

**The Causes of the 1997-98 Asian Economic Crisis: A review of the academic literature and Comparison between Indonesia and South Korea\***

**Aaron Nematnejad  
Department of Management  
Birkbeck, University of London**

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## **Abstract**

*This article reviews the literature on the causes of the Asian crisis. Initially a review is given on the causes of the crisis for Asia as a whole and later on, one for the specific literature arguing the causes of the South Korean and Indonesian crisis. An analysis is made on how much they are related to the crisis in Asia as a whole, and whether different arguments are related to each other. It has been found that both Indonesia and South Korea were operating in a relationship-based environment when opening up their capital accounts. This facilitated corruption as well as allowing huge inflows of short-term dollar denominated debts. The reason for the crisis causing a larger devaluation of the Indonesian currency than to the South Korean was because of the higher amount of short-term debt as a percentage of foreign exchange reserves and a more corrupt political system, which exacerbated the panic during the crisis period.*

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## **Introduction**

The Asian crisis began on the 14<sup>th</sup> of May 1997 following speculative attacks on the baht and the failure of Thailand's largest finance company on the 23<sup>rd</sup> of May. This resulted in the baht collapsing and the abandonment of its link to the US dollar. The Philippine peso the Malaysian ringitt, the Indonesian rupiah and the Singaporean dollar were all affected. By the end of January 1998 all these countries devalued their currencies by more than 30% (Hu 1999:10). From the onset of the crisis many of the world's leading economists, such as Krugman, Sachs, Radelet and Frenkel suggest several reasons for the crisis. These include theories on moral hazard, financial system weaknesses, crony capitalism, macroeconomic mismanagement and panic as causes of the crisis.

This article considers these different explanations and attempts to provide a linkage between them. The other contribution of this dissertation is to specifically analyse Indonesia and

Korea, to see whether they fit the general theories given for the causes of the crisis for Asia as a whole. Several country specific studies have already been made (Chang, Park and Yoo (1998), Arndt (1997), Radalet (1999) and Tolentino (2000)), however none analyse whether their country case applies to the literature on the general causes of the Asian crisis.

Section 1 of the paper presents an outline of the hypotheses. Section two examines East Asia's macroeconomic fundamentals for the decade leading up to the crisis period. Section 3 describes the form of capitalism and general financial environment of the East Asian countries including changes that were made. Section 4 discusses the panic and contagion factor. Section 5 presents case studies of Indonesia and South Korea. Section 6 discusses these country case studies and compares them to the general arguments provided on the causes of the crisis and section 7 concludes.

## 1: Hypotheses

This research was initially carried out by finding relevant articles and books from the Social Science Citation Index and the Internet. After completing the readings, a first spreadsheet was created, which summarised all the literature. A second spreadsheet was then created to outline the differences between the various articles and books. Any reference on Asia in this dissertation includes the following countries: Indonesia, South Korea, Malaysia, the Philippines, and Thailand. After the second database was completed, I formulated three propositions:

*Proposition 1: The literature on the general causes of the East Asian crisis can be applied specifically to Indonesia and South Korea.*

*Proposition 2: There is a linkage between the different theories on why the crisis happened.*

If the literature attempts to give reasons on why the crisis happened (whether they are qualitative or quantitative), then one would expect that the greater the (perceived) amount of a certain explanatory variable the greater it should affect the specific country.

*Proposition 3: One should perceive a relationship between the magnitude of the explanatory variables regarding the causes of the crisis on the one hand, and the magnitude of their effects on the other.*

## 2: Macroeconomic fundamentals

This part of the paper explores the view that the Asian financial and currency crisis reflected structural and policy distortions in the countries of the region. Fundamental imbalances triggered the currency and financial crisis even though the consequences were more severe than they should have been (Corsetti, Pesenti and Roubini 1998a)<sup>1</sup>.

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<sup>1</sup> Since this is the quantitative section where the statistics are widely agreed by most researchers, the data was taken mainly taken from the *International Financial Statistics* of the International Monetary Fund obtained from Corsetti et al's (1998a) appendix.

### *2.1: Current account deficits*

Many authors, such as Dornbush, Goldfajn and Valdes (1995) emphasise the role of current account deficits as a vulnerability to financial crises. Furthermore Lawrence Summers's (US Deputy Treasury Secretary) commented in *The Economist* that "close attention should be paid to any current account deficit in excess of 5% of GDP, particularly if it is financed in a way that could lead to rapid reversals"<sup>2</sup>. According to Corsetti et al (1998a) and The World Bank (1998) a number of countries affected by the Asian crisis provided reasons for concern. Data given by the IMF show that by 1996 Asia had an average current account deficit of 5% of GDP.

Corsetti et al (1998a) argue that the currency crises were associated with external competitiveness problems. In fact as a group the countries that were the most affected were the ones that had considerably large deficits throughout the 1990s. Even though current account deficit is not the only explanatory variable for the crisis, it certainly is one of them.

### *2.2: Growth Rates*

Economic theory suggests that current account deficits are not necessarily problematic if they are coupled by high rates of economic growth. For a given current account deficit high growth rates imply a slower dynamics of the foreign debt to GDP ratio and enhance the countries ability to service its external debt. In addition high (actual or expected) GDP growth may reflect sustained capital accumulation rates driven by expectations of high profitability (Corsetti, et al 1998a: 11).

The majority of countries in East Asia had high GDP growth rates in the 1990s. Growth rates averaging 7% were the norm. Only in 1996 did most countries experience declining growth rates. However economic theory does not always hold in practise. History suggests that the issue of expectations can falter the above suggestion of sustainability. High GDP growth can cause an economy to be even more vulnerable to a crisis than expected. For example high growth rates may induce over-optimistic expectations on how well the economy will be developing. This can lead to large inward capital flows to finance the increase in consumption and demand. In such a circumstance an external shock can lead to a change in expectations that can lead to a large withdrawal of capital from the region, which will inevitably lead to a crash (Corsetti et al 1998a).

Furthermore Krugman (1994) questions the notion of the 'Asian miracle' stating that Asia's GDP growth was mainly due to growth in the availability of inputs rather than total factor productivity (TFP). He described the Asian economies as a collection of 'paper tigers' whose growth rates were declined with the onset of diminishing returns. The key point is that unless increases in GDP growth is accompanied by increases in productivity, growth rates will eventually decline as diminishing returns will eventually set in. However if Krugman was so confident in his analysis of Asia's GDP growth then surely he must have been able to work out a rough estimate when GDP growth would have reached a maximum and eventually declined. With regard to the crisis his statement is even more contradictory. If the crisis was due to diminishing returns then one would expect a more symmetric decline in growth rate,

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<sup>2</sup> Corsetti et al (1998a:6) quoting Summers (1995:46-48)

after the year when there was a maximum in the growth rate, rather than a sudden free fall as happened in Indonesia, Korea and the rest of the East Asian countries.

Furthermore Krugman's (1994) statement is further undermined when using the Salow Model. This model presents a graph of the logarithm of GDP per worker and that predicted by the Solow model, assuming a constant TFP growth rate of one per cent per year for Indonesia and Korea. The graph also shows that consistent with the theory, growth rates can be expected to decline over time as diminishing returns set in. However the results show that the declines are very graduate. As can be shown from the graph, the onset of diminishing returns can only be expected to account for moderate declines in growth rates over the next few years, relative to historical averages (World Bank 1998:5)<sup>3</sup>.

### *2.3 Investment rates, efficiency and profitability.*

Since the current account is the difference between national savings and investments, a deficit can arise from either a decrease in savings or an increase in investments. Conventional wisdom holds that borrowing from abroad is less problematic if it is used to finance new investment rather than consumption. Underlying such conventional wisdom is the assumption that the cost of the borrowed funds is less than the profits made from the investments. Also implicit in the assumption is that high investment rates contribute to the increase in productive capacity in the traded sector. (Corsetti et al 1998a: 13). If the borrowed funds are invested in non-traded sectors (like property and construction) the chances of the funds producing high profits is less, which may contribute to the current account deficit.

The Asian countries were characterised by very high rates of investment throughout the 1990s. In most countries these rates were well above 30% of GDP. However it is important to consider whether these high quantities of investments represent productive capital accumulation. Corsetti et al (1998a) believe that there are several reasons why such high investments should be regarded with concern in regards to current account sustainability. Evidence on the profitability of investment is provided by a standard measure of investment efficiency known as the 'incremental capital output ratio (ICOR), defined as the ratio of the investment rate and the rate of output growth. The data however shows that the average ICOR of Asian countries has increased from 4.18 between 1987-92 to 4.82 between 1993-96. Stock prices have increased on average from 576 in 1990 to 1305 in 1996.

### *2.4: Inflation*

Inflation is an important factor to take into account for the analysis of current account and external debt sustainability. Under normal circumstances and a floating exchange rate, inflation has the effect of decreasing the competitiveness for the inflated economies exports, thereby causing a decrease in the exchange rate.

“However when currency values are fixed or semi-fixed and domestic inflation is above foreign inflation, a real currency appreciation leads to decreasing cost competitiveness, eventually undermining the credibility of the peg. In particular, high inflation rates may signal poor macroeconomic policy, generating the need for

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<sup>3</sup> See also Harris (2000).

seignorage revenue. Generally an economy, which has a pegged exchange rate and experiences high inflation rates would be potentially exposed to speculative attacks.” (Corsetti et al 1998a: 18).

Overall inflation rates were low in the 1990s. Decreasing from 9.5% in 1991 to 5.9% in 1996. However in terms of sustainability the picture is considerably more complex. The banking and financial sector problems experienced by several Asian countries over the 1990s raised considerable doubts on their ability to keep inflation low in the near future. Specifically these doubts were related to the possibility that the consequences of the banking sector bailouts might prompt an increasing use of seignorage and would require infusions of liquidity to prevent systematic runs<sup>4</sup>. For these reasons the nominal depreciation of Asian currencies were consistent with the expected inflationary consequences of banking and financial bailouts.

### *2.5: Real exchange rate appreciation*

Exchange rate policies exacerbated Asia’s economic problems. During the early 1990s governments in each of the crisis countries kept their exchange rates fixed or changed them at very slow, predictable rates. They also convinced the public that these policies would remain intact in the future. These policies helped encourage short-term capital inflows. They also kept the prices of tradable goods and services relatively fixed, while the prices of non-tradable goods and services rose as a result of the investment boom. The pegged exchange rate arrangements posed much greater problems during the initial triggering stages of the crisis when countries sold their foreign exchange reserves to defend their currencies from devaluing. As the reserves ran down, vulnerabilities to the financial panic increased (Radalet and Sachs 1999). Although many of the Asian countries attempted to keep their exchange rates fixed there was a real appreciation of 9.2% of Asia’s exchange rate between 1990 to 1996.

### *2.6: Foreign debt and the role of short-term debt*

A country may suffer a short run liquidity problem if the available stock of reserves is low compared to the overall burden of external debt service. Liquidity problems arise when a country suffers from huge withdrawals of credit, so if a large fraction of a country’s external liabilities are short-term a crisis may arise due to a liquidity shortfall (Corsetti et al 1998a). When looking at IMF statistics, one does not get the feeling that Asia’s short-term debt as a percentage of total debt indicates economic vulnerability. In 1993 the average for the East Asian countries was 28% and by 1996 it only rose modestly to 33%. However when looking at the share of short-term debt as a percentage of GDP one sees a completely different picture. For 1993 the average for the East Asian countries was 98% of foreign exchange reserves, which is already quite a high figure. However the numbers become even scarier when looking at the mid-1997 data, with an average 140% of foreign exchange reserves.

Corsetti et al’s assessment of the debt situation goes even deeper than this. They highlight the relevance of debt-service plus short term debt as a percentage of foreign reserves. If a liquidity crisis occurs foreign reserves must be large enough to cover a countries debt service

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<sup>4</sup> See section 3.7 on moral hazard.

obligations (including the rollover of short-term debt). Data for Asia's average in 1996 was 141.6% of foreign reserves (1998a: 32).

### *2.7: Foreign reserves and the issue of broad money*

The existence of large foreign exchange reserves facilitates the sustainability of a fixed exchange rate and a current account deficit. A traditional measure of the adequacy of foreign exchange is the stock of reserves in months of imports. A better indicator of adequacy is the ratio of money assets to foreign reserves, since in the event of an exchange rate crisis all liquid money assets can be converted into foreign exchange.

Now we will report the ratio of M2 to foreign reserves. In most Asian countries the ratio between M2 and foreign reserves was dangerously high in 1996-97. This ratio was almost equal to 6.5 and then rose to 7 by the first quarter of 1997. To report another indicator of financial fragility, IMF statistics show the ratio of short-term external liabilities to foreign reserves at the end of 1996 was equal to 138%. These results suggest that by the end of 1996, in the event of a liquidity crisis with BIS banks no longer willing to roll over short term loans, foreign reserves in East Asia were insufficient to cover short term liabilities let alone to service interest payments and to repay the principle on long term debt coming to maturity in the period (Corsetti et al 1998a: 35-36).

### *2.8: Composition and size of capital inflows*

A crisis is more likely to occur when a high proportion of the flows are composed in short-term flows rather than foreign direct investment. This is because if market sentiments change it is much easier for speculators to withdraw their portfolio assets than companies packing their bags and leaving (Frankel and Rose 1996). There is a dearth of accurate data on FDI inflows as a percentage of current account deficit. Data from Corsetti et al (1998a) show that East Asian countries averaged around 47%. However this does not provide evidence on a crisis happening.

## **3: Capitalism and policies in East Asia**

The study of East Asian capitalism has been a popular topic for the past 20 years.<sup>5</sup> Contrary to the above section where a literature review is made of authors blaming the Asian crisis on economic fundamentals, this section analyses whether it was the form of capitalism and policy implementations that caused the crisis. This includes a description of the policies in the region and the legal environment of operating businesses. Initially a literature review will be given describing the differences between capitalism in East Asia and the West. Then I argue that even though the form of capitalism was not the actual cause of the crisis it did however increase the vulnerabilities in the region for a crisis to be triggered. Assessing the form of capitalism is especially important because one has to ask the question: if there is a fault to it, why did those countries prosper so much for the past thirty years? They must have done something right to get the popular title of 'Asian Tigers'.

### *3.1: The East Asian business model*

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<sup>5</sup> See Whitley (1991) and Hamilton and Biggart (1988) for arguments whether there is a distinctive East Asian business model or not.

In describing the East Asian business model, Singh (1999) gives a review of the opinions relating the crisis to the East Asian business model. He quoted the World Bank claiming that the East Asian countries were successful because they followed market friendly strategies and integrated their economies closely with the rest of the world. The World Bank's economists gave three criteria for 'market friendly'.

1. The government should intervene as little as possible (only when the private sector is unable to do so).
2. Intervention should be subject to checks and balances; if there is intervention it should be transparent.
3. The role of the government should effectively be to provide the institutional legal framework for businesses to operate.

However many of the critics believed that the above statements were not held. The governments in Japan and Korea pursued vigorous industrial policy and moulded the private sector to operate the way they wanted it to. This included changing the matrix of prices and incentives facing entrepreneurs, in the way the planners wanted it to. Critics of the above statements claimed that neither Japan nor Korea closely integrated their economies with the rest of the world. Rather, they made extensive use of import controls to protect specific industries. They also discouraged rather than promoted foreign direct investment.

“Policy interventions took many forms - targeted and subsidised selected industries, low deposit rates and ceilings on borrowing rates to increase profits and retain earnings, protection of domestic import industries, the establishment of financial support of government banks, public investment in applied research, firm and industry specific export targets and wide sharing of information between private and public sectors. Some industries were promoted and others were not” (Singh 1999: 16).

Singh (1999) suggests that there is a generally agreed view on the East Asian model as:

1. There is a close relationship between the government and businesses, where there is a form of administered guidance to businesses without formal legislations.
2. There is a difference between corporate law in East Asia and countries following the Anglo-Saxon form of capitalism. The former take a longer term perspective of investment.
3. Many East Asian authorities do not promote competition to the extent that western countries do, rather they guide it, so that there is an equal balance between the two.
4. Even though Japan and Korea have integrated into the world economy they have done it strategically. They have integrated mainly with respect to exports up to the point that it was useful to them (Singh 1999:17).

### *3.2: East Asia's non-arms-length based capitalism*

Much research has been done on the differences between the western arms-length (or Anglo-Saxon) form of capitalism and the relationship-based (or sometimes called bank-based) form of capitalism. Arms lengths capitalism tends to exist in countries where the governments promote competition. Banks play a small part in financing companies and as a result they issue securities to the public, via financial markets. Relationship-based systems do not tend to have an active liquid stock market where company securities are frequently traded, instead companies rely much more on bank loans to finance their investments. Huge conglomerates such as the chaebols are actually backed up by banks. This has a great effect on the actual business environment of their respective countries.

Bank-based countries do not tend to have their companies threatened by takeover activity. If companies are under financial difficulties, banks do not attempt to liquidate them, rather they will help them out by offering more funds or act as a guidance system. For this reason these type of countries are described by operating under a relationship-based system. However under Anglo-Saxon, arms-lengths systems, companies do not tend to get funded by the banks, instead they issue securities via financial markets. At the same time they are obliged to submit all relevant information to the public. If a company gets into financial trouble they are under the threat of takeover. There is a huge advantage with this type of system for the economy on the whole. Takeover activities allow capital to be allocated from less efficient hands to more efficient ones. Managers of these type of companies are often encouraged to maximise profits and increase the value of the companies' equity. If a company performs badly, shareholders will change managers or even worse, the company is taken over by a more competent institution. This in effect allows resources to move from less efficient resources to more efficient ones (Franks and Mayer (1990), Thomas and Waring (1999)).

In the relationship-based system, companies even when doing badly are often bailed out by their banks. This results in managers seeking out for growth opportunities rather than profit. Due to them not having any worries about takeover activities, they do not have the incentives to produce high profit margins. This in effect results in a misallocation of resources. Companies under bank-based systems are said to operate less efficiently than in arms lengths. However there is an advantage to relationship-based systems in that they are able to carry out long-term projects. Companies who are expected to constantly produce high profits usually are not able to carry out long-term risky project. On the other hand companies operating under the relationship-based systems are.

### *3.3: Structural disadvantages with relationship-based capitalism and the Asian crisis*

Despite relationship-based capitalism working for many years in the majority of developing countries, there are some disadvantages. In relationship-based capitalism there is less threat of take-over. This causes inefficiency in the economy in the sense that managers of companies do not have the incentives to maximise profits and minimise costs of production (Frankel 1998). Many companies in that type of environment attempt to maximise growth by diversification, which results in companies running on low profits and high gearing and debt-

equity ratios. This, according to conventional neo-classical microeconomics is identified as allocative and productive inefficiency. The governments in East Asia were also known to direct businesses in their own interests. This becomes even more problematic when there are constant shifts of government coalitions changing policies on businesses. This problem is labelled as allocative inefficiency in microeconomics language.

The other problem with relationship and bank-based systems is that because many of the corporations are only associated with their cross subsidiaries and their respective banks, a lot of information only flows between corporations and the banks (sometimes the governments), without the general public knowing about it. This implies that there is very little transparency of corporations and banks true balance sheets (Rajan and Zingales 1998).

Many critics of the Asian form of capitalism such as the IMF and Frankel (1998) believe that it was not just the lack of disclosure between corporations and banks that created a huge element of uncertainty in the economies but also between governments, huge corporations and the public. Governments in East Asia often hid information, particularly with regard to extra budgetary fiscal transaction, the quasi-fiscal activities of the central bank, official foreign exchange reserves and their management (including reserve related liabilities), and private sector short-term debt. The governments have also been unreliable in giving out information on public infrastructure projects (Singh 1999: 24).

Singh (1999) however argues that blaming it on transparency would also be weak because the Scandinavian countries experienced a crisis in the 1990s and they are regarded as being one of the most transparent countries in the world. However he then quotes the Bank for International Settlements in claiming that timely information on maturity of bank loans was readily available for international banks. However this argument is still weak because Singh (1999) does not take into account what proportion of foreign investors read reports published by the BIS.

When being exposed to a stockbrokerage firm one realises that the majority of investors follow trends or take advice from brokers who tend to skim over newspapers and simple financial reports. The average investor will not have the capability to investigate every source of information on his investments; rather he will tend to follow headlines and sentiments. Therefore subtle factors in the economy could go wrong without many taking account of it. Insufficient transparency becomes a problem when analysts rate certain institutions or economies, by making faulty judgements based on misleading information, but I do not believe it could cause the triggering of a crisis. There is a possibility however that when investors are uncertain on the status of an economy, they would withdraw their money as soon as something is believed to trigger a crisis.

### *3.4 Corruption, cronyism and nepotism*

We discussed above how relationship-based capitalism, (where banks, corporations and governments closely work with each other) reduces transparency. However it produces another problem known as cronyism. Many of the East Asian countries were regarded, especially by the IMF to have a lot of corrupt politicians who bribed corporates to carry out processes in certain ways (to favour their coalitions), which eventually led to the vulnerabilities. Cronyism has long been discussed in the context of the East Asian business model. Hamilton and Biggart (1988) and Hamlin (2000) emphasise that many of the East

Asian corporations and even small businesses tend to give important positions to family and friends. Castels (1999) describes how in Korea and Japan, women are discouraged from working<sup>6</sup>. This can be problematic as it causes a misallocation of resources, by reducing productivity, in the sense that instead of employing the most qualified and productive person to carry out their work they employ less qualified people who are related or are friends with the owners and managers.

Corruption also produces other symptoms. When corporations mislead shareholders or even their respective governments on the performance of their businesses, there will be a discrepancy on how well the corporate sector is believed to work and how well it is actually working. The problems will be further exacerbated when the government wants to formulate macroeconomic policies to further improve the economy to what it presently is. When policies are carried out in light of the presumed economic situation further misallocation of resources will exist<sup>7</sup>.

However there are many who agree that corruption and cronyism existed in the East Asian countries but also claim that it was not the cause of the crisis. Authors such as Johnson (1998) Singh (1999) and Hu (1999) argue that cronyism and corruption could not have been the culprit because if they were why did the 'East Asian Tigers' prosper for so many years. Corruption definitely does not explain why the crisis happened at that specific era in time. However, Grabel (1999) agreeing with the above authors to some extent claims that when analysing the case deeply one realises that it was the intensification of corruption that led the situation to become so bad. However Grabel's statement does not explain why there was an intensification of corruption at the period when the crisis was happening.

### *3.5: Advantages of the East Asian business model*

One cannot only describe the negative factors with regard to the East Asian form of capitalism. One has to take into account why these economies did so well for the past thirty years. Relationship-based capitalism tends to be at an advantage for high-risk businesses. Some investments are strongly believed to be profitable in the far future and if corporates can guarantee it to their banks they can get a much more long-term form of finance in the relationship-based system. Arms-lengths systems tend to destroy long-term value rather than increasing or preserving it. Relationship-based systems may work better in developing countries, where contracts are ineffective and price signals from the markets, relatively uninformative.

Some support for this argument comes from research on the performance of conglomerate organisations. Conglomerates can be thought of as the ultimate relationship-based system, in the sense that the different business units that make up the organisation receive financing from an internal capital market more efficiently than if they were to obtain it from an external source (Rajan and Zingales 1998: 8).

### *3.6: Liberalisation of financial markets*

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<sup>6</sup> This does not generally apply to the rest of the Asian countries.

<sup>7</sup> See also Mauro (1997).

During the early 1990s many of the East Asian countries liberalised their financial markets. Capital accounts of many East Asian countries had been deregulated in the preceding periods. It is agreed by many such as Hu (1999), Singh (1999) and Taylor (1998) that it is for this reason rather than the Asian form of capitalism that the crisis happened<sup>8</sup>. Proponents of this theory believe that had the Asian governments continued with their state guided form of capitalism the crisis would not have occurred. They also believe that liberalisation would have been a possibility had the governments applied prudent regulation and supervision to the financial systems. Liberalisation gave opportunities for foreign investors to allocate their funds into East Asian countries. Many of the funds were in the form of short-term dollar denominated debts. To analyse how liberalisation contributed to the crisis one has to begin by discussing the issues of moral hazard.

### *3.7: Moral hazard*

According to most economists ‘moral hazard’ is said to be the excessive investments by private agents assuming that if their investments will be unsuccessful there will be some other agent bailing them out. Corsetti, Pesenti and Roubini (1998b) apply it to the East Asian crisis at three levels: The corporate level, the financial level and the international level. One has to revisit the old East-Asian form of capitalism to apply moral hazard to the corporate level. Due to the government’s strong willingness to sustain economic growth, many corporations were often encouraged or even controlled by the government to undertake risky investments, with an implicit guarantee that the government would bail them out if they are in trouble. Liberalisation increased opportunities to borrow from abroad to finance domestic projects, many of the creditors often assuming that should projects go wrong, governments would bail out the troubled firms<sup>9</sup>.

At the corporate level, much of the foreign borrowing was done by inexperienced domestic banks borrowing loans on a short-term basis from abroad, through financial markets and channelling them to corporations with a proven track record of low profitability. On the international level many international banks provided loans without carefully calculated risk analysis. This was mainly because of the assumed long lasting fixed exchange rates that many of the Asian countries undertook, and also in case something were to go wrong with the economy, they relied on the IMF to bail them out. This was especially reinforced after witnessing Mexico being bailed out by the IMF after their crisis. One can take a point of view of a rational investor, in the sense that even if perceived risks did exist, many foreign investors had the opportunities to lend on a short-term basis, and if a shock does occur they could quickly pull out. The Asian crisis was not the only time when moral hazard became a topic. In an analysis on currency and financial crisis of the early 1980’s, Diaz-Alejandro stresses the time consistency problem of moral hazard:

“Whether or not depositors are explicitly insured, the public expects governments to intervene to save most depositors from losses when financial intermediaries run into trouble. Warnings that intervention will not be forthcoming appear to be simply not believable.”(1985:15.)

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<sup>8</sup> Wade (1998) and Hirst (2000) believe it is due to both.

<sup>9</sup> See also Kregel (1998) and the Bank for International Settlements (1998).

If governments do implicitly guarantee some form of bailout, a sudden reversal of foreign funds forces governments (with limited economic resources) to step in and guarantee the outstanding stock of external liabilities. To satisfy solvency, the government must then undertake appropriate fiscal reforms, possibly involving recourse to seigniorage revenues through money creation (which is expected to lead to inflation). Speculators worrying about the inflationary factors will attack the currency causing it to depreciate.

Now we need to resolve a new problem, namely why if the East Asian business model is an inefficient form of capitalism, and arms-lengths free market western forms of capitalism are more efficient form, (emphasising profits and rectifying any misallocation), why is it that liberalisation proved to be the culprit of the crisis as so many like Hu (1999) and Taylor (1998) Rajan and Zingales (1998) offer an explanation. They claim that the vulnerabilities were caused by financial liberalisation and capital account deregulation during a period when many of the businesses were operating under relationship-based policies. Despite the advantages of the two systems, the two are not compatible under the same environment, and inertia did not allow East Asian corporations to adjust their business methods to operate under free market policies. Instead there was a persistence of many corporations operating under high gearing ratios, and at the same time liberalisation allowed a huge influx of funds pouring into countries where efficient free market price signals were not available to direct funds into productive uses.

#### **4: Panic and contagion**

The third theory on why the crisis happened was panic. It is important to think about the meaning of the word crisis and panic and see how they are linked to each other, with respect to financial market fluctuations. According to Frankel and Rose (1996) a crisis is defined as a rapid depreciation of a currency by at least 25%. This means that whatever theories there are concerning the crisis, they have to do more than explain the downturn of market indicators and exchange rates values. Contrary to a recession a crisis is a large devaluation in a short space of time.

Section 3 analyses East Asian relationship-based capitalism and provides an explanation as to why the crisis happened. However, many disagree with these views and respond by stating that East Asia has been adopting that form of capitalism since the Second World War and if that was the reason why did the crisis not happen a long time ago. The majority of articles that make this point state that it was financial liberalisation in an environment that was still very much relationship-based which caused the huge vulnerabilities, especially with respect to the accumulation of short- term debt. However this still does not explain the timing of the crisis. In their article, Radalet and Sachs (1998) claim that even though East Asia's fundamentals were bad, and macro-economic imbalances were deteriorating, a return to equilibrium should not have caused such a huge swing in the opposite direction. They believe that the sudden shift in market sentiment could only be explained by a panic.

The notion of panic needs further investigation. Panic occurs because rational actors witness financial markets taking a huge down turn (perhaps caused by a random trigger, like a major bankruptcy) and as a result they sell as quickly as possible, rather than expecting the markets to bounce back again<sup>10</sup>. This causes an even greater decrease in market value, which leads to more people getting worried. Eventually the traders, which initially did not hold this view realise the sudden fall in value and they end up panicking and selling<sup>11</sup>. When looking at a broad scale this causes an exponential decrease in currency value until it reaches a minimum. This type of behaviour is scientifically referred to as a positive non-linear feedback effect (Gleick 1997). The minimum could occur due to three reasons:

1. Foreigners have sold all existing domestic currencies which they possessed;
2. Illiquid or long-term foreign denominated financial securities are still in existence that are traded with difficulty;
3. Some financial force pulling it back in the opposite direction. This could be in the form of a successful government policy or changes in interest rates.

However our theory on panic induced crises is hypothetical, it is what we would logically expect to happen. However over a decade before the Asian crisis, Diamond and Dybvig (1983) have developed a model of a bank run where they claim that a financial panic is a case of multiple equilibria in the financial markets. Interestingly Radalet and Sachs describe the model as:

“A panic is an adverse equilibrium outcome in which short-term creditors suddenly withdraw their loans from a solvent borrower. In general terms a panic can occur when three conditions hold: short-term debts exceed short-term assets; no single private market creditor is large enough to supply all the credits necessary to pay off existing short-term debts; and there is no lender of last resort. In this case it become rational for each creditor to withdraw its credits if the other creditors are also fleeing from the borrower, even though each creditor would also be prepared to if the other creditors were to do the same. The panic may result in large economic losses (e.g. premature suspension of investment projects, liquidation of the borrower, creditor grab race etc.” (1998:3).

Interestingly even though this model was developed 14 years before the East Asian crisis, the causes of financial crises that Diamond and Dybvig (1983) describe are similar to the ones outlined in sections 2.6 and 2.7.

However the above description of a panic driven crises applies mainly within a country. Many studies have been made on how a crisis in one country can affect or spill over to another country. This is due to investors witnessing a devaluation in a region and expect neighbouring countries to have the same problems (Bertero and Mayer 1990). Hu (1998:35) claims that a more precise explanation may be that portfolio investment was generally channelled into the East Asian region through ‘Asia-Pacific’ funds rather than funds for individual countries. If one country was hit the whole portfolio was hit and shares would have to be sold to pay investors back. The East-Asian crisis clearly had a contagion element to it. Many econometric

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<sup>10</sup> See also Wade (1998: 703).

<sup>11</sup> One can argue that a fall in the value could give the incentive to reinvest, however when such rapid devaluation occurs in such a short space of time, it would be irrational not to sell.

studies were made on contagion effects and financial crises that happened 10 years ago (Bertero and Mayer 1990), as well as ones that happened in the Asian crisis (Park and Song 2000). There are two reasons why I believe that a qualitative analysis should be made. Firstly the majority of econometric analysis made is based on cross-country regression models involving more than 25 countries. There is a huge weakness, in that they do not include high frequency information on qualitative events that have happened during the crisis period and how that could have logically led to a contagion or a panic. And secondly the majority of investors do not read highly complex mathematical formulations of contagion effects, rather a qualitative description based on logical psychological explanations would be more feasible.

## **Section 5: Country case study**

In this section we give a summary of what explanations different writers gave on the causes of the crisis on an individual country basis.

### *5.1: South Korea*

The evidence, which we will provide for South Korea's case, will mainly come from three sources. Chang, Park and Yoo (1998) give an outline of Korea's liberalisation process and emphasise that it was the abandonment of Korea's former relationship based system that led to the vulnerabilities. Haggard and Mo (2000) emphasise on the political side of the Korean crisis and how it played a part in liberalising the economy and creating uncertainty. Park and Song (2000) examine the issues of contagion and panic relating to Korea. Arguments will mainly be drawn from authors mentioned above in describing the causes of the Korean crisis, although some others will occasionally be mentioned. Initially a description of the economic fundamentals will be given, followed by arguments on liberalisation and its role in creating the vulnerabilities with an outline on how it affected corporate balance sheets. Followed by that, an analysis is made on the political side of the Korean crisis, to see whether corruption and cronyism had a part to play. Lastly the effects of contagion and panic will be discussed to examine to what extent the markets exaggerated in their free fall.

The majority of Korea's economic fundamentals were sound during the 1990's. Its current account deficit was just over 1% of GDP in 1990, decreased to 0.16% in 1993 and rose to just less than 5% in 1996. GDP growth was also at a stable level. In 1991 it was at 9.13% and by 1996 it decreased to 7%, which is still high. Investment rates were fairly constant during the 1990's with an average of 37% of GDP. Incremental capital output ratio increased from 3.8 between 1987-92 to 4.9 between 1992-96. However stock market indexes decreased from 696 in 1990 to 651 in 1996. Inflation rates have improved from 9.30% in 1991 to 4.96 in 1996. Real exchange rates have decreased from 96.0 in 1990 to 87.2 in 1996. The trouble begins when looking at debt figures. Foreign debt as a percentage of GDP rose from 13.79% in 1990 to 28.40 in 1996. Short-term debt as a percentage of total debt looks even worse. In 1990 it was at 30.87% and rose to 50.20% in 1996. The ratio of debt service plus short-term debt to foreign reserves increased from 127.43% in 1990 to 243.31% in 1996. The ratio of M2 to foreign reserves was equal to 6.5 by the end of 1996 and rose to almost 7 by the first quarter of 1997. FDI flows as a percentage of current account deficit was low in Korea. In 1996 it was at 10%.

Even though many authors such as Krugman (1998) believe that the crisis in Korea was due to a systematic malaise, others such as Stiglitz (1998) argue that it was due to mismanagement of financial liberalisation and also financial market panic. Before liberalisation taking place the Korean government controlled all internal and especially cross-border financial flows very tightly. Although there was some degree of financial liberalisation in the 1980s they were slow and the government mainly controlled its speed. By the early 1990s the Korean government started to relax controls over financial flows. In 1993 the process of financial liberalisation was greatly accelerated when Kim Young Sam became president (Chang et al 1998).

The Kim governments' liberalisation plan included interest rate deregulation, granting more managerial autonomy to the banks, reduction of entry barriers to financial activities and most importantly liberalisation of the capital account.<sup>12</sup> By 1995 government regulations on foreign borrowing had been greatly reduced, resulting in huge influx of foreign debt, which nearly trebled from \$44 billion in 1993 to \$120 billion in September 1997. Even though Korea's debt was fast growing it was not according to the World Bank's criterion of unsustainable. However one aspect, which is misleading in the figure is the proportion of debt, which had a maturity of less than a year. The share of short-term debt to total debt was 58.3% at the end of 1996<sup>13</sup>.

What helped build up this huge influx of foreign debt were the inexperienced merchant banks set up in the name of financial liberalisation by the new Kim government. The total foreign debt stock of these banks rose by some 60% per annum between 1994 to 1996, compared to the increase of national foreign debt, at some 33.6%. More importantly there was a serious lack of supervision of these merchant banks, which explains the huge mismatch of maturity structure between their borrowings and loans. Part of the reason why the majority of debt was short-term was due to liberalisation being more extensive to short term debt rather than long-term debt. Long-term borrowers were required to give detailed information to the Minister of Finance and Economy (MOFE) while short-term borrowers were not. Chang et al (1998) argue that it was the abandonment of the old regime of industrial policy, governed by the state that led to the weakening of the business sector. Before the Kim Young Sam government ascended to power, Korea had a five-year planning practise, which had provided an overarching policy coordination framework since its introduction in 1962. This was replaced by the '100-day Plan for the New Economy', which was regarded by the population as a publicity stunt. At the same time in the name of government administrative 'rationalisation', the planning Ministry, the Economic Planning Board, was merged with the Ministry of Finance, forming a merged ministry, the Minister of Finance and Economy. At this point it was clear that industrial planning, the way it used to be was coming to an end. Added to that was the dismantling of selective industrial policy, by the Kim Young Sam government. However selective industrial policy started to lessen in the late 1980s with the rise of neo-liberal ideology and the growing power of the chaebols, which demanded greater autonomy in their investment decisions. However after allowing for some autonomy in the petrochemical industry, the government had to make a U-turn and intervene in the industry as it ran into serious trouble. Despite this, the Kim government arranged for the complete dismantling of most industrial policy measures, which proved to be unsuccessful. Chang et al assert that this led to huge over-investments by many of the chaebols. Over-investments by these chaebols

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<sup>12</sup> For a detailed list of financial liberalisation measures in Korea during the 1990s see Chang et al (1998) p. 737.

<sup>13</sup> By the eve of the crisis 64% of their borrowings were short-term and 85% of their loans were long-term.

led to falling profitability and major corporate failures in a number of leading industries (1998:740). Below are two examples on how the demise of industrial policy affected Korean industry.

In 1993 the Kim government licensed 'Samsung' a medium sized chaebol to enter the overcrowded car industry. This from the start was a bad move because despite destabilising the car industry before producing a single car, Samsung's cars did not come into the market until 1998. Samsung was never believed to be strong in the car industry and on top of that the government arranged for it to be located in a poorly conditioned factory in Kim's hometown. Kim's government believed that Samsung's problems would be solved by acquiring the third largest car manufacturing Kia. Kia was a chaebol that had a highly regarded manufacturing firm but also had financial problems. The Kim government took advantage over their financial problems and forced Kia to nationalise, which in turn reduced foreign confidence in South Korea.

The Kim government also supported Hanbo a medium sized chaebol, to enter the steel industry. Like Samsung, Hanbo entered a highly competitive, overcrowded industry. It was obvious that the government had not given any careful thought on carrying out this process, especially when Hyundai, the largest chaebol was refused entry to the steel industry. Hanbo subsequently collapsed in early 1997 and it was later found out that behind the governments support for Hanbo's entry, lay corruption involving the president's son and close aides. This also reduced international confidence to Korea.

Chang et al (1998) claim that the stories behind the Hanbo and Samsung cases were not typical of Korea under the state led model. In the traditional model large sums of money did flow between politicians and big businesses but the money was often tied up with particular projects in areas like urban development and government procurement, but they were rarely related to particular projects such as in the manufacturing sector. It is further claimed that the abolition of the five-year planning and the weakening of industrial policy increased the likelihood of corruption taking place. Before many of the manufacturing sectors were insulated from corruption, the dismantling of the state led sectoral policies increased the likelihood of 'bending rules'. It was only under the Kim government that corrupt state-business links developed (especially in the manufacturing sector).

Corsetti et al (1998b) argue that due to governments' willingness of sustaining high rates of economic growth, corporations are led into high-risk investments presuming that the government would bail them out in the face of bankruptcy. Krugman (1994) applies this 'moral hazard' notion to Korea, claiming that the crisis happened because of the government's implicit guarantee of bailing out the chaebols. One factor that Krugman has not taken into account was that many of the chaebols were only unprofitable due to high interest payments, rather than inefficiency. When measuring corporate profitability before interest payments, Korean firms operated well compared to other successful economies. Between 1973-96 this figure averaged 7.4% in Korea compared to 7.7% in the USA (Akyuz, Chang and Kozul-Wright 1998).

Chang et al (1998) admit that in the run up of the crisis many of the chaebols had a high debt burden and were prone to failure. However despite this fact they further claim that for the previous two decades, there had not been a single instance when the government bailed out a chaebol<sup>14</sup>. Certainly there were occasions where the individual firms belonging to a chaebol were assisted but this repeatedly involved a government-mediated takeover of the firm (by another chaebol or by the government owned banks). This however leaves little room for moral hazard, as those chaebols who under-performed, had their managers removed. Chang et al (1998) further claim that if the chaebols were counting on the government to bail them out during bankruptcy, they would not have increased their exposure to non-bank financial institutions (who were under no control by the government). The other argument against moral hazard is that the investments that the chaebols have made were in industries with stable returns, rather than high risk and high profit. However these industries did not remain stable, since in the absence of an industrial coordinator, overcapacity and falling profitability resulted. Chang et al (1998) use Japanese manufacturing corporations as an example of having high gearing ratios and at the same time Japan not experiencing a crisis anywhere near to the extent that Korea did, which provides further evidence, had it not been for Korea's ill-designed financial liberalisation program and the dismantling of industrial policy, high corporate debt would not have produced the crisis in Korea<sup>15</sup>.

Haggard and Mo (2000) provide a different perspective to Chang et al (1998) by discussing the political factors associated with the Asian crisis. They believe that the government wanted to stabilize the economy, but was constrained by its political cycle. Analysts in 1994 warned the president of the problems of a current account deficit. In response to this the government attempted to put deregulation on hold and calm investment, however they did not succeed because the public criticised them for reversing their commitment to deregulation. Another problem was the huge anti-chaebol sentiment by the public, which put pressure on the government to promote small and medium enterprises, by encouraging the rate of growth and investments, which led to their financial vulnerabilities.

It is debatable what caused the onset of the crisis. Tolentino (2000) believes that a direct causal link can be established between the growth of highly indebted Korean multinational enterprises and the crisis. This analysis however, fails to explain the timing of the crisis. Haggard and Mo (2000) provide a more accurate explanation. They believe that the initial stage of the crisis was caused by the government's management of the Kia failure and Hong Kong's financial shock<sup>16</sup>. Both these events increased public uncertainty and set the stage for a panic. Haggard and Mo (2000) detail how political uncertainty exacerbated the crisis, arguing that it was not just caused by random withdrawals of funds by foreign investors, but also by uncertainty created by the government in dealing with companies who were close to bankruptcy. This is evident from the speculative attacks experienced by the market after news announcements about how the government was dealing with Korea's faulty corporations. Haggard and Mo (2000) also believe that the government's failure of passing the financial reform legislation and the dismissal of the Minister of Finance and Economy affected the markets badly. Between June 1997 to January 1998, Korea's exchange rate devalued by 41.6% (Hu 1998: 10).

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<sup>14</sup> See also Hahm and Mishkin (2000).

<sup>15</sup> See also Hirst (2000: 147-148).

<sup>16</sup> See also Park and Song (2000: 19).

## 5.2: Indonesia

The majority of economic fundamentals have been good in Indonesia. Its current account deficit was just above 4% of GDP in the first two years of the 1990s, but dropped in 1993-94 to nearly 1%, although it reached 3.30% in 1996. The growth rate was around 7% in 1991 reached a maximum of 16% and eventually by 1996 came down to 8%. Indonesia's investment rates decreased during the 1990s from 36.15% to 31.60% in 1997. Incremental capital output ratio decreased slightly from 4.0 between 1987-92 to 3.8 between 1993-96. Stock market indexes rose from 417 in 1990 to a peak of 637 in 1996. FDI inflows were also high at 60-90% of the current account deficit between 1992-95. Inflation rates were also on a favourable level of 9.4% in 1991 to 6.64% in 1996. However real exchange rates did appreciate by 8% from 1990 to 1996, which could have been a bad sign<sup>17</sup>. Indonesia had a high debt to GDP ratio in 1991 at 68%, but this fell to 57% in 1996, although this was still quite high. Indonesia's ratio of short-term debt to total debt was relatively low in 1990 at 16% but rose to 25% in 1996. However the figures look more troubling when one considers the ratio of short-term debt to foreign exchange reserves and the ratio of short-term debt plus debt service to foreign reserves. These values were 177% and 294% in 1996. Ratio of M2 to foreign reserves constantly rose throughout the 1990s reached a high peak of 7.0 in 1995 and dipped in 1996 to 6.50.

The views provided by Pincus and Ramli (1998) on Indonesia reflect Rajan and Zingales's (1998) view on how the general Asian crisis was brought about. Although most authors who have analysed Indonesia individually agree that financial liberalisation originated the vulnerabilities leading to the crisis, Pincus and Ramli (1998) emphasise this. They also claim that the Asian crisis is not one but several distinct national crisis sharing common environments. Below a description will be given followed by an argument on how the changing business environment created vulnerabilities leading to a crisis. The changing business environment in Indonesia started in around the early 1970s when Indonesia opened up its capital account followed by radical bank deregulation in 1983 when banking reforms had removed most controls on interest rates, entry, credit allocations and had lowered reserve requirements. This led Indonesia to have one of the most liberal banking systems in the world. Bank credit expanded at a rapid rate and so did the number of institutions, increasing to over 240. The private banks expanded credit at an annual rate of 40% from 1988 to 1996. Both the legal framework and supervisory capacity lagged behind this rapid growth, with some predictable results. Non-performing loans exceeded \$12 billion according to 1996 official statistics although even this amount is expected to be an underestimate (Pincus and Ramli 1998).

During the liberalisation and deregulation period the World Bank praised Indonesia and claimed that the opening up of the financial system would stimulate deregulation of the real side of the economy and thus propel the process of economic growth (Pincus and Ramli 1998). Corruption and crony capitalism fits well with Indonesia's political system. Liberalisation did not go quite in line with the theoretical economic debates the technocrats proposed, rather there was still a lot of power in the hands of Suharto's cronies that opposed them. The only time the technocrats had the ability to implement policies was when the

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<sup>17</sup> Kenward (1999:84) claims that high frequency data measured a few month before the crisis shows even greater real exchange rate appreciation.

economy was in trouble and even then, only the ones that had good relationships with Suharto had the ability to implement policies. This meant that the benefits of liberalisation could only be practised randomly when political opportunities for them have arisen, which resulted in incoherent financial strategies.

Suharto himself did not have a great interest in solving domestic economic problems like the budget. He allowed huge off-budget spendings to finance his electoral campaigns. He even used some of the 'deforestation fund' to finance a then minister of research and technology, Habibie's national jet project in 1994. The need to continuously tighten liquidity to adjust to unplanned fiscal oscillations explains the persistent wedge between domestic interest rates and overseas borrowing, which led to the huge short-term debt. Ironically the opening of the capital account and currency convertibility was supposed to avoid the problems of corruption in the Sukarno regime in the 1960's. The issue of moral hazard also comes into the Indonesian scene. With the banking reforms in 1988, removing restrictions on opening new banks and branch offices and also sharply reducing reserve requirements led Indonesia to have one of the most unregulated financial institutions in the world. This was compounded by the fact that there were interest rate and credit ceilings on state banks in 1983 (Pincus and Ramli 1998:731).

Deregulation eased entry and lowered capital requirements. Banks were required to hold no more than \$16 million in capital. This created an environment that led banks taking excessive risks, a problem also caused by lax supervision, inadequate accounting procedures, lack of restraints on lending and borrowing practices and also ambiguous laws regarding bank liquidations. Although the technocrats were aware of these risks, by the early 1990s their even little influence on Suharto decreased which constrained them even more to regain control over the irresponsibly working banking system.<sup>18</sup> Deregulation left the government few options in managing the economy and adjusting to external shocks. Having relaxed capital, interest rates, credit creation and fiscal policy controls, enabled the government to manage the economy only through interest rates on Bank of Indonesia securities and the exchange rate. This was also a reason why interest rates were so high in the region (leading to such high short term dollar denominated debt). So as we can see the attempt to liberalise the financial system in such a corrupt and patrimonial state structure enhanced the vulnerabilities in the region by allowing the practices of moral hazard (Pincus and Ramli 1998:731-2).

The above examples do not allow one to blame corruption directly on the causes of the crisis, but they do lead one to believe that liberalisation in a relationship-based system would have been a possibility provided that there was transparency and prudent economic management. It is clearly evident that corruption and nepotism hindered the success of financial liberalisation. However it is not enough to analyse situations before the onset of crisis but also during it. Cole and Slade (1998), Pincus and Ramli (1998) and Radelet and Sachs (1998), provide detailed analyses on how policy mistakes and revelations of political corruption enhanced the severity of the crisis.

The onset of the Indonesian crisis is said to have begun in August 1997 when the speculators started to attack the rupiah. Even though the speculation was not serious the Indonesian government decided to widen the trading bands, raise its three months interest rate from 11 to 28% and intervened heavily in the foreign exchange markets. During the same period the

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<sup>18</sup> In 1991 they attempted to limit foreign borrowing, however that was ruled out by the son of a huge timber baron that wanted to launch a \$1.8 billion petro-chemical project (Pincus et al 1998).

ministry of finance postponed investment projects worth around \$16 billion. The rupiah further depreciated as domestic banks and non-banks rushed to hedge their foreign exchange positions, and it was clear that the flow of credits into the country came to a halt. The symptoms of moral hazard and over-leveraging was even more apparent when the sudden disappearance of foreign credits placed the Indonesian banks under further stress who were already weakened by non-performing loans. Since the banks themselves were large-scale dollar borrowers, currency depreciation led to a contraction of bank capital. Domestic borrowers found that they were unable to roll over their short-term loans and were forced into default. The government thought that by raising interest rates, speculators would be attracted into the country, which would revalue the exchange rate. However what it did in fact was to increase the burden of the banks and non-banks, who found it difficult to finance their short-term obligations<sup>19</sup>.

Apart from what caused the vulnerabilities in Indonesia, one can analyse the period during which the economy was falling and see how not only economic fundamentals before the crisis affected the crisis, but also policy implementations and political events that occurred during the crisis exacerbated its effects. One can specifically learn that even though some of the initiatives that the government set out were detrimental to the economy, it was more of a case that the country panicked when new policies and announcements were made by the government.

The initial panic stage was at the onset of the crisis, when there were sudden outflows of funds which led to many investors withdrawing their money, however the increase in the rate of withdrawals was when panic by domestic individuals and businesses both drew from and fed back into foreign investors' panic, resulting into further capital outflow from Indonesia. On the 31<sup>st</sup> of October Indonesia signed a three-year IMF programme, which proved less of a success than the austerity measures Bank Indonesia undertook (Pincus and Ramli 1998).

The IMF insisted on tightening liquidity, raising interest rates (to around 20-30%) and achieving a fiscal surplus of 1% of GDP which proved trivial since currencies fluctuated on a daily basis by 5-10%, which had mainly to do with political developments. Exchange rate movements were more dependant by changes in political expectations than by interest rate changes, new economic policies or even new agreements with the IMF (Cole and Slade 1998:63). The immediate cause of the IMF programmes collapse, was bank liquidations (Pincus and Ramli 1998: 727).

On the 1<sup>st</sup> of November the government closed 16 private banks, which was supposed to make the country think that the government was being more prudent, however all it did was undermine confidence in the private banks. This was also mainly due to the confrontation between the President's family and the minister of finance and governor of the central bank,

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<sup>19</sup> See also Radalet (1999).

of which the Presidents' family won. This led to a serious loss of confidence and also reduced the technocrats' power even further (Cole and Slade 1998).

The functioning of the payment systems was severely impaired by runs on most private banks. The central bank as a lender of last resort, was forced to supply emergency credits to the banks suffering the runs. Instead of controlling the banks by shutting them temporarily or refusing to provide further credit, the central bank attempted to sustain some of these banks and provide more loans which gave opportunities for further capital outflow. Besides sustaining many of these banks, the government with the IMF's encouragement guaranteed all liabilities of the banks, which led to a greater incentive for moral hazard. Contributing to this crisis was the fact that the central bank was effectively leaderless as its governors and ministers were dismissed by the president, presumably for having closed banks owned by his relatives. The crisis was further exacerbated by the many destabilising information, which leaked, of banks being closed and politically protected projects that had been cancelled and then reinstated.

However despite the banks guarantee, which was supposed to reassure creditors, the public became even more worried and had little confidence in the government's commitments. The creditors had even less confidence when knowing that the guarantee of bank liabilities, denominated in foreign currency was going to be paid in rupiah rather than dollars which added a further degree of uncertainty, leading to deposits continuing to flow out of both the private banks and the state banks (Cole and Slade 1998). Between June 1997 and January 1998 Indonesia's exchange rate devalued by 68% (Hu 1998:10).

## **6: Critique**

In this section we discuss the validity of the three propositions outlined in section 1.

### *6.1 South Korea*

According to Corsetti et al's (1998a) assessment of economic fundamentals, the only variables that reflect vulnerabilities in Korea are the ratio of short-term debt to foreign reserves, low FDI flows as a percentage of current account deficit, the ratio of M2 to foreign reserves and the high GDP growth that led to huge flows of foreign denominated loans. There

is no clear evidence of the other variables causing the crisis especially with regard to the changes in real exchange rates.

Taking the point of view of capitalism, evidence from Chang et al (1998), Hirst (2000) and Haggard and Mo (2000) suggest that the explanations provided by Frankel (1998) and the IMF<sup>20</sup> on the causes of the crisis are inaccurate. Although there was close connection between the government and many of the chaebols', their statements do not explain the success of Korea's economy during the rapid growth period. The articles written by Taylor (1998) and Singh (1999) explain the vulnerabilities created by financial liberalisation which led to fundamental economic problems, this however does not explain why countries like the USA and Switzerland did not experience a crisis when they also have a financially liberalised economy. Taylor (1998) and Singh (1999) do not explain why the advantages of western arms-length type capitalism were not benefited during Korea's liberalisation period. Rajan and Zingales (1998) provide a much better explanation with respect to Korea, namely that the problems were caused by rapid financial liberalisation in a relationship-based environment. This transformation exacerbated the problems of corruption, cronyism and insufficient transparency, as many of the conglomerates had not changed their management strategies and remained in a legal environment where there was no need to disclose detailed information on the status of corporations. This fact is evident from the imprudent and risky investments practised by many of Korea's inexperienced financial institutions as described by Chang et al (1998). This problem should also be blamed on Korea's legal system, which did not provide effective bankruptcy and corruption laws. Corruption and insufficient transparency prevented the calculation of accurate risk analysis by foreign financial institutions<sup>21</sup>. All these factors along with high growth rates masked Korea's fundamental problems, allowing moral hazard taking place at an international level. Although there is an element of validity made by Johnson (1998), Hu (1999) and Singh (1999) in questioning the weaknesses in the corruption argument, they dismiss the subtle factors on how corruption led to a default in credit ratings. Chang et al (1998) dismiss corruption on the grounds that it was the demise of industrial policy, which allowed cronyism to take place, they avoid detailed discussions on the significance of the Hanbo scandal in foreign and domestic confidence, as Haggard and Mo (2000) do.

Haggard and Mo (2000) provide a different perspective on the causes of the vulnerabilities. While they agree with Chang et al's (1998) claim that the demise of industrial policy and unregulated and rapid rates of liberalisation were a problem, they believe that liberalisation would have been successful had the government not been constrained by public demands of high rates of investment and economic growth. However there is a lack of literature for the general Asian crisis model describing how political factors did not allow liberalisation and macroeconomic management to occur successfully.

While it is difficult to pinpoint the exact cause of the onset of the crisis, evidence provided by Haggard and Mo (2000) and Park and Song (2000) suggest that it was both due to contagion from Hong Kong's shock and the uncertainty created by Kia's bankruptcy. Hu (1999) argues

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<sup>20</sup> Described by Singh (1999)

<sup>21</sup> None of the literature explain this.

that the contagion factor in the Asian crisis was due to foreign investors channelling funds into Asia through 'Asia-Pacific' funds rather than funds for individual countries. There is however no evidence of this in any of the literature for Korea. With respect to panic, Korea's case resembles the Diamond and Dybvig (1983) model where a panic is a case of multiple equilibria in the financial markets caused by worried rational investors withdrawing short-term funds. Haggard and Mo (2000: 210-214) provide evidence of this where speculators attacked the won on various news announcements.

The above results suggest that with the exception of political, corruption and some economic factors like exchange rate appreciation, the causes of Korea's crisis reflect the causes for the crisis on Asia as a whole, validating proposition 1.

With regards to proposition 2, the above analysis also provides evidence on the linkage between different explanations of the causes of the Korean crisis. The literature suggests that the initial stage was when the government liberalised the financial market during a period when the economy was growing and legal policies were still operating in a relationship-based manner. As most of Korea's conglomerates were not used to disclosing information to the public, international investors were unable to carry out accurate risk analysis, which led to moral hazard problems at the international level, as explained by Corsetti et al (1998b). This problem was exacerbated by the fact that Korea was known for fast growth and investors therefore entered the markets to take advantages of the high interest rates. All of these factors led to Korea's high ratio of short-term debt to foreign reserves, which made Korea very vulnerable to external shock and a panic induced crisis.

## 6.2: Indonesia

When discussing the arguments on Asian capitalism, Indonesia fits well with the theory proposed by Rajan and Zingales (1998). The country was operating on a bank and relationship-based system until the 1970's when Indonesia opened up its capital account followed by bank deregulation in 1983. Pincus and Ramli (1998) give a description of how this behaviour led to a rapid expansion of bank credits and financial institutions. Operating in a relationship-based environment, lacking supervision and a legal framework to handle this transition, this expansion led to the high accumulation of short-term debts.

Corsetti et al's (1998b) moral hazard theory can certainly be applied to the Indonesian case. The literature on Indonesia describes many instances where moral hazard led to vulnerabilities, such as the World Bank's applauding Indonesia's move for liberalisation, giving Indonesia greater incentives not to regulate its economy. This also created moral hazard at an international level where optimistic investors inspired by the World Bank's statements poured in funds. The lack of regulation during the liberalisation process made it easier for financial institutions to be created and lowered capital requirements. This created an environment where banks were led to taking excessive risks and thereby creating moral hazard.

Singh (1999), Hu (1999) and Johnson (1998) dismiss corruption and cronyism as a cause of the Asian crisis. However the literature on Indonesia shows that corruption certainly led to the

financial vulnerabilities. Pincus and Ramli (1998) believe that liberalisation would have been a success if the government followed what the technocrats suggested. The problem, however, was that the government was not at all receptive to the advice of these experts. Besides ignoring the technocrats, Pincus and Ramli (1998) describe a number of scenarios where corruption has been evident. In page 731 of their article they detail how Suharto used tax payers money on his electoral campaign instead of on public matters, he even used funds which were supposed to be used to finance public infrastructure like the 'deforestation fund' to finance his Minister of Research and Technology. Pincus and Ramli (1998) argue that this corruption caused the fiscal oscillations and explains the persistent wedge between domestic and foreign interest rates.

This argument can be applied to the country's lack of transparency, as well as the lack of regulations compelling detailed disclosure of financial state of institutions for the international investors to use, in order to carry out successful risk analysis. This meant that investors were blindly pouring money into the region. Like in the Korean case Singh's (1999) view on transparency cannot be applied to Indonesia as it clearly did have an effect.

Radalet and Sachs (1998) and Diamond and Dybvig's (1983) panic theories can be applied to Indonesia. There is no evidence in the literature to explain why the Indonesian currency was suddenly attacked, however most authors describe a sudden outflow of funds, caused by panic, which reflect Radalet and Sachs's (1998) claim. The panic theory can be confirmed further by the evidence that Cole and Slade provide, when they state that the IMF's policies did little to improve the currency, as currency values fluctuated by 5-10% on a daily basis on news announcements.

Corruption can also be applied to the actual panic stage. Grable's (1999) view can be applied to the Indonesian case when he states that it was the intensification of corruption that led to the crisis. As described by Cole and Slade (1998) a great deal of the panic was caused by the government's dismissal of ministers and arresting of political oppositions, causing the public to have little confidence or trust in their statements and policies. Indonesia's crisis reflects Diamond and Dybvig's (1983) model in two ways. Firstly Indonesia had a lot of short-term debt, secondly the country experienced multiple equilibrium exchange rates brought about by panic on news announcements. With the exception of corruption the literature on the general causes of the Asian crisis fits the Indonesian case demonstrating the validity of proposition 1.

With regard to proposition 2, we can see that there is a direct linkage between the different theories causing the crisis. Like in Korea, the initial stage was during financial liberalisation when the country experienced huge inflows of short-term loans and rapidly expanded the number of financial institutions available. However as we can see from above, the country did not have an adequate regulatory system to direct the funds in the most productive uses. This problem also existed due to corruption by the Suharto government, which enabled corporations to survive as well as the fact that many of the corporations did not have transparent accounting details. This led to moral hazard at an international level where investors were not able to carry out successful risk analysis and assumed because of the fixed exchange rate, the government and IMF's implicit guarantee of a bailout, that foreign loans would remain in a healthy state. Eventually the fact that the country was under such high debt caused them to be vulnerable to an external shock that led to the panic induced crisis.

So we can see that there is a causal linkage between different theories explaining the crisis, thereby demonstrating the validity of proposition 2.

With respect to proposition 3, there are two main factors that could explain why the crisis affected Indonesia more than Korea. The first reason is because Indonesia had a much higher ratio of short-term debt to foreign reserves than Korea did. This meant that if all the creditors panicked, there was a higher potential for the exchange rate to devalue in Indonesia than in Korea. The second reason is that Indonesia had a much more corrupt business environment than Korea. The evidence in the literature shows that as well as corruption causing the huge differential in interest rates between Indonesia and the rest of the world, it also exacerbated the panic during the crisis period. Although Korea suffered a number of speculative attacks because of uncertainty in the political system, the Indonesian government caused a much larger panic especially when the president dismissed various government ministers, causing the central bank to be leaderless. These explanations provide a clear understanding why Indonesia was affected more than Korea.

## **7: Conclusion**

The causes of both the Indonesian and South Korean crisis relate to the general Asian crisis model. With respect to economic fundamentals both countries had poor fundamentals that were masked by high rates of economic growth and low inflation. However like most Asian countries both Indonesia and South Korea had high ratios of short-term debt to foreign exchange reserves, which made them vulnerable to sudden withdrawals. Both countries also liberalised their economies too quickly and without prudent regulation. This problem was exacerbated by cronyism and moral hazard, which led the two economies taking excessive financial risks. With the exception of Grabel (1999) the literature on corruption, cronyism and transparency in section 3.4 does not fit well with Indonesia and South Korea. Most authors deny that corruption and cronyism caused the crisis. However there is ample evidence showing that these factors contributed to the vulnerabilities of the financial systems and to the intensity of the crisis. None of the literature however provides firm evidence on how the crisis was triggered. The only explanation of the sudden withdrawal of funds is contagion and panic.

Although all authors agree that at least one of the three factors caused the crisis, evidence in the literature shows that they are all in effect linked to each other. The reason for different authors having different opinions is because they argue for different stages in the crisis. The first stage was the creation of vulnerabilities, which was caused by liberalisation of financial markets in a relationship-based environment. This led to moral hazard by international investors and inexperienced banks channelling funds unproductively. Although corruption did not cause any significant economic problems during most of the high growth period it did prove a problem when the two countries were aiming to westernise their capitalist systems. These factors caused a mismanagement of the economy, which created the huge interest rate differentials between them and the rest of the world, which eventually led to the huge short-term dollar denominated debts. The result of huge short-term debts allowed the crisis to become as severe as it did. The only reasons that could be given for Indonesia's higher

devaluation is that it had a higher ratio of short term debt to foreign reserves and also a more corrupt political system which exacerbated the effect of the crisis.

However the literature which explains the causes of both the specific countries and the general Asian crisis countries has limitations. The authors hardly ever make a comparison between the economic fundamentals of both the Asian crisis countries and non-crisis countries. This makes it difficult for a researcher to analyse whether the fundamentals they describe as being poor really are poor. The literature also rarely ever gives a reason why liberalisation was not carried out more slowly than it was. It is difficult to discern what allowed the governments of these countries to manage the economies so badly and if corruption was the reason, why did it exist in the Asian countries and not in the West. Further research need to be done on these specific topics in order to acquire a better understanding of the Asian crisis.

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### **Appendix: A chronology of the Asian crisis with special attention to Indonesia and South Korea (From May 14<sup>th</sup> to September 9<sup>th</sup> 1997)**

Source: Henderson (1998) P.285-309

#### **1997**

May 14-15      Bank of Thailand intervenes to defend the baht from attack by speculators. Philippines Central Bank raises overnight borrowing rate by 175 basis points to 13% to avoid spill over from the baht onto the peso.

July 2            Bank of Thailand abandons peg for the baht, which depreciates by 18% to about 30 to the dollar.

- July 8 Malaysian central bank intervenes aggressively to defend the ringgit.
- July 11 Philippines Central Bank gives up defence of the peso. It had spent one eighth of the international reserves in the first ten days of July and hiked overnight borrowing rates as high as 32%. The peso depreciated by more than 10% to the US dollar.
- July 13 Creditor banks announce they will grant emergency support to help automaker Kia, Korea's eighth largest chaebol, avoid bankruptcy. On July 23 S&P and Moody's placed several Korean banks on a negative credit rating outlook.
- July 14 Malaysia's Bank Negara gives up defence of the ringgit after unsuccessfully raising interest rates to 50% and spending an estimated US \$3 billion in reserves. The ringgit plunges to a thirty-three month low.
- Aug 13 Indonesian rupiah comes under severe pressure, hitting historical low of 2682 versus \$US, before ending on 2655 on active defence by the Bank Indonesia.
- Aug 14 Bank Indonesia abolishes intervention band effectively allowing the rupiah to float.
- Aug 18 Bank Indonesia hikes SBI intervention yields twofold to threefold on maturities of less than one week (20%) to three months (28%) to support the rupiah.
- Aug 22 Moody's maintains banking outlook in the face of Indonesian currency crisis.
- Aug 29 Indonesia imposes swap restrictions on offer side for US\$ 5 million.
- Sept 4 Indonesia unveils 10-point austerity measures. Bank Indonesia cuts one- and three month SBI intervention yields by 3%.
- Bank of Korea will lend 1 trillion KRW to troubled Korea First Bank, and government will boost its capital with purchase of 600bn KRW in Korea First common shares.
- Sept 9 Bank Indonesia cuts SBI intervention yields on seven and fourteen days by 1%, one and three months by 2%.
- Jinro, South Korea's largest liquor group and nineteenth largest chaebol, becomes the third large Korean firm to go bankrupt this year, with debts of nearly \$US3 billion.