flows to developing countries, implying excess exposure in a few countries. Ten countries (out of 135) accounted for 60 per cent of all borrowing during 2002-04, and that proportion has risen subsequently to touch three-fourths in 2006. In the portfolio equity market, flows to developing countries were directed at acquiring a share in equity either through the secondary market or by buying into initial public offers (IPOs). IPOs dominated in 2006, accounting for $53 billion of the $96 billion inflow. But here too there were signs of concentration. Four of the 10 largest IPOs were by Chinese companies, accounting for two-thirds of total IPO value. Another 3 of those 10 were by Russian companies, accounting for an additional 22 per cent of IPO value.

Finally, despite this rapid rise in developing country exposure, with that exposure being excessively concentrated in a few countries, the market is still overtly optimistic. Ratings upgrades dominate downgrades in the bond market. And bond market spreads are at unusual lows. This optimism indicates that risk assessments are pro-cyclical, underestimating risk when investments are booming, and overestimating risks when markets turn downwards. But two consequences are the herding of investors in developing country markets and their willingness to invest a larger volume of money in risky, unrated instruments.

In sum, we are now witnessing a return to a period when large and rising inflows, herd behaviour and over exposure have come to characterize capital flows from the North to the South. Is there reason to believe that unlike in 1997, say, this time around these developments are benign, or even positive, from the point of view of the developing countries as some would suggest? Besides the many crises that have occurred across the developing world, including in Argentina and Turkey, during the decade since 1997, structural changes in the global financial system suggest that risk, including systemic risk has only increased. And the experience with the sub-prime crisis suggests that even in developed countries, the regulatory framework has not evolved to match the complexity of markets, institutions and instruments that characterize today's financial systems, and prudential regulation, new disclosure norms and changed accounting practices have not been successful in identifying fragility before it is too late.

Structural transformation of global finance

This experience matters because of evidence that the rapid rise of capital flows to developing countries has associated with it the institutional globalization of international finance. During the 1990s, the three-decade long process of proliferation and rise to dominance of finance in the global economy reached a new phase. Characteristic of that was a growing process of financial consolidation that was concentrating financial activity and financial decision making in a few economic organizations and integrating hitherto demarcated areas of financial activity that had been dissociated from each other to ensure transparency and discourage unsound financial practices.

A study (Group of 10, 2001) of financial consolidation commissioned by Finance Ministers and Central Bank Governors of the Group of 10 found, as expected, that there had been a high level of merger and acquisition (M&A) activity in the study countries during the 1990s, with an acceleration of such activity especially in the last three years of that decade. The number of acquisitions by financial firms from the survey countries increased from around 337 in 1990 to between 900 and 1000 by the end of the decade. Further, the average value of each of these acquisitions had increased from $224 million in 1990 to $649 billion in 1999. Clearly, M&A in the financial sector was creating large and complex financial organizations in the international financial system.

Further, over the 1990s as a whole the evidence seems to be that M&A activity was largely industry-specific, with banking firms tending to merge dominantly with other banks. However, the pattern was changing over time. While in 1994 there was one instance of cross-industry M&A for every five instances of intra-industry mergers, the ratio had come down to one in every three by 1999. The merger and acquisition drive within the financial sector was not merely creating large and excessively powerful organizations, but firms that straddle the financial sector. Exploiting the process of financial liberalization these firms were breaking down the Chinese Walls that had been built between different segments of the financial sector.

Given the wave of financial liberalization in the developing world, it was inevitable that this process would affect developing countries as well. According to a CGFS study (Committee on the Global Financial System, 2004) there has been a surge in foreign direct investment in the financial sectors of developing countries. The study, by using cross-border M&As targeting banks in emerging market economies (EMEs), found that cross-border deals involving financial institutions from EMEs as targets, which accounted for 18 per cent of such M&A deals worldwide during 1990-96, rose to 30 per cent during 1997-2000. The value of financial sector FDI rose from about $6 billion during 1990-96 to $50 billion during the next four years. Such FDI peaked at $20 billion in 2001, declined sharply in 2002, but stabilized in 2003. The net result is a clear shift in the ownership structure of the financial sector (Table 4). Anecdotal evidence indicates that this figure would have risen sharply since then.

With respect to Asia, CGFS found that: "The proportion of cross-border M&As in East Asia's financial sector initially was small compared with other regions. The value of cross-border M&As targeting non-Japan Asian countries was $14 billion or 17% of the total during 1990-2003. Asia, however, has been one of the fastest growing target regions for M&A, with a sizeable jump in cross-border M&A activity occurring in Korea and Thailand. In addition, there have been a large number of small-value cross-border M&A transactions in the finance sector between East Asian economies. In 2003, Asia received the largest share of FSFDI inflows."

Table 4: Ownership Structure in the Banking Systems of Emerging Market Economies[1]

Country	**1990**			**2002**[2]		
	Domestic		**Foreign**	**Domestic**		**Foreign**
	Private[3]	**Government**		**Private**	**Government**	
Asia						
China	0	100	0	98	2[4]	
Hong Kong SAR	11	0	89	28	72	
Indonesia	…	…	4	37	51	13
India	4	91	5	12	80	8
Korea	75	21	4	62	30	8
Malaysia	…	…	…	72	18	
Philippines	84	7	9	70	12	18
Singapore	11	0	89	24	0	76
Thailand	82	13	5	51	31	18

Latin America						
Argentina	…	36[5]	10[6]	19	33	48
Brazil	30	64	6	27	46	27
Chile	62	19	19	46	13	42
Mexico	1	97	2	18	0	
Peru	41	55	4	43	11	46
Venezuela	93	6[7]	1[7]	39	27	34
Central & Eastern Europe						
Bulgaria	…	…	0	20	13	67
Czech Republic	12[5]	78[5]	10[5]	14	4	82
Estonia	…	…	…	1	0	99
Hungary	9	81	10	11	27	62
Poland	17[7]	80[7]	3[7]	10	17	63
Russia	…	…	6	23	68	9
Slovakia	…	…	0	9	5	85

Notes:
[1] Percentage share of total bank assets. 2002 figures for central and eastern Europe: Percentage share of regulatory capital.
[2] Data are shown for the latest year available, which is mainly that for 2002.
[3] Calculated as residual.
[4] 1999
[5] 1994
[6] Average of 1988-93
[7] 1993
Source: Committee on the Global Financial System, 2004, Table 1, page 9.

While liberalization and the high returns offered by hitherto protected financial markets offered new opportunities, financial crises favoured globalization. As the CGFS study notes: "A standard response to crises by EME governments, encouraged by the international financial institutions, was to accelerate financial liberalization and to recapitalize banks with the help of foreign investors. This was the case in Latin America in the years following the 1994 Mexican crisis." In Asia also governments liberalized the terms of foreign entry and ownership after the crisis, but because of a major role played by governments in the recapitalization of banks, the expansion of foreign presence came with a delay.

Thus, the global financial system is obviously characterized by a high degree of centralization. With US financial institutions intermediating global capital flows, the investment decisions of a few individuals in a few institutions virtually determines the nature of the "exposure" of the global financial system. The growing presence of a few international players in the developing countries and the consolidation of these players had implications for the accumulation of risk in markets where agents tend to herd. Unfortunately, unregulated entities making huge profits on highly speculative investments are at the core of that system.

The role of new institutions: Hedge funds and private equity firms

Liberalization has not just increased consolidation and global integration of the banking industry in developing countries. Many of them are now home to the activities of institutions like hedge funds and private equity firms that are loosely regulated in the developed countries, are highly leveraged and pursue unconventional, speculative and risky investment strategies in relatively illiquid assets aimed at exploiting mispricing and arbitrage opportunities to ensure high returns for their investors. With investment banks and fund managers adopting practices similar to these entities the distinction between these and other financial institutions is blurring at the level of activity, excepting perhaps for the concentration of the activities of these entities on specific kinds of trades.

While controversial for long, hedge funds gained notoriety in 1992 when George Soros' Quantum Fund was held responsible for the speculative attack on the British pound and in the late 1990s with the collapse of the much publicized Long Term Capital Management with its star traders, Nobel-winning economists and high-return track record. For developing countries, their notoriety was linked to the role they are alleged to have played in the currency speculation that precipitated the 1997 crisis.

Yet, hedge fund activity in developing countries has increased substantially in recent years, including in Asia. Encouraged by liberalization that ensures not only entry but the proliferation of instruments, the growth of derivatives markets, the emergence of futures, and the increase in shorting possibilities, these firms have devoted much attention to these markets. According to one estimate quoted by the Financial Stability Forum (2007), the share of hedge fund assets managed in Asia has risen from 5 per cent in 2002 to 8 per cent in 2006. These increases have been at the expense of the US, which while recording a significant increase in hedge fund activity in absolute terms, has seen a decline in share of the global total from more than 80 per cent in 2002 to about 65 per cent in 2006.

Besides hedge funds, portfolio diversification by financial investors in developed countries seeking new targets, higher returns and/or a hedge has over the last quarter of a century has seen a revival of private equity firms. Private equity, as originally broadly defined, involves investment in equity linked to an asset that is not listed and therefore not publicly traded in stock markets. Given this broad definition, a range of transactions and/or assets fall under its purview, including venture capital investments, leveraged buyouts and mezzanine debt financing, where the creditor expects to gain from the appreciation in equity value by exploiting conversion features such as rights, warrants or options.

While private equity has been growing rapidly, its activities in the developed countries is being curbed by the growing opposition to these firms and their activities. A major criticism of private equity firms is their lack of transparency. Besides, they are being accused of yielding the hatchet against workers or breaking up companies when firms are being restructured.

One result of all this is that private equity firms are finding their business getting harder to conduct in the US and Europe. Not surprisingly, there are signs that the business is increasingly moving overseas, especially to emerging market countries where markets are booming because of foreign institutional investment inflows.

According to Emerging Markets Private Equity Association, fundraising for emerging market private equity surged in 2005 and 2006. Estimated at $3.4 billion and $5.8 billion in 2003 and 2004, the figure shot up to 22.1 billion in 2004 and $21.9 billion in the period to November 1 during 2006. Asia (excluding Japan, Australia and New Zealand) dominated the surge, with the figure rising from $2.2 and $2.8 billion in 2003 and 2004 to $15.4 billion during 2005 and $14.5 billion during the first ten months of 2006.

Deal-making in developing countries has also gained momentum. Dealogic estimates that the value of private equity deals in the Asia Pacific, excluding Japan, more than tripled to $26 billion in 2006 from $7 billion in 2005. Private equity buyouts have accounted for 7 percent of regional merger and acquisition volume in 2006, up from 3 percent in 2005 but still below the global figure of 17 percent. Though Australia accounted for $11.7 billion in activity, deals in the Indian sub-continent jumped to $3.1 billion in 2006 from $764 million in 2005, with Kohlberg Kravis Roberts & Co.'s $900 million purchase of Flextronics Software Systems, India's largest deal. North Asia deals totalled $10.4 billion, led by Goldman Sachs' $2.6 billion investment in Industrial & Commercial Bank of China, this year's biggest regional deal. Investment banks have raked in $304 million in net revenue from private equity investors thus far in 2006, compared with $239 million last year.

Transformation of the financial sector

The increase in foreign presence in the financial sector in developing countries has meant that the flow of capital is accompanied by the movement of firms and institutions from the developed to the developing. Countries wanting to attract financial investments have to accommodate financial investors as well. Further, when these entities are permitted to enter developing country markets, they would be interested in the replication of their trading practices in the new environment. Policies of financial liberalization are, *inter alia*, meant to meet these requirements of finance capital in countries seeking to attract financial investments. Financial liberalization therefore: (i) opens the country to new forms and larger volumes of international financial flows; (ii) allows entry of a foreign financial entities, varying from banks to private equity firms, into the country; and (iii) dilutes or dismantles regulation and control that does not permit or curbs the operation of the entities and the pursuit of their preferred practices. A consequence of such liberalization is financial consolidation and the proliferation of new institutions and instruments.

It has been argued for sometime now, and especially since the East Asian crisis, that the first of the above features of financial liberalization, involving liberalization of controls on inflows and outflows of capital respectively, have resulted in an increase in financial fragility in developing countries, making them prone to periodic financial and currency crises.

Analyses of individual instances of crises have tended to conclude that the nature and timing of these crises had much to do with the shift to a more liberal and open financial regime. What is less emphasized is the vulnerability that stems from the proliferation of new kinds of foreign institutions, new instruments and new business practices in the wake of liberalization. As we have, the increase in the extent and width of liberalization over the last decade has not only led to the surge in capital flows in recent years but encouraged the entry of speculative investors

adopting unusual lending and investment practices in environments that are even less regulated than the US, for example. This would, therefore, have substantially increased rather than reduced financial vulnerability over the last decade.

Lessons from the US sub-prime crisis

The US sub-prime crisis illustrates how underlying such vulnerability is the financial entanglement which results from the layered financial structure, the "innovative" financial products and the inadequate financial regulation associated with the increasingly liberalized and globalized financial system in most countries. Few deny that the source of the crisis in the sub-prime housing loan market in the US—consisting of loans to borrowers with a poor credit record—is the way in which the preceding boom was triggered and kept going. Housing demand grew rapidly because of easy access to credit, with even borrowers with low creditworthiness scores, who would otherwise be considered incapable of servicing debt, being drawn into the credit net. These sub-prime borrowers were offered credit at higher rates of interest, which were sweetened by special treatment and unusual financing arrangements—little documentation or mere self-certification of income, no or little down payment, extended repayment periods and structured payment schedules involving low interest rates in the initial phases which were "adjustable" and move sharply upwards when they are "reset" to reflect premia on market interest rates. All of these encouraged or even tempted high-risk borrowers to take on loans they could ill afford, either because they had not fully understood the repayment burden they were taking on or because they chose to conceal their actual incomes and take a bet on building wealth with debt in a market that was booming.

What needs to be understood, however, is the problem is largely a supply-side creation driven by factors such as easy liquidity and lower interest rates. Utilizing these circumstances mortgage brokers attracted clients by relaxing income documentation requirements or offering grace periods with lower interest rates, on the completion of which higher rates kick in. As a result, the share of such sub-prime loans in all mortgages rose sharply. Estimates vary, but according to one by Inside Mortgage Finance quoted by the New York Times (Creswell & Bajaj, 2007), sub-prime loans touched $600 billion in 2006, or 20 per cent of the mortgage loan total as compared with just 5 per cent in 2001.

The increase in this type of credit occurred because of the complex nature of current-day finance that allows an array of agents to earn lucrative returns even while transferring the risk associated with the investments that offer those returns, Mortgage brokers seek out and find willing borrowers for a fee, taking on excess risk in search of volumes. Mortgage lenders finance these mortgages not with the intention of garnering the interest and amortization flows associated with such lending, but because they can sell these mortgages to Wall Street banks. The Wall Street banks buy these mortgages because they can bundle assets with varying returns to create securities or collateralized debt obligations, involving tranches with differing probabilities of default and differential protection against losses. They charge hefty fees for structuring these products and valuing them with complex mathematical models, before selling them to a range of investors such as banks, mutual funds, pension funds and insurance companies. These entities in turn can then create a portfolio involving varying degrees of risk and different streams of future cash flows linked to the original mortgage. To boot, there are firms like the unregulated hedge funds, which make speculative investments in derivatives of various kinds in search high returns

for their high net worth investors. Needless to say, institutions at every level are not fully rid of risks but those risks are shared and rest in large measure with the final investors in the chain.

This structure is relatively stable so long as defaults are a small proportion of the total. But if, as the share of sub-prime mortgages in the total rises, the proportion of defaults increases, the bottom of the barrel gives and all assets turn illiquid. Rising foreclosures affect property prices and saleability adversely as foreclosed assets are put up for sale at a time when credit is squeezed because lenders turn wary. And securities built on these mortgages turn illiquid because there are few buyers for assets whose values are opaque since there is no ready market for them. The net result is a situation of a kind where a leading Wall Street bank like Bear Stearns has to declare that investments in two funds it created linked to mortgage-backed securities were worthless. The investors themselves have to sell-off other assets to rebalance their portfolios, sending ripples into markets such as those in developing countries that have little to do with the US sub-prime market.

The problem is not restricted to the Wall Street banks. For example, in early August 2007, the French bank BNP Paribas suspended withdrawals from three of its funds exposed to the mortgage-backed securities market. The bank reportedly attributed its decision to "the complete evaporation of liquidity in certain market segments", which constrained it from meeting withdrawal demands that could have turned into a run on the fund. In some cases a bail-out became necessary, as was true of Dusseldorf-based IKB bank, which through offshore, front company Rhineland Funding had invested as much as $17.5 billion in asset-backed securities. As the value of its assets fell, Rhineland had to call on a €12 billion line of credit that it had negotiated with a group of banks, including Deutsche Bank, besides IKB itself. Deutsche Bank decided to opt out of its promise to lend, resulting in the discovery that the Fund had suffered huge losses and needed a bail-out led by state owned KfW. And in the UK, Northern Rock, a top mortgage lender that is a bank that began as a hosing society, incurred losses in the sub-prime market and became the target of a bank run. Worried depositors began pulling out their money, forcing the Bank of England to intervene because of fears that the disease may spread to other banks. It offered Northern Rock funds to tide over the crisis and depositors a guarantee that their deposits were safe. In sum, the effects of the sub-prime crisis weakened distant segments of the global financial system, as a result of financial entanglement.

Entanglement also makes nonsense of the theory that a complex financial system with multiple institutions, securitization, proliferating instruments and global reach is safer because of the fact that it spreads risk. This was illustrated by the example of IKB referred to above. Banks wanting to reduce the risk they carry resort to securitization to transfer this risk. But institutions created by the banks themselves, linked to them in today's more universalized banking system or leveraged with bank finance often buy these instruments created to transfer risk. In the event, as *The Economist* ("Prime Movers", August 11th, 2007) recently put it, "banks (that) have shown risk out of the front door by selling loans, only ... let it return through the back door." This it notes is what exactly transpires in the relationship between the three major prime broking firms—Goldman Sachs, Morgan Stanley and Bear Sterns—that offer prime broking services, including loans, to highly leveraged institutions like hedge funds. The bail-out of Long Term Capital Management in 1998 was necessitated because of entanglement of this kind involving all the leading merchant banks.

Investments by banks, pension funds and mutual funds are driven by the search for high and quick returns in a world of excess liquidity. In deciding to make investments on structured

products intermediated at different levels, these institutions, ill-equipped to judge the true value and riskiness of these assets, rely on rating agencies. But these ratings have turned out to be unreliable and pro-cyclical, serving as erroneous and belatedly corrected signals. Noting that "in a matter of weeks thousands of portions of subprime debt issued as recently as 2005 and 2006 have had their ratings slashed", *The Economist* ("Sold down the river Rhine", August 11th, 2007) argued that investors should not have trusted the original ratings because "the rating agencies were earning huge fees for providing favourable judgments". What is more, even when there is no deception involved, rating agencies themselves are not equipped to assess these products and rely on information and models provided by the creators of the products themselves. Once an asset is rated there is much reluctance to downgrade it, because it would raise doubts about related ratings as well as trigger a sell-off that affects prices of related securities that may warrant further downgrades.

There are many lessons that are once again being driven home by the sub-prime crisis that are of particular significance for developing countries that are rapidly liberalizing their financial systems. First, excess liquidity in a loosely controlled financial system, which encourages the flow of capital to developing countries, also provides the basis for speculative and unsound financial practices, such as excessive sub-prime lending that increases fragility. Second, such practices are encouraged by the "financial innovation" that liberalization triggers, which increases the number of layers of intermediation and allows firms to transfer risk. As a result, those who create risky "products" in the first instance are less worried about the risk involved than they should be. Third, as the product moves up the financial chain, investors are less sure about the risk and value of these products than they should be, rendering even low risk, first-stage tranches prone to value loss. Fourth, this inadequate knowledge appears to be true even of the rating agencies on whose ratings investors rely, resulting in erroneous ratings and belated rating downgrades. This implies that as and when a rating downgrade does occur, the asset turns worthless, since there is nobody willing to buy into the asset. Fifth, new forms of self-regulation appear to be poor substitutes for more rigorous control, since the current crisis originates in a country whose financial sector is considered the most sophisticated, well regulated and transparent and serves as a model for others reforming their financial sectors. And finally, financial globalization and entanglement imply that countries that have more open and integrated financial systems are prone to contagion effects, even if the virus originates in remote locations and markets. These are lessons that must inform policy in these so-called emerging markets.

Signs of vulnerability

If a supply-side driven surge in liquidity increased vulnerability in the US, it would be difficult to hold that developing countries with even poorer regulatory systems that are imitating the Anglo-Saxon financial model are not vulnerable. One obvious indicator of such an increase in vulnerability is the massive "boom" in their stock markets that emerging markets across the Asian region are experiencing (See Appendix Charts). Market observers, the financial media and a range of analysts agree that foreign investments have been an important force, even if not always the only one, driving markets to their unprecedented highs. There are a number of reasons why this trend points to vulnerability. To start with, the spike in stock prices is extremely sharp. Second, this boom is generalized and occurs independent of the relative economic performance of the country concerned. This not only implies that fundamentals do not have the prime role in determining the behaviour of markets, it also means that the danger of contagion is

real. Third, this occurs both in countries where investors have burnt their fingers in 1997 and in those they have not.

A second indicator of vulnerability is the revival of the credit spiral, which underlay the East Asian crisis. It was no doubt true that in the years immediately following the crisis the flow of private non-guaranteed debt to developing countries as a group fell till 2000 and registered a marginal decline in the subsequent two years to 2002 (Table 5). With government's wanting to discourage debt-dependence, and creditors wary of lending any further, even public and publicly guaranteed debt from private creditors registered a sharp decline during those years. But matters seem to have changed dramatically over the last four years. The flow of non-guaranteed debt from private sources into developing countries has increased by 250 per cent over the four years ending 2006, or at a scorching pace of 28 per cent compound per annum. Simultaneously, governments too seem to have overcome their fear of debt with public or publicly guaranteed debt from private creditors having risen by more than 150 per cent or growing at a compound rate of around 11 per cent annum. In sum, creditors appear willing to lend and debtors willing to borrow, resulting in an aggregate scenario that spells debt dependence of a much larger magnitude than preceded the 1997 crisis.

There has been some change in composition by source as well. While in the immediate aftermath of the 1997 crisis, the relatively small inflow of debt was on account of bond issues by developing countries, with bank credit collapsing and turning negative, in more recent years there has been a revival of bank credit. In terms of target, as was happening at the time of the crisis there is a sharp shift in borrowing away from the public to the private sector. The corporate share of external debt has risen from less than one-fifth of the total in the late 1990s to more than one-half in 2006.

Table 5: The Structure of Private Credit to Developing Countries ($ bn)

	Bonds	**Banks**	**Others**	**Short-term**	**Total**
1998	38.8	49.4	-5.3	-65.3	17.6
1999	30.1	-5.3	-1.5	-17.3	6.0
2000	20.9	-3.8	-3.7	-6.3	7.1
2001	10.3	7.8	-6.5	-23.7	-12.1
2002	10.4	2.3	-6.9	0.5	6.3
2003	24.7	14.5	-4.4	55.0	89.8
2004	39.8	50.6	-4.0	68.4	154.8
2005	55.1	86.0	-4.9	67.7	203.9
2006[e]	49.3	112.2	-5.5	72.0	228.0

Source: World Bank (2007)

What is disturbing is the extreme concentration of these flows, with a growing and now substantial share of it flowing to Europe and Central Asia. In 2006, 57 per cent of flows of private non-guaranteed debt went to this region while East Asia ad the Pacific received 14 per cent and Latin America and the Caribbean 19 per cent. Just 10 countries accounted for thee-fourths of all borrowing in 2006, a sharp increase from the already high 60 per cent average during 2002-04. What is more, the evidence points to a growing share of lending to banks in

developing countries, interested in exploiting the lower interest rates in international as opposed to domestic markets. Loan commitments to the banking sector totalled $32 billion in 2006, which exceeded commitments to the oil and gas sector, a traditional leader.

Finally, the World Bank's report on Global Development Finance 2007 suggests that there has been a decline in credit quality accompanying these developments. To quote: "As private debt flows swell, riskier borrowers may be taking a larger share of the market. The share of bonds issued by unrated (sovereign and corporate) borrowers rose from 10 percent in 2000 to 37 percent in 2006, and the share of unsecured loans in total bank lending rose from 50 percent in 2002 to almost 80 percent in 2006." (World Bank, 2007: p. 47).

The point to note, however, is that despite these disconcerting trends creditor confidence is at a high. The average spread between interest rates charged on developing country loan commitments and the benchmark LIBOR fell from more than 200 basis points in 2002 to 125 in 2006 and the average loan maturities have become longer.

The inevitable conclusion from this evidence that needs explaining is that creditors are not pricing risk adequately and taking it into account when determining exposures. One explanation could be that creditor profiles have changed significantly, with the entry of intermediaries such as hedge funds and other less risk-averse entities into the credit market. The other could be the growing role of credit derivatives, which allows for the pooling of risk and the transfer of risk to entities that are less capable of assessing them.

According to figures reported by the *Financial Times*, "The outstanding notional volume of credit derivatives contracts has doubled every year since the start of this decade to reach $26,000bn in the middle of last year. This has led many traditional credit investors to rethink their strategies. But above all, it has triggered a sharp increase in the number and scale of credit-focused hedge funds. In 1990, according to Hedge Fund Research, hedge funds focused on fixed income strategies accounted for just over 3 per cent of the $39bn of assets under management in the industry. By the end of last year, a more varied array of credit-related strategies accounted for almost 7.5 per cent of a $1,400bn industry – and that does not include convertible bond arbitrage. Similarly, the volume of assets under management in fixed-income arbitrage strategies alone, which seek to exploit price differences between related bonds and rely heavily on derivatives, has leapt from $5.8bn in 2001 to $41bn at the end of 2006, according to HFR." (Davies & Beales, 2007). Since these developments are also taking place in the emerging markets, hedge funds are looking for a role there as well.

These two aspects are indeed related. The emergence of credit derivatives has rendered credit assets tradable. This allows those looking for quick or early profits to operate in this area. But even here financial innovation has played a role. Until recently, other than banks, the major players in the credit business were pension funds and insurers. But with equities proving to be inadequately remunerative investments, banks increasingly geared to creating new instruments based on debt, and credit derivatives offering liquid credit instruments, new players–hedge funds and pension funds–have emerged as investors and new operators–specialized credit funds and managers of collateralized debt obligations–have emerged as providers of instruments.

In sum a decade after the 1997 crisis we are witnessing trends which imply an increase in financial fragility that can lead to further financial crises, with extremely adverse implications for growth, stability, employment and social welfare. This is the element of continuity in a world that is seen as having changed substantially. Self-regulation clearly does not help. New measures to govern finance and financial flows are a necessity.

Macroeconomic fall-out of the capital surge

Besides increasing fragility and vulnerability, the surge in capital flows to developing countries is making the macroeconomic management of these economies increasingly difficult, with potentially adverse implications for development. The growing presence of foreign capital is disconcerting not just because such flows are in the nature of "hot money" which renders the financial sector fragile, but because efforts to attract such flows and accommodate any surge in such flows that may occur have a number of macroeconomic implications.

To start with, inasmuch as financial liberalization leads to financial growth and deepening and increases the presence and role of financial agents in the economy, it forces the state to adopt a deflationary stance to appease financial interests. Deflation follows because financial interests favour tax cuts but oppose deficit financing. Those interests are against deficit-financed spending by the state for a number of reasons. First, deficit financing is seen to increase the liquidity overhang in the system, and therefore as being potentially inflationary. Inflation is anathema to finance since it erodes the real value of financial assets. Second, since government spending is "autonomous" in character, the use of debt to finance such autonomous spending is seen as introducing into financial markets an arbitrary player not driven by the profit motive, whose activities can render interest rate differentials that determine financial profits more unpredictable. Third, if deficit spending leads to a substantial build-up of the state's debt and interest burden, it may intervene in financial markets to lower interest rates with implications for financial returns. Financial interests wanting to guard against that possibility tend to oppose deficit spending. Finally, the use of deficit spending to support autonomous expenditures by the state amounts to an implicit legitimization of an interventionist state, and therefore, a de-legitimization of the market. Since global finance seeks to de-legitimize the state and legitimize the market, it strongly opposes deficit-financed, autonomous state spending.

Efforts to curb the deficit under a lenient tax regime obviously result in a contraction of public expenditure, especially expenditure on capital formation, which adversely affects growth and employment; leads to a curtailment of social sector expenditures that sets back the battle against deprivation; impacts adversely on food and other subsidies that benefit the poor; and sets off a scramble to privatize profit-earning public assets, which render the self-imposed fiscal strait-jacket self-perpetuating. All the more so since the finance-induced pressure to limit deficit spending is institutionalized through legislation like the Fiscal Responsibility and Budget Management Act passed in 2004 in India, which constitutionally binds the state to do away with revenue deficits and limit fiscal deficits to low, pre-specified levels.

Implications of curbing the monetized deficit

This macroeconomic fall-out and its effects are aggravated by the perception that accompanies the financial reform that macroeconomic regulation should rely on monetary policy pursued by an "independent" central bank rather than on fiscal policy. The immediate consequence of this perception is the tendency to follow the principle that even the limited deficits that occur should not be "monetized". Fiscal reform was not concerned only with reducing the size of the deficit, but also with the manner in which any given level of the deficit should be financed. In this regard, fiscal reform involved a sharp reduction of the "monetized deficit" of the government and its subsequent elimination. In many countries this shift out of low-interest borrowing from the central bank has resulted in a sharp rise in the average interest rate on government borrowing,

worsening the fiscal problem. This shift, it is argued, is essential for giving the central bank a degree of autonomy and monetary policy a greater role in the economy. This understanding, in turn, stems from the premise that monetary policy should have a greater role than fiscal manoeuvrability in macroeconomic management.

The question that remains, therefore, is whether this "abolition" of the monetized deficit in order to appease financial capital actually results in central bank independence. It does not if the country is successful in attracting capital leading to a rapid increase in the level of its foreign exchange reserves. The process of reserve accumulation is the result of the pressure on the central bank to purchase foreign currency in order to shore up demand for and dampen the effects on the domestic currency of excess supplies of foreign currency. In India's liberalized foreign exchange markets, for example, excess supply leads to an appreciation of the rupee, which in turn undermines the competitiveness of India's exports. Since improved export competitiveness and an increase in exports is a leading objective of economic liberalization, the persistence of a tendency towards rupee appreciation would imply that the reform process is internally contradictory. Not surprisingly the central bank and the government have been keen to dampen, if not stall, appreciation. Thus, the Reserve Bank of India's (RBI's) holding of foreign currency reserves has been rising in the course of the surge in capital inflows as a result of large net purchases.

Unfortunately, the RBI's ability to persist with this policy without eroding its ability to control domestic money supply is increasingly under threat. Increases in the foreign exchange assets of the central bank amount to an increase in reserve money and therefore in money supply, unless the RBI manages to neutralize increased reserve holding by retrenching other assets. If that does not happen the overhang of liquidity in the system increases substantially, affecting the RBI's ability to pursue its monetary policy objectives. Till recently the RBI has been avoiding this problem through its sterilization policy, which involves the sale of its holdings of central government securities to match increases in its foreign exchange assets. But even this option has now more or less run out. Net Reserve Bank Credit to the government, reflecting the RBI's holding of government securities, had fallen from Rs 1,673.08 billion at the end of May 2001 to Rs 46.260 billion by December 10, 2004. There was little by way of sterilization instruments available with the RBI. To partly deal with this problem, the government launched a Market Stabilization Scheme in April 2004. Under the scheme, the Reserve Bank of India is permitted to issue government securities to conduct sterilization operations, the timing, volume, tenure and terms of which are at its discretion. The ceiling on the maximum amount of such securities that can be outstanding at any given point in time is decided periodically through consultations between the RBI and the government.

Since the securities created are treated as deposits of the government with the central bank, it appears as a liability on the balance sheet of the central bank and reduces the volume of net credit of the RBI to the central government, which has in fact turned negative. By increasing such liabilities subject to the ceiling, the RBI can balance for increases in its foreign exchange assets to differing degrees, controlling the level of its assets and, therefore, its liabilities. The money absorbed through the sale of these securities is not available to the government to finance its expenditures but is held by the central bank in a separate account that can be used only for redemption or the buy-back of these securities as part of the RBI's operations. As far as the central government is concerned while these securities are a capital liability, its "deposits" with the central bank are an asset, implying that the issue of these securities does not make any net

difference to its capital account and does not contribute to the fiscal deficit. However, the interest payable on these securities has to be met by the central government and appears in the budget as a part of the aggregate interest burden. Thus, the greater is the degree to which the RBI has to resort to sterilization to neutralize the effects of capital inflows, the larger is the cost that the government would have to bear, by diverting a part of its resources for the purpose.

There are three consequences of these developments. First, the monetary policy of the central bank that has been de-linked from the fiscal policy initiatives of the state, is no more independent. More or less autonomous capital flows influence the reserves position of the central bank and therefore the level of money supply, unless the central bank chooses to leave the exchange rate unmanaged, which it cannot. This implies that the central bank is not in a position to use the monetary lever to influence domestic economic variables, however effective those levers may be. Secondly, the country is subject to a drain of foreign exchange inasmuch as there is a substantial difference between the repatriable returns earned by foreign investors and the foreign exchange returns earned by the Reserve Bank of India on the investments of its reserves in relatively liquid assets. Finally, in its effort to balance the accumulation of foreign exchange assets by retrenching government securities deposited with it by the central government under the Market Stabilization Scheme, the RBI has taken on deposits of such securities to the tune of more than Rs 1,800 billion. Since the interest due on those securities has to be met from the central budget, the Budget for 2007-08 had provided for an outgo of Rs 37 billion on this account. But the Mid-Year Review estimates that interest payments on bonds issued for this purpose would amount to Rs 82 billion during financial year 2007-08, necessitating a supplementary demand of Rs 45 billion. Even more money may have to be allocated for the purpose before the next financial year. This would make fiscal management difficult as well. The outcome may be a further cutback in capital and social expenditures.

While partial solutions to this problem can be sought in mechanisms like the Market Stabilization Scheme, it is now increasingly clear that the real option in the current situation is to either curb inflows of foreign capital or encourage outflows of foreign exchange. As the RBI's survey of monetary management techniques in emerging market economies reported in its Survey of Currency and Finance 2003-04 makes clear, countries have chosen to use stringent capital control measures or market-based measures such as differential reserve requirements and Tobin-type taxes to restrict capital inflows.

Countries unwilling to opt for capital control measures are soon forced to loosen capital outflow norms to expend the foreign exchange "acquired" through large capital inflows, because of pressures to prevent any "unbridled" appreciation of the domestic currency. In countries like India, policies adopted with this objective include: substantial expansion of the permission to use foreign exchange for investment abroad by Indian residents; greater flexibility regarding pre-payment of external commercial borrowings by private sector firms; liberalization of surrender requirements for exporters enabling them to hold up to 100 per cent of their proceeds in foreign currency accounts; extension of foreign currency account facilities to other residents, with permission to transfer large sums annually for any legally permissible expenditure in the host country; and allowing banks to liberally invest abroad in high quality instruments.

Thus, one response to the difficulties countries face in managing the recent surge in capital inflows, regulate, is to move towards greater liberalization of the capital account. This only aggravates the problems created by excess global liquidity in the first instance.

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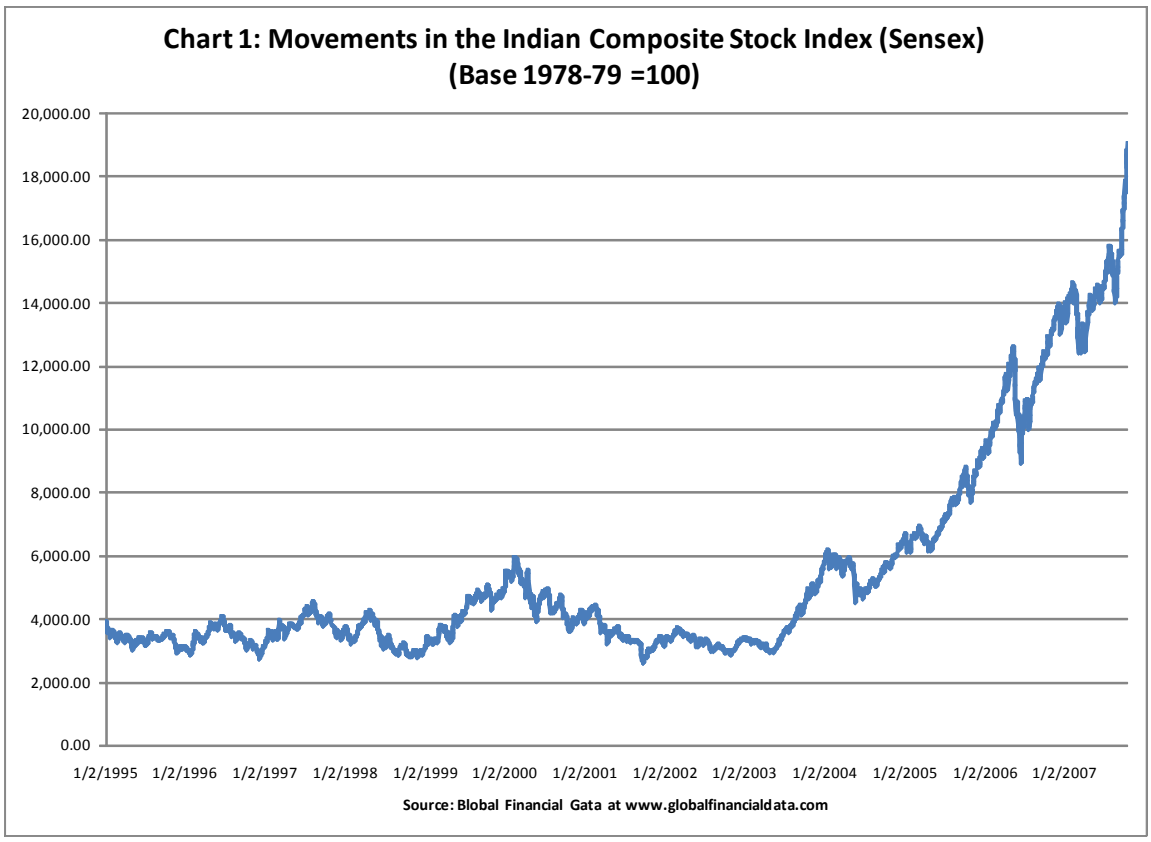
Chart 1: Movements in the Indian Composite Stock Index (Sensex)
(Base 1978-79 =100)
20,000.00
18,000.00
16,000.00
14,000.00
12,000.00
10,000.00
8,000.00
6,000.00
4,000.00
2,000.00
0.00
1/2/1995
1/2/1996
1/2/1997
1/2/1998
1/2/1999
1/2/2000
1/2/2001
1/2/2002
1/2/2003
1/2/2004
1/2/2005
1/2/2006
1/2/2007
Source: Blobal Financial Gata at www.globalfinancialdata.com

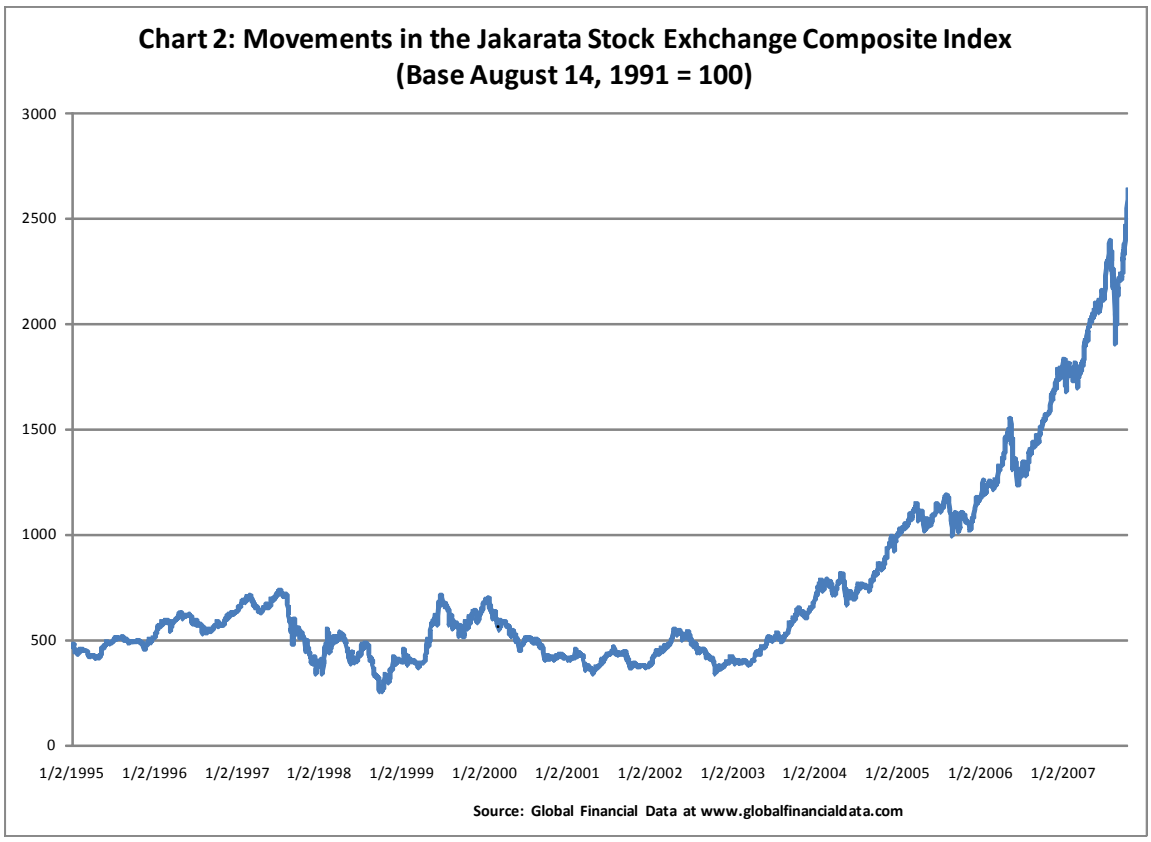
Chart 2: Movements in the Jakarata Stock Exhchange Composite Index
(Base August 14, 1991 = 100)
3000
2500
2000
1500
1000
500
0
1/2/1995
1/2/1996
1/2/1997
1/2/1998
1/2/1999
1/2/2000
1/2/2001
1/2/2002
1/2/2003
1/2/2004
1/2/2005
1/2/2006
1/2/2007
Source: Global Financial Data at www.globalfinancialdata.com

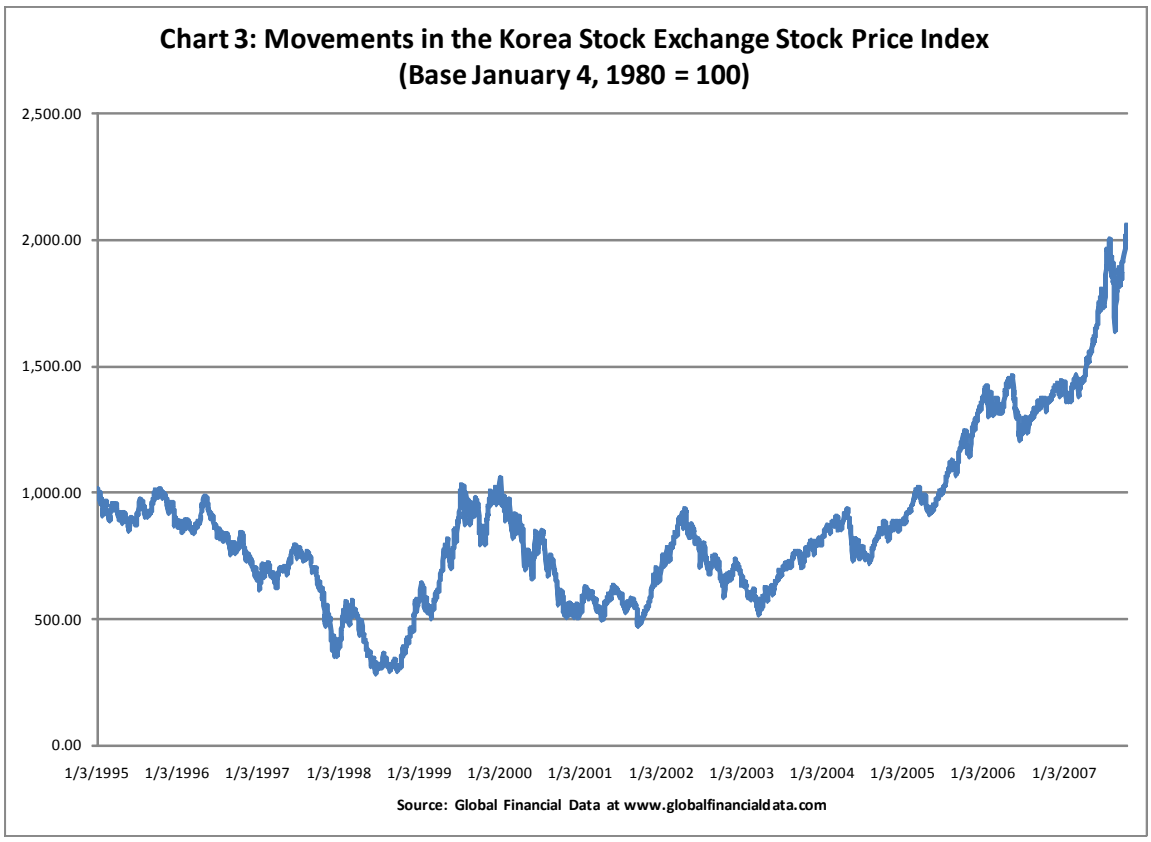
Chart 3: Movements in the Korea Stock Exchange Stock Price Index
(Base January 4, 1980 = 100)
2,500.00
2,000.00
1,500.00
1,000.00
500.00
0.00
1/3/1995
1/3/1996
1/3/1997
1/3/1998
1/3/1999
1/3/2000
1/3/2001
1/3/2002
1/3/2003
1/3/2004
1/3/2005
1/3/2006
1/3/2007
Source: Global Financial Data at www.globalfinancialdata.com

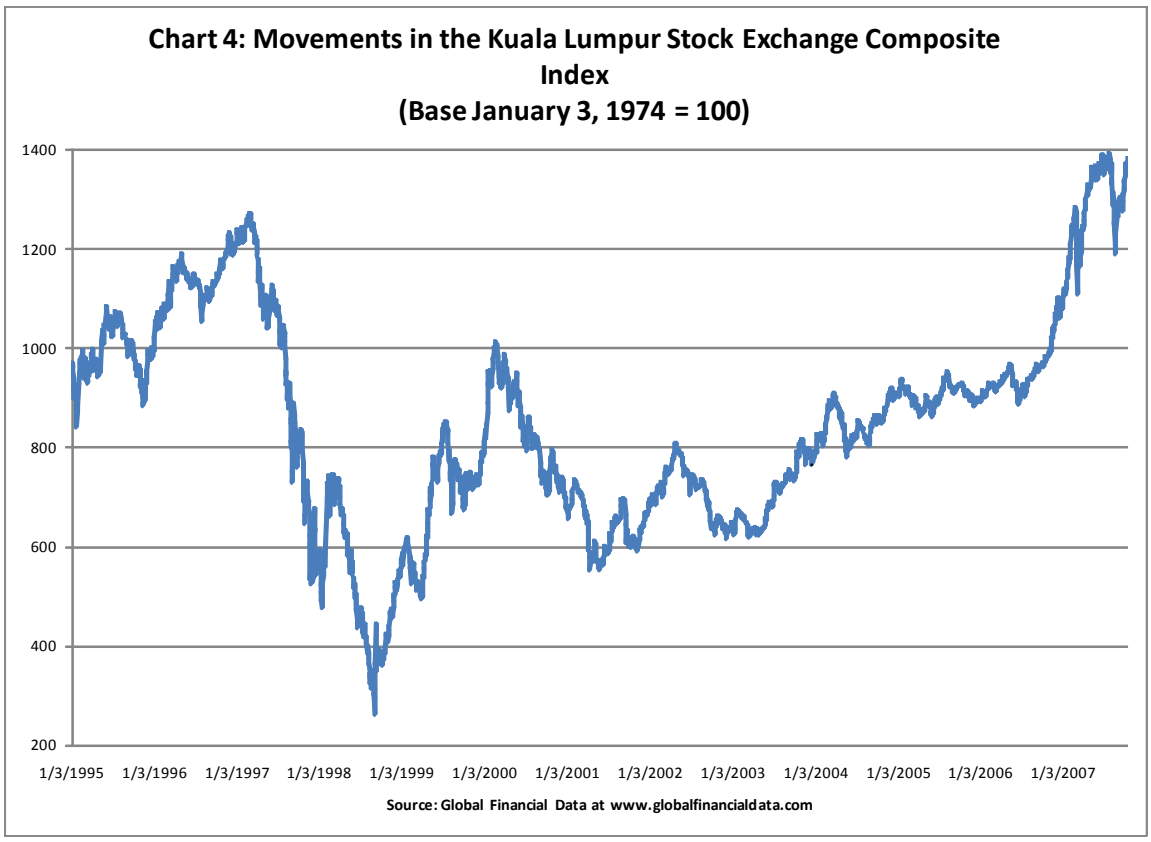
Chart 4: Movements in the Kuala Lumpur Stock Exchange Composite Index
(Base January 3, 1974 = 100)
1400
1200
1000
800
600
400
200
1/3/1995
1/3/1996
1/3/1997
1/3/1998
1/3/1999
1/3/2000
1/3/2001
1/3/2002
1/3/2003
1/3/2004
1/3/2005
1/3/2006
1/3/2007
Source: Global Financial Data at www.globalfinancialdata.com

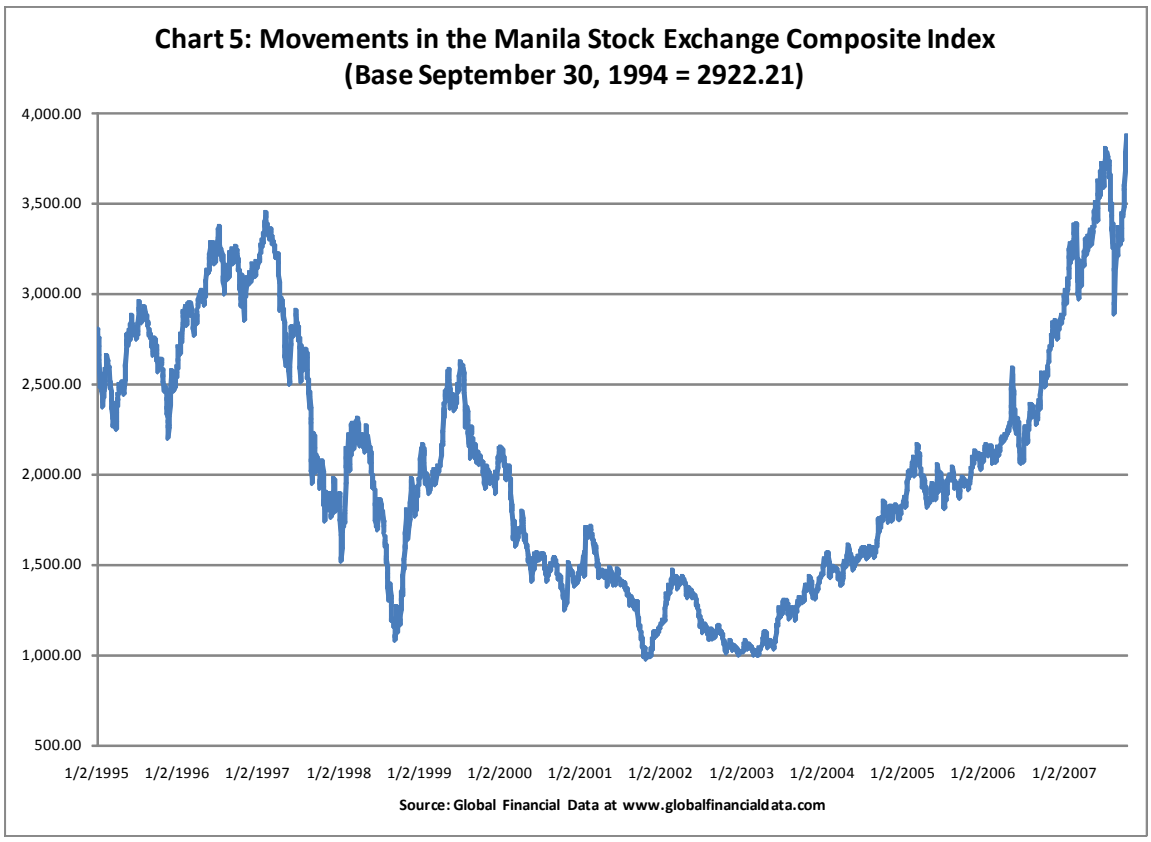
Chart 5: Movements in the Manila Stock Exchange Composite Index
(Base September 30, 1994 = 2922.21)
4,000.00
3,500.00
3,000.00
2,500.00
2,000.00
1,500.00
1,000.00
500.00
1/2/1995
1/2/1996
1/2/1997
1/2/1998
1/2/1999
1/2/2000
1/2/2001
1/2/2002
1/2/2003
1/2/2004
1/2/2005
1/2/2006
1/2/2007
Source: Global Financial Data at www.globalfinancialdata.com

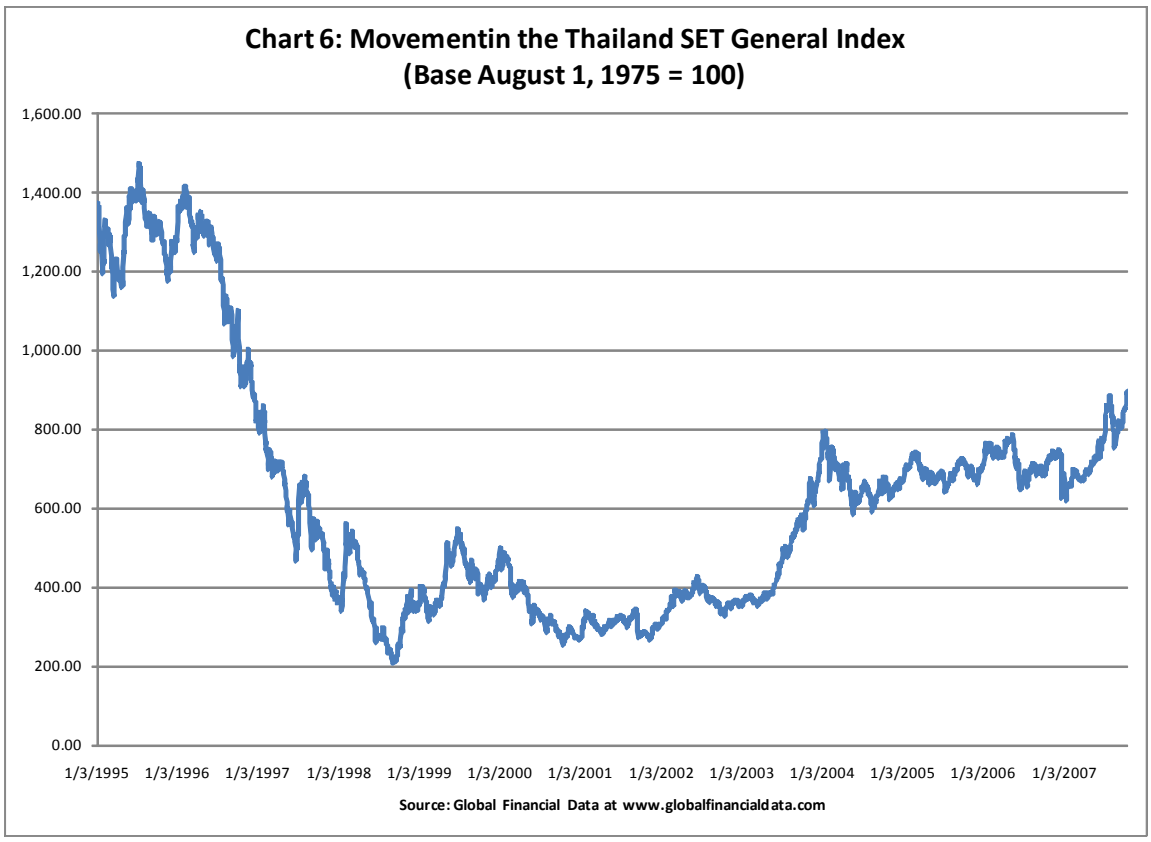
Chart 6: Movementin the Thailand SET General Index
(Base August 1, 1975 = 100)
1,600.00
1,400.00
1,200.00
1,000.00
800.00
600.00
400.00
200.00
0.00
1/3/1995
1/3/1996
1/3/1997
1/3/1998
1/3/1999
1/3/2000
1/3/2001
1/3/2002
1/3/2003
1/3/2004
1/3/2005
1/3/2006
1/3/2007
Source: Global Financial Data at www.globalfinancialdata.com