Delhi Business Review ✠ Vol. 8, No. 1 (January - June 2007)

HAVE WE LEARNT ANYTHING FROM THE ASIAN CRISIS?

LOOKING AT THE CRISIS FROM THE PERSPECTIVE OF INDIA

Rakesh Gupta*
Parikshit K. Basu**

THE Asian crisis of 1997-98 represents a forceful manifestation of the weakness of the economic profession, commercial businesses, international financial organisations and the banks in identifying the vulnerability and preventing the economic despair associated with the crisis. This paper attempts to analyse the role of financial structure of an economy in maintaining economic stability and explore the situation where a vulnerable financial structure leads to a crisis. It critically evaluates the causes of the Asian financial crisis of 1997-98 focussing on the crucial trigger factors. The situation in India is then analysed in the backdrop of the Asian crisis lessons. The paper concludes that the financial structure in India is weak and unstable at present as it is going through the process of transformation. But this may not necessarily lead to a crisis as no known trigger factors are apparent at the moment. However, the policy makers should attempt to improve the financial structure in India by removing imbalances already created in the process of financial sector reforms. Otherwise, new trigger factors might emerge to lead the vulnerable situation to a crisis.

Keywords: *Currency crisis, Vulnerability, Moral hazard, Asian crisis, Financial reforms.*

Introduction

The Asian crisis of late 1997-98 represents a forceful manifestation of the vulnerability of the economics profession, commercial businesses, international financial organisations and the banks in predicting and if possible, preventing the economic turmoil associated with the crisis. The crisis struck some of the most rapidly growing economies of the time. Crisis was unforgiving and unanticipated when it struck. Economists, policymakers or the market analysts had no idea of such severe danger coming.

The crisis in Asia was largely unanticipated. None of the economists or international organisations raised any serious warning signals with respect to the crisis except for Krugman (1994) and UNCTAD (1996). However, these studies also suggested economic slow-downs and nothing like what happened soon afterwards in Asia. What we have witnessed in several Asian markets was collapses in domestic asset markets, widespread bank failures and bankruptcies and a very severe downturn in the economy in general.

Currency crises are fast outflows of financial capital in expectation of possible currency depreciations, causing exhaustion of reserves, financial instability and finally contraction in the economy (1). The first recorded financial crisis occurred in the 18th century involving South Sea Company. More recent examples of crisis include Mexican crisis of 1994 and the Asian crisis of 1997-98. These events and global after effects of the events have led to many theoretical and empirical studies, wherein researchers

* *Lecturer, School of Commerce, Faculty of Business and Informatics, Central Queensland University, Rockhampton, Australia.*
** *Senior Lecturer, School of Marketing & Management, Charles Sturt University, Bathurst, Australia.*

have attempted to identify causes of the crisis, vulnerability of an economy to a currency crisis, policy implications of the crisis and contagion and suggesting ways to avert crisis in future. The countries most severely affected by the Asian crisis of 1997-98 were Thailand, South Korea, Indonesia and Malaysia. Hong Kong and Philippines were also affected but less severely.

This paper attempts to analyse the situation where a vulnerable financial structure leads to a crisis. It critically analyses the causes and lessons of the Asian financial crisis of 1997-98 focussing on the crucial trigger factors. The situation in India where the financial structure is evolving at present is then analysed in the backdrop of the lessons learnt from Asian crisis. The paper concludes that the financial structure in India is weak and unstable at present as it is still going through the process of transformation. Improvements have been made in this process and as such still weak financial structure may not necessarily lead to a crisis as no known trigger factors are apparent at the moment. However, the policy makers should attempt to accelerate the process of improving the financial structure in India by removing imbalances already created in the process of financial sector reforms. Otherwise, new trigger factors might emerge to lead the vulnerable situation to a crisis.

The next section of the paper critically analyses the Asian financial crisis in detail. Section 3 deals with the situation in India focussing on reform measures and the emerging imbalances that made the structure weak and unstable, at least for the time being. The final section summarises the conclusions.

Anatomy of the Asian crisis

Background of the crisis

A strong and efficient financial system is generally considered a prerequisite for establishment of market driven, productive and competitive economy at any stage of economic development. In case of newly opened or reformed economies like India and China, the financial system plays even more important role in allocating scarce resources to their final uses (Graff 2003). Allen (2001) also found that financial structure does matter for economic growth. He suggested that for a traditional economy based on manufacturing activities, bank-based financial system should help the process of economic growth. But for a knowledge-based economy, capital market may play a more appropriate role.

Since the fall of the Bretton Woods system in early 1970s, the world has seen several financial crises, specially in the emerging markets, in the Southern Latin America (Argentina, Chile and Uruguay in 1981-82; in all of Latin America, during the 1982-89); in Western Europe in 1992-93; Mexico in 1994-95 and in Asia during 1997-98. Theoretical and empirical literature has suggested that financial crises in 1990s have been preceded by several common features - pegged exchange rate regimes, rapid financial liberalisations, massive capital inflows, real appreciations of the currency, deteriorating current accounts and speculative and herding behaviour in the capital markets.

Mexican and Asian crises in more recent years were followed by rich literature on the causes, prevention and forecasting techniques to forecast crisis and identify vulnerable economies. The research on the causes and treatment of Mexican crisis did identify several responsible factors (Bustelo, 2000). But the current literature on the indicators of the currency crises does not fit well with the circumstances in the Asian countries before the crises occurred. Out of the eight main significant variables identified in the literature (2), only one (a high ratio of short-term foreign debt to reserve or rise in this ratio) was recorded in the troubled East Asian economies in the period preceding the onset of crises in mid-1997.

The Asian crisis was different from other crises. Fundamental aspects of macroeconomic management remained sound in the affected economies in the period preceding the crisis. Fiscal balance, low inflation rates and high growth rates were also observed. The four worst affected countries, Thailand, Korea, Indonesia and Malaysia followed responsible budgetary policies in the period preceding the crisis (3). Monetary policies were prudent as was indicated by the short-term inflation rates and interest rates. In any case, monetary policy was not expected to play a major role while pegged exchange rate system was in operation. Domestic savings and investment rates were high, suggesting growth was not dependent upon maintaining capital inflows only. However, capital inflows remained strong throughout 1995, 1996 and part of 1997 as assessment of credit rating agencies was strong. Although total external debt was not excessively high, maturity structure and composition of the debt were of concern. Current account deficits were high but the capital inflows in the pre-crisis period were adequate to match the deficits. Based on the fundamentals, none of the economists or the international organisations raised any warning bells, except for Krugman (1994), who did point to the vulnerability of these countries but did not raise strong concerns. UNCTAD (1996) also raised concerns about the possible slow down in the economic development in the Asian countries but did not suggest of a crisis of the magnitude which struck afterwards.

World market conditions were not sufficiently adverse prior to the commencement of the Asian crisis. Prior to the Mexican crisis, Japan's economy, the major trading partner of Mexico, was showing signs of slowdown. In case of Asia, the US economy, major trading partner for Asia during the pre-crisis period was strong. Thus the crisis in Asia could not have been caused by the global economic conditions.

Credit to the private sector was rising and so was the foreign borrowing by the banking sectors to finance the credit to private sector. This was particularly acute in Korea, Malaysia and Thailand with financial sector claims on the private sector rising to the level in excess of 140% of GDP in 1996 (Radelet and Sachs, 2000).

Identified reasons

Athukorala and Warr (2002) argued that unmanaged international capital flows and private sector financial decisions were one of the most important contributory factors of the Asian crisis of 1997-98. The East Asian crisis was associated with financial panic where drastic currency depreciations and stock market adjustments have been far in excess of expectations. This was reflected in the reversal of capital flows around the time of the crisis. In 1996, for the Asian-5 countries (4) there was a net inflow of foreign capital of US$ 93 billion and, on reversal in 1997, the net outflow was US$ 12 billion, which indicated an outflow of US$ 105 billion during the year. This was equal to 11% of the pre-crisis combined GDP of these countries (Radelet and Sachs, 2000).

Krugman (1998b) emphasised that the major cause of the crisis was moral hazard and not necessarily the faulty macro-economic policies. Several researchers have supported this view (e.g. Chang, 2000; Mckinnon and Pill, 1998). There were structural flaws and some problems of macro-economic management. These were contributory to the crisis but not the primary factor causing the crisis. Krugman (1998a) explained the Asian crisis in terms of two factors - moral hazard and over investment. Moral hazard arises as financial institutions implicitly seem to have guarantees from the government. Foreign creditors are lured by these seemingly safe and high return investments, thus extending credits to local banks. This moral hazard on the part of the banks gets even worse when these borrowed funds are channelled to unproductive sectors which are already over-invested. Large scale insolvencies and bankruptcies in the corporate and banking sector in Korea and Thailand could be due to overinvestment in companies. The argument of over investment in these countries is also supported by the evidence of cronyism in these countries (Chang, 2000) (5). Further support to the argument of over investment is found in the increasing investment in Malaysia and Korea which exceeded 40% and 35% respectively of GDP during 1996 (Bustelo, 2000).

Moral hazard may have played an important role in international lending operations for a long time. The Mexican bailout could have provided incentive to imprudent lending all over the world.

Many governments in East Asia might have been expected to stand ready to bail out private debtors – something that had also been seen as an even greater source of moral hazard for the Asian borrowers. It is difficult to assess the precise role of moral hazard in imprudent lending. However, the international intervention in Asia was designed primarily to guarantee repayment to foreign lenders. Again, negotiated settlements resulted in the socialization of private external debt when the governments were forced to assume loan losses, particularly in Korea.

Some researchers have considered liberalisation as the major cause of the crisis (Bhagwati, 2001; Furman and Stiglitz, 1998; Sachs, 1995; Williamson, 1999). 'The chief underlying cause of the Asian crisis starting mid-1997 was to be found in the hasty opening to freer capital flows under pressure from ….' (Bhagwati 2001, p. 56). As documented by Athukorala and Warr (2002), there was evidence that in the lead up to the crisis, the affected economies had (i) rapid accumulation of mobile capital (6); (ii) domestic lending booms and (iii) over valued exchange rates. Capital account opening could facilitate the foreign borrowings but was not expected to cause a crisis by itself (Bhagwati, 2001).

Thus, from the views of major researchers it becomes clear that several economies in Asia (e.g., Thailand, Indonesia, Malaysia and Korea) had problems within their systems. These included pegged exchange rate system, high inflow of capital that was largely uncontrolled towards the end and lack of prudential controls. All of these factors had contributed to the crisis and they had build up over the years. However, none of these factors alone could have caused a serious crisis unless there was a major underlying provocative factor such as moral hazard. The banks and financial institutions continued to breach basic financial norms such as using short-term credit inflow to finance long-term projects (Krugman, 1998a). All these were done with the understanding that the government would bail out in case there was any problem. As the situation continued for a fairly long period the moral hazard phenomenon became deep rooted and financial institutions were increasingly involved in reckless activities. Close nexus between political power and economic institutions made the situation worse and moral hazard was almost obvious. For example, in Indonesia, a number of clearly known insolvent institutions were permitted to continue operations with subsidies. The central bank failed to monitor the build-up of high corporate debt as well (7). At the same time, financial derivatives facilitated efforts by some entities in raising their risk-to-capital ratios, dodging regulatory safeguards, manipulating accounting rules and evading taxation (Dodd, 2001). None of such activities would have continued for a long time unless political-economic alliance of the affected economies created an ideal situation of moral hazard.

Lessons from the crisis

Analysis of a crisis always provides lessons for future. Researchers attempt to identify features of a crisis and try to use them as measures to identify possibility of another crisis in future. From Asian crisis analysis, it becomes evident that high dependence on inflow of foreign capital and presence of moral hazard can create serious problems and make the economy vulnerable to a crisis. However, possibility and vulnerability do not always lead to a crisis, as past experiences have proved.

Vulnerability means predisposition to a crisis - if anything goes wrong suddenly a lot goes wrong (Athukorala and Warr, 2002). Vulnerability in itself may not cause a crisis. It needs a trigger that would push a vulnerable economy into a crisis. This trigger could be an error of judgement in macroeconomic policies, failure to implement a policy reform (ibid) or a contagion. Comparing the determinants of vulnerability of five crisis countries (Thailand, Indonesia, South Korea, Malaysia, and the Philippines) as compared to the five economies that, by and large, escaped the crisis during late 1990s (China, Taiwan, Singapore, India and Sri Lanka), Athukorala and Warr (2002) observed that the trigger events must have played the most pivotal role. Akerlof and Romer (1994) argued that crisis had elements of panic and disorderly workout. Pilbeam (2001) had a view that the crisis was caused by excessive foreign financed credit expansion, which resulted in unsustainable asset bubbles. The resulting crisis would have been less severe if international investors had rolled over the loans and did not exit simultaneously. Thus, in essence it appears that the crisis was caused by moral hazard (excessive foreign financed credit expansion), credit bubble (the credit bubble caused by excessive foreign finance, which could happen because of the moral hazard) and then finally financial panic worked as a trigger.

India had largely avoided the crisis in late 1990s. Is it vulnerable to such a crisis in future? There are more dissimilarities than similarities between India and the crisis affected Asian economies in terms of economic and financial structures. But India is increasingly becoming dependent on inflow of foreign capital and moral hazard phenomenon is also prevalent. Financial institutions are still largely dominated by the public sector in India and that indirectly acts as a public guarantee of the financial liabilities. Thus it may be interesting to analyse the situations in India to assess the level of vulnerability at the present point of time.

Financial structure in India and challenges ahead

The financial system in India was almost entirely controlled by the government directly till the reform process started in early 1990s. The financial structure was compartmentalised and dominated by public sector institutions in each compartments. Banks and financial institutions directly owned by the government controlled short-term and long-term credit flows. With highly regulated national economy, the financial system worked without any major conflict. However, inefficiencies were very evident in almost all public sector financial institutions. Capital market was underdeveloped and did not play a major role in mobilising credits. Efficiency of capital market was also low.

While the overall reform process commenced in India in 1991, it was realised that an efficient banking system and a well functioning capital market capable of mobilizing savings and channelling them to productive uses were essential if India's effort at economic restructuring was to succeed (Vaghul, 1994). Financial sector reforms in India are generally associated with the Narsimham Committee report (GOI, 1992) that charted a road map for reforms of the banking sector. However, the capital market reforms were initiated from mid 1980s (8). Over the past decade-and-a-half series of reform measures have been introduced that have significant impact on workings of stock exchanges, commercial banks, development financial institutions, mutual funds, insurance companies and non-bank finance companies (Datar and Basu, 2004).

The reform process began with stock exchanges and then spread to banks, mutual funds, NBFCs and of late, to insurance companies. However the spread of reforms has been rather uneven. For example, while co-operative banks and NBFCs have remained largely unaffected, the state level institutions which performed a significant role in funding of small and medium enterprises are yet to adjust to the effects of competition. While the reforms in those sectors where participants are comparatively bigger and, therefore, visible remain at the centre of public discussion, the weaker links in the financial system became apparent in different irregularities (scam) in recent years.

Several participants in the financial system have responded by product diversification and entering new business segments. Non-banks entered banking operations while banks entered in insurance, mutual funds and stock broking. Simultaneous reforms in trade and foreign exchange markets have facilitated opening of financial system to foreign capital, foreign participants and their business practices.

Capital markets reform process in India commenced in mid 1980s, these were confined initially to equity market. The process have gained momentum since 1990s and gradually covered debt markets. The capital market reforms present a case where a judicious combination of competition, deregulation and regulation has led to sustained reforms and increased efficiency. The Securities Exchange Board of India (SEBI) was set up as a market regulator with statutory powers to control and supervise operations of all participants in the capital market viz. stock exchanges, stock brokers, mutual funds and rating agencies. Opening of stock exchange trading to Foreign Institutional Investors (FIIs) and permission of raising funds from international market through equity linked instruments have introduced a degree of competition to domestic exchanges and other market participants.

The main component of the financial market in India is the commercial banks. Banking sector reforms are so far dominated by deregulation, decontrol and increasing competition. This was partly because banks were subjected to elaborate micro regulations, and the institutional changes were limited by dominance of government ownership. While commercial banks were directly regulated in the pre-reform period, the focus of regulation has now changed to prudential regulations (Shirai, 2001). Banks are now subjected to uniform accounting standards, provisioning requirements, asset classification and capital requirements. Subject to such prudential regulations banks are now left free to make micro decisions on credit assessment and disbursement. An element of competition was introduced with provision to set up new banks in the private sector. Such new private banks could start using new technologies from a clean slate and compete with existing established banks. These banks have carved out a niche for themselves and have been instrumental in forcing other banks to adopt modern technology, offer wider product range and adopt a customer centric approach. However, the ownership, organization and internal work process of government owned banks and other financial institutions have largely remained unchanged so far (Chipalkatti and Rishi, 2003). There has not been much change in systems of nomination of directors on bank boards, appointment of chief executives and other senior managerial professionals. In the area of credit policy, banks are now required to adopt an independent professional approach based on risk appetite and the prevailing industrial and commercial outlook.

The non-bank financial intermediaries sector in India consists of Development Financial Institutions (DFIs) (9) largely owned by the government and small firms in private sector providing specialized financial services (10). Deregulation of interest rates and phasing out of low cost funding support from the government made the traditional model of DFIs unsustainable. As interest rates are now market determined, long-term lending rates are higher than short-term rates and banks have natural advantage in offering loans at lower rates as they have access to low cost primary deposits (11). The relative disadvantage of DFIs in offering loans at competitive rates coupled with recent industrial slow down has resulted in higher non-performing loans and lower volumes of fresh business. In such a situation, DFIs need to redefine their roles and re-position themselves in the competitive financial system. This process, however, is subject to government policies as the government owns most of these institutions. While the problems of all-India institutions are publicly discussed those of state level institutions, which are no less serious often go unnoticed.

As a result of series of reforms the divisions between banking, securities and insurance sectors have become less visible in India in recent years. Banks have now started moving towards universal banking structures involving banking, insurance, securities and merchant banking businesses. At the same time, increasing competition has created certain improvements in public sector institutions, resulted in a growing number of mergers and also in the emergence of financial conglomerates. The capital markets are also growing at a rapid rate(12). At this point it is necessary to have effective prudential regulations to keep the financial system under control. In recent years, a number of countries, both developed and developing, have made attempts to restructure their financial supervisory and regulatory systems to suit requirements of their changing financial sector. In India as well the supervisory system is being modified towards this target.

However, there seems to be a significant gap developing in the process of financial sector reforms. As observed by Datar and Basu (2004), the reform measures in India mostly affected external factors such as increasing competition by permitting private (including foreign) entrants, removing price restrictions such as interest rates and exchange rates and instituting a system of prudential regulations. Very rarely reform measures so far dealt with organizational and institutional aspects of the process internal to financial institutions. The organizational and governance structures of individual institutions are important for efficient decision-making and that, in turn may affect the efficacy of the market system itself.

The government still owns most of the financial institutions in India. The government decides most of the important aspects of human resource policies in these public sector institutions and, they are not performance oriented. As compared to pre-reform period, the financial institutions in India now work within a more competitive environment with much higher risk. With liberalization of interest rates and foreign exchange rates, market price risks have become more relevant. The risk taking behaviour of the managers of a financial institution is a function of its institutional policies on acceptable risk profile and human resource policies on performance management and incentives schemes. Only those institutions that are well equipped to handle risk assessment and mitigation can compete efficiently in the market. Moreover, as Indian industries now face a more open and competitive business environment, credit risks faced by the financers have also gone up. In such a scenario, internal systems of banks should be more risk sensitive while at the same time flexible enough to be appropriate for a competitive business environment. This would require quite a bit of overhaul of human resource practices followed by the public sector institutions. Unless financial sector reforms start addressing these aspects, the benefits of reforms would remain limited. If left unattended, this may pose a serious threat to financial stability and economic growth, as it happened in several other less developed economies in the past.

During transformation of economies (e.g. implementation of economy-wide reforms), economies experience types of vulnerabilities and instabilities, as evidenced in most of the East European economies in the recent past. India is no exception to this. Along with other sectors, financial sector reforms have suddenly exposed the domestic institutions to international competition. Opening up of the sector has allowed significant inflow of foreign capital which was practically impossible in the past. Such sudden impacts could very well cause vulnerability within a system. Although there are signs of imbalances within the financial institutions in India in recent years, possibility of a crisis may not be imminent. There is no sign of any trigger factor as it was in crisis-stricken Asian economies in pre-1997 period.

Table 1: Selected Financial Indicators: India

	2000-01	2001-02	2002-03	2003-04	2004-05
Current account balance as % of GDP	-0.14	0.16	0.28	0.42	-0.23
Government fiscal deficit as % of GDP	5.69	6.20	5.89	4.47	4.48
External Debt as % of GDP	22.60	21.10	20.20	17.80	17.40
Short term Debt as % of total debt*	4.0	3.6	2.8	4.4	4.0
External Debt servicing as % of GDP	17.10	16.60	13.40	16.40	16.30
Domestic Debt as % of GDP	5.85	6.50	6.96	5.43	4.60
Non performing loans as % of GDP	6.20	5.50	4.40	2.90	N.A.
Real effective exchange rate	66.53	68.43	72.76	74.14	76.95

Source: Reserve Bank of India, Handbook of Statistics on Indian Economy (http://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy) - viewed on 1/2/06

As Table 1 indicates, selected financial indicators at the macro level were more or less stable in the recent past. In case of most of the worst affected Asian economies during the second half of 1990s, similar indicators were adverse and most importantly, deteriorated very fast over the years (Shetty, 2002; Athukorala & Warr, 2002). In India, current account balances as percentage of GDP has remained stable in recent years. Government fiscal deficit as percentage of GDP has slightly improved from 5.69 in 2000-01 to 4.48 in 2004-05. Dependence on external debts (as percentage of GDP) has also reduced - from 22.60% in 2000-01 to 17.40% in 2004-05. Percentage of short term debt to total debt is fluctuating, but not at an alarming level as yet. Non-performing loans (as % to GDP) is also within acceptable range over the years.

Presence of moral hazard enhanced the vulnerability of the financial structure in India. Moral hazard phenomenon is practically unavoidable in developing economies, particularly which followed state-led development approaches like India. Long practice of direct government supports resulted in inefficiencies and widespread unfair practices in financial institutions in India (Datar and Basu, 2004). Existing regulations had not been applied with equal enthusiasm in all cases of inappropriate practices in the past. Since the reform process started there has been new surge of regulatory measures. Increasing competition and presence of a modified prudential mechanism might reduce the moral hazard impacts in the future. This would certainly strengthen the financial structure of India and reduce vulnerability of a financial crisis.

Conclusions

Relationship between financial structure and financial and economic stabilities has been widely acknowledged in the literature. In general, developing and emerging economies tend to have unstable and weak financial structures, particularly during the period of transformation. It is not necessary that a weak financial structure will always lead to a crisis. Lessons from recent financial and economic crises such as the Asian crisis in 1997-98 proved that a sub-optimal financial structure may be necessary but not sufficient condition in itself for a crisis. Factors, identified in the literature, which may have caused the Asian crisis, include existence of moral hazard and excessive foreign financed credit expansion. This excessive expansion in the credit contributed to the unsustainable asset bubbles. The unstable financial structure was excessively pressurized to handle large inflows of foreign capital for a long period of time when the moral hazard phenomenon was on the rise due to close nexus between political and business powers in most of the affected economies. The vulnerable situation just needed a trigger to lead it to a crisis. Once the problem accumulated, the triggers were possibly provided by deteriorating foreign exchange reserves due to pegged exchange rate regime, panic and disorderly workout.

At the present stage of transformation, the financial structure in India displays imbalances and instabilities. Series of reform measures have been initiated in India in the last decade or so to make the financial sector more competitive, fair and transparent. But till date the financial institutions are largely owned and controlled by the government which signifies high moral hazard potential. At the same time, external reform measures were disproportionately higher than efforts to modify and improve internal management systems. As a result, imbalances have grown and that has affected the risk-taking behavior and overall efficiencies of the institutions. With increasing flow of foreign capital in recent years, the situation seems to be still vulnerable although may not be alarming, as evident from the financial indicators.

The new measures of prudential control may reduce the vulnerability in the long run. One very positive feature in the entire process may be the absence of a strong nexus between democratic political leadership and business communities in India. As lessons from the past have shown, trigger factors are essential to transform a vulnerable situation into a crisis. India doesn't follow a pegged exchange rate system (although the currency is not fully floated as yet but is expected to do so soon) and it has not yet reached a stage of overdependence on foreign capital for economic growth. However, trigger factors could be different in every situation. Thus, the Indian financial structure is vulnerable at the present stage of transformation that may or may not lead to any crisis. India has certain features that could potentially act towards more stability. The policy makers in India should focus attention towards these areas before it becomes too late. Lessons from past experiences always assist the process and that can build more stable and sustainable economies in future.

End notes

1. Krugman in his introduction to collection on 'currency crisis' has stated, "There is no generally accepted formal definition of currency crisis, but we know them when we see them. The key element is a sort of circular logic, in which investors flee a currency because they fear that it might be devalued, and in which much (though not necessarily all) of the pressure for such a devaluation comes precisely from that capital flight" (Krugman, 2000 page 1).
2. The eight variables used by empirical studies on indicators of financial crises are: currency real appreciation, ratio of short term debt to reserves, ratio of M2 to reserves, domestic bank credit, reserves, GDP growth, ratio of current account to GDP and export growth. Bustelo (2000) has reviewed nine empirical studies on indicators of financial crisis and these eight are the significant variables tested in the studies.
3. Athukorala and Warr (2002) included Philippines in the list of worst affected countries, which was also affected by crisis but not so severely.
4. The Asian-5 countries as discussed in the literature on East Asian financial crisis are; Indonesia, Malaysia, Philippines, Thailand and South Korea. Most researchers have lumped these countries together in terms of the growth rates around 8% and being affected by a crisis around the same time in 1997 (see Radelet and Sachs, 2000).
5. Chang (2000) and Krugman (1998b), who called cronyism 'minister's nephew' syndrome have argued that this in itself did not cause the crisis in Asia.
6. Mobile capital as defined by Athukorala and Warr (2002) covers short-term bank credit, accumulated portfolio investment, and balances on non-resident bank accounts and trade credits.
7. By the end of 1997 Indonesia's total private sector debt stood at US$ 74 billion with average tenure of 18 months for most of the loans. Indonesia's value of total exports in 1997-98 was about US$ 56.2 billion (Harvey 2000, p.109).
8. G.S. Patel Committee presented agenda for reforms of stock exchanges in 1988 while R.N. Malhotra Committee unveiled insurance sector reform agenda in 1992.
9. DFIs used to provide term loans to industrial concerns often at administratively kept low rates. The category includes large institutions operating at all-India level and smaller one operating at state levels. These institutions are fully/partly owned by central/state governments. Irrespective of proportion of ownership, government has the right to appoint board of directors and chief executives.
10. They provide services like higher purchase, leasing, stock broking, etc. The number of such firms is quite large.
11. Based on RBI (online) 'Report on Trend & Progress of Banks in India'.
12. Market capitalisation of Mumbai Stock Exchange (BSE) in 1994 was merely 36,807 billion rupees, which increased to 56,032 billion rupees in 1998 and figure for the year ending March 2006 is 169,842 billion rupees.

Reference

Akerlof, G. and Romer, P. (1994) "Looting: The Economic Underworld of Bankruptcy for Profit", *NBER Working Paper No. 1869,* Cambridge, Mass: National Bureau of Economic Research (April).

Allen, Franklin (2001) "Financial Structure and Financial Crisis", *International Review of Finance,* Vol.2, Issues 1&2, p.1-19.

Athukorala, P. and Warr, P. G. (2002) "Vulnerability to a Currency Crisis: Lessons from the Asian Experience", *The World Economy*, Vol.25, Issue 1, p.33-57.

Bhagwati, J. (2001) "The Asian Economic Crisis: What do we Know Now?", in Bhagwati, J. (ed.), *The Winds of the Hundred Days: How Washington Mismanaged Globalisation,* Cambridge, Mass.: MIT Press, Chapter 5, p.51-60.

Bustelo, P. (2000) "Novelties of Financial Crises in the 1990s and the Search for New Indicators", *Emerging Markets Review*, Vol.1, Issue 3 (November).

Chang, H. (2000) "The Hazard of Moral Hazard: Untangling the Asian Crisis", *World Development*, Vol.28, No.4, p.775-88.

Chipalkatti, Niranjan and Rishi, Meenakshi (2003) "Indian Banking Sector Reforms and Liberalization: Pain or Panacea?", *Proceedings of the Academy of Business and Administrative Sciences Conference*, Vancouver, (June), (Web Ref. *http://www.sba.muohio.edu/abas* - Accessed in May 2005).

Datar, M. K. and Basu, P. K. (2004) "Financial Sector Reforms in India: Some Institutional Imbalances", *Conference Volume, Academy of World Business, Marketing and Management Development Conference*, (June), Gold Coast, Australia.

Dodd, Randall (2001) "The Role of Derivatives in the East Asian Financial Crisis", *Financiar*, Philadelphia, Vol.7, Issue 1-4, p.28-44.

Furman, J. and Stiglitz, J. (1998) "Economic Crises: Evidence and Insights from East Asia", *Brookings Papers on Economic Activity*, Vol.2, p.1-136.

Government of India (1992) *Report of the Committee on Banking Sector Reforms (under the chairmanship of M Narasimham (Narasimham Committee I)*, Department of Banking, Ministry of Finance and Company Affairs, New Delhi.

Graff, Michael (2003) "Financial Development and Economic Growth in Corporatist and Liberal Market Economies", *Emerging Markets, Finance and Trade*, Vol.39, Issue 2 (March-April), p.47.

Harvey, C.R. (2000) "The Drivers of Expected Returns in International Markets", *Emerging Markets Quarterly*, p.32-49.

Krugman, P. (2000) "*Currency Crises*", University of Chicago Press, Chicago.

Krugman, P. (1998a) *What Happened to Asia?,* Mimeographed, Department of Economics, Massachusetts Institute of Technology, Cambridge, MA.

Krugman, P. (1998b) *Fire-Sale FDI*, Paper Presented at NBER Conference on 'Capital Flows to Emerging Markets', Feb. 20-21, Mimeographed, MIT.

Krugman, P. (1994) "The Myth of Asia's Miracle", *Foreign Affairs,* Vol.73, No.6 (November/December), p.62-78.

McKinnon, R. and Pill, H. (1998) "International Over-Borrowing - A Decomposition of Credit and Currency Risk", *World Development*, Vol.26, Issue7, p.1267-82.

Pilbeam, K. (2001) "The East Asian Financial Crisis: Getting to the Heart of the Issues", *Managerial Finance*, Vol.27, Nos.1&2, p.111-33.

Radelet, S. and Sachs, J. (2000) "The Onset of the East Asian Financial Crisis", in Krugman, P. (Ed.) *Currency Crises*, University of Chicago Press, Chicago.

Reserve Bank of India (Online) (2005) *Report on Trend and Progress of Banks in India*, Various Issues, Web site: *http://www.rbi.org.in/* - Accessed in May.

Reserve Bank of India, Handbook of Statistics on Indian Economy, *http://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy - viewed on 1/2/06*

Sachs, J. (1995) "*Do We Need an International Lender of Last Resort?*", Unpublished, Paper Presented at Frank D. Graham Lecture*,* Princeton University, April.

Shetty, A. (2002) "The Asian Financial Crisis and India", Finance India, Vol.16 No.2, p.541-55.

Shirai, Sayuri (2001) "*Assessment of India's Banking Sector Reforms from the Perspective of the Governance of the Banking System*", Unpublished, Paper Presented at the ESCAP-ADB Workshop, Bangkok, November.

UNCTAD (*1996) *Trade and Development Report 1996*, Geneva.

Vaghul, N. (1994) "Liberalization of the Financial Markets in India", *Columbia Journal of World Business*, Vol.29, Issue 1, p.42-48.

Williamson, J. (1999) "*Development of Financial System in Post-crisis Asia*", Unpublished, Paper Presented at the High-Level Dialogue on Development Paradigms, Asian Development Institute, Tokyo (10 December).