The Dynamics of Twin Crises in Asia
A Comparison between the Egyptian and The Indonesian Currency Crises

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ABSTRACT
The study attempts to identify the extent of similarities, and/or differences between the conditions that surrounded the Asian tigers economies from 1994-1999, and those in Egypt from 1998-2003. A generic "Business Dynamics model" is developed, based on a simplified causal framework of three main independent groups of variables; economic fundamentals, Real and Financial links, and vulnerability indicators, the relevant data for Indonesia is chosen for the simulation model. Although similar symptoms between the two cases were identified, the origins for trouble were quite different; while the Indonesian crisis was mainly attributable to the combination of fixed exchange regime, moral hazard, and excessive financial liberalization, the Egyptian economy has suffered a weak real sector, undiversified and exogenously determined sources of hard currency, and a long-lasting rigid exchange rate system. In summary, the authors contend that even a floatation of the Egyptian pound has taken place, the Egyptian currency crisis would not have been resolved, unless drastic measures were to be taken to trouble shoot the other two main sources of trouble; low levels of exports, and undiversified sources of dollar flows. The study concludes with invaluable lessons from the Asian crisis that should be taken into the consideration of the Egyptian policy maker; among them are the essentiality of an independent monetary policy, the determination of target priorities that matches the current level of development, a solid export-based strategy, the speeding-up of the privatization program, the enforcement of the new banking-legislation, and an increasing level of transparency.

INTRODUCTION
The era of globalization has witnessed an increased economic and financial interdependence; many emerging countries have opened their economies to international capital investments in order to sustain intensive economic reforms and structural adjustments. Although, major benefits have been attained, a price had to be paid. The world has witnessed an epidemic series of financial crises during the past two decades (the TEQUILA effect (1995), the ASIAN flu (1997), and the RUSSIAN virus (1998), each of these crises had spilled-over to other countries, mostly in the same region.

Financial crises are not new; there had been crises before the Mexican crisis of the 1995,for instance the breakdown of the Bretton Woods system in the early seventies, the debt crisis of the 80s, and many others that trace back our time to the 19th century, most notably the speculative attack on the United States' adherence to the gold standard in 1894-96, *so what makes those crises of today so compelling?*

From the authors' standpoint, the term **Globalization** has made all the difference, where the enhanced Information Technology, increased openness of financial markets, and liberalization of trade, crises have not only becoming so pronounced in effect but also much more contagious than ever before.

During the past 6 years the Egyptian economy has gone through some difficulties, some of which were seen by most policy makers in the country as exogenous, nonetheless the continuation of these difficulties should urge the questionability of this allegation, true there had been exogenous shocks, but this doesn't lead us to conclude that everything was and is going well on the internal side. The year 1998 was real bad for the Egyptian economy. A sharp decline in Egypt foreign flows; tourism, the Suez Canal, workers' remittances, oil exports, and finally FDI were all affected by the Luxor incident and the fall in international oil prices. Although there had been slight improvements, the situation got worse due to another exogenous shock: the Sept.11th, as a result, a deteriorating current account deficit, a depletion in reserves, and an excessive pressure over the domestic currency were the inevitable outcomes, despite the GOE's several trials to curb the surging demand for dollars, the problem has persisted and exacerbated, the pound was devalued more than once during the year 2001, however the continuing pressure over the pound accompanied with the threat of an upcoming war in the region, which means another exogenous shock, led the Egyptian government to announce the floatation of the Egyptian pound-a decision that has been urged by many international organizations such as the IMF for several years.

Some policy makers estimate that these difficulties are just temporary and are not to be considered as a crisis, however the current situation in the banking sector and the failure of many Egyptian private firms, could be signals of a real upcoming overall financial crisis, with its severe potential impact on the social and political levels, *The problem is: we don't know that for sure!*

PROBLEM DEFINITION

As history repeats itself, empirical evidence has showed that there is a tendency for financial crises to have commonalities in certain aspects. The authors believe that there might be some common grounds between the situation in Asia before 1997 and the conditions we are living currently in Egypt since the year 1999. In other words: we could be on the verge of a severe crisis in Egypt, unless some real and drastic precautions are transformed into actions.

STUDY OBJECTIVE

This paper aims at determining the extent to which the conditions that led to the Asian crisis, from 1994 -1997, was similar to and/or different from that we have faced in Egypt from 1998 till the Egyptian Pound floatation in 2003. The study should come up with pinpointing the most relevant vulnerability conditions that could jeopardize the Egyptian economy to fall into a deep crisis.

STATE OF THE ART

FINANCIAL CRISES MODELS

Two main opposing models were considered the classical views for explaining financial crises:

First-Generation Models

The early works to depict the Mexican crises in the 80s and 90s had resulted in what was termed "first-generation models".

Krugman (1979) & Flood and Garber (1984) contended that the inconsistency between a fixed exchange rate system and the pursuit of government policies such as monetizing a large fiscal deficit can push the economy to crisis, the scenario works as follows; as the central bank expand the money base to finance a mounting fiscal deficit, a balance of payments deficit builds up, which on turn could be financed by foreign reserves, once reserves have fallen to a critical level, there would be speculative attacks on the domestic currency that deplete the remaining reserves till they reach to a certain level, where the government could not defend its fixed exchange rate, which inevitably forces the government to float or devalue the domestic currency.

It is interesting to note that first generation models blame solely deteriorating economic fundamentals due to the government's failure in pursuit of the right policies-in other words; the pegged rate could not have been sustained even in the absence of speculation.

From the authors' perspective, governments sometimes act passively towards reserves depletion, especially when they have much higher priorities such as price stabilization programs, and social & political obligations, for instance, Egypt had been resisting for long to devalue its national currency due to the same aforementioned justifications, however the cost of reacting too late were severe on the Egyptian economy.

Second-Generation Models

The attack against the national currency is not necessarily based on fundamentals; rather it could be *built in* as a result of a self-fulfilling prophecy that the government would devalue that currency in the near future.

Obstfeld (1984) suggested that fundamentals might neither be sufficient nor necessary conditions to push an economy into a crisis. This could have occurred when the government decision to devalue or even abandon its peg was not just due to the inconsistency between deteriorating fundamentals and a fixed exchange regime, rather, the government might had been reluctant to maintain the peg as the cost of doing so was becoming too high. In other words, the benefits perceived from maintaining the peg was overweighed by some overwhelming problems such as high interest rates, debt service, and unemployment-for which a trade off would have to be made, and as time goes by without a government reaction, speculation increases the cost of maintaining the peg till it becomes too high to bear (Obstfeld 1994).

Obstfeld (1994,1996) had introduced the cost of holding foreign reserves which was absent in earlier models, Obstfeld (1996) presented a model in which the government falls between two conflicting goals; maintaining the peg and reducing high unemployment, which would raise the cost of maintaining the peg too high to be borne in face of rising speculation, he pointed out that speculation hikes because market participants might think that the government would devalue short, that's why they begin to take speculative positions against the domestic currency, which hastens the government action towards devaluation.

Third generation models

"Third generation models define fundamentals more broadly" (Ghui & Gai, P.368 1998) According to this study, the relatively very recent models have two distinct advantages over earlier models; first they allow for the inclusion of some micro frictions such as deficiencies

(moral hazards) in the banking system induced by government guarantees-**second** they allow for explicit interactions between fundamentals and beliefs, hence a combined responsibility for financial Crises.

Mishkin (1996) suggested that a currency crisis could lead to a banking crisis, if an external shock, coupled with a commitment to fixed exchange rate, led to loss in reserves, and the depletion in reserves was reinforced by speculative attacks, which would lead to a (currency crisis)-then the resulting rise in real interest rates could lead to credit crunch, output contraction, bankruptcies, and a failure in the banking system-however he contended that the extent of failure in the financial system would depend on whether banks' liabilities were largely denominated in the foreign currency.

The Asian Virus Chronology:

- Krugman, 1998 contended that he had overseen signs of vulnerabilities, noting that the current account deficits were as high as their counterparts during the Tequila effect (1994), nonetheless what actually happened in Asia was more complex than fiscal problems**:** collapses in domestic asset markets, widespread bank failures, bankruptcies of many private firms-these were not anticipated by any one.

- Masson (1998) stressed the impact of what he termed the "monsonal" effects-these are external shocks to some regions or countries, which can trigger financial crises-but in order to do that, external shocks can only affect zones of weakness in the afflicted economies-according to the IMF report, 1998 major economic shifts in industrial countries can trigger financial crises in emerging ones, the report referred to the sharp increase in the US interest rate in the eighties and the sharp appreciation of the dollar against the Japanese Yen as triggers for the Tequila crisis 1996, and the Asian virus in 1997, respectively.

- Fundamentals were not enough to trigger the Asian financial crisis, Glick and Rose (1998) stressed the role of trade flows in propagating the crisis, they showed that when the US dollar appreciated against the Japanese Yen, the Asian countries' trade competitiveness was hurt, as the Japanese exports became cheaper than their Asian counterparts, and in the presence of the rigidities of the exchange rates, the most adversely shocked countries had let their currencies float followed by a series of competitive devaluations that ended with the least adversely affected countries.

- One central element of the Asian crisis has been seen in the dynamics of international capital flows (Griffith Stephany-Pfaffenzeller Stephan, 1999); in the mid nineties the East Asian countries were embarking on economic adjustments and stabilization programs, which entailed an implementation of fixed exchange rate regimes to combat inflation and attract international flows-foreign inflows started to increasingly surge into the region, as its overall economic outlook was looking pretty stable.

- Yet, financial institutions were still underdeveloped, and government gave implicit guarantees to investors that they would be bailed out if something gets wrong; this was termed the moral hazard phenomenon (Krugman, 1998)

- In addition, high profit margins of the domestic financial intermediaries often made it expensive to borrow in domestic capital markets, thus motivated private firms to take out loans in the international capital markets (IMF, 1998), these loans were mostly short-term, that were used to finance long-term projects.

- On the micro level the unwarranted surge of capital flows caused a condition of an over investment in those economies coupled by an overvaluation in the prices of assets and capital markets, by the time the marginal returns of such investments began to fall, as the economy was running over capacity, revenues started to decline sharply, and firms got into trouble-the bubble just burst (Krugman, 1997)

- As banks could not collect their liabilities, investors started to felt the blues, flows started to fly out the Asian bloc and speculation made things even worse.

- As the pressure was enduring, the Asian Tigers used their foreign reserves to defend their pegs, as things were getting out of hands, interest rates were raised to attract investors back-however the rise in the real interest did not stop speculation-unfortunately it choked investment much more-the inevitable outcome was the successive devaluations that began with the Thai Baht in July 1997.

THE EGYPTIAN ECONOMY IN TROUBLE

Egypt has embarked on an economic reform and structural adjustment program that gained plaudits from international observers for its rewarding outcomes. However, the combination of consecutive external shocks to the economy in 1998 & 2001 (September 11th), with slowed down efforts in the reform program have resulted in some trouble for the Egyptian economy.

The long-lasting deterioration in the balance of payments accounts reflects a state where dollar inflows have been severely lagging behind dollar outflows for the last five years, a condition which has reinforced an increased demand for more dollars as market participants were becoming much more unconfident, in my perspective, the widening gap between dollar supply and demand was mainly due to the incapability of the Egyptian market to respond to such external shocks as effectively, and flexibly as possible.

According to the figures of the US embassy report (2002), the average official exchange rate was devalued several times to ease an overvaluation that reached to 35%, despite these efforts, the shortage in dollars had persisted. Despite the 23% cumulative devaluations of the Egyptian foreign exchange rate, there had been an ongoing shortage of dollars at the official rate resulting in a parallel market that comprised 20% of market transactions-"unless the government pursues a more flexible exchange rate policy, things can get worse"(Fitch ratings, 2002).

In its efforts to resolve the problem, the Egyptian government has used its foreign reserves to inject some liquidity in the market; nonetheless, the result was a continuous drainage of reserves, and an inevitable too late decision to devalue more than once in 2001-02.

It is important to note that, the overall economic outlook was beginning to improve after an 18 months of sluggish in the Economic activity-however the incident of Sept.11th had a far reaching effect that hit the economy in its backbone sectors; tourism, transport, exports, and foreign direct investment-which are all labor-intensive activities (Egyptian ministry of foreign trade, 2002).

With respect to the banking sector, according to Fitch (2002) credit growth has grown more rapidly than nominal GDP for several years, and with the slowdown in the economic activity, there has been an increase in the ratio of non-performing loans that reached to 16.1% (and

even 17% according to the US embassy report, 2002) these figures were even suggested by Dun & Bradstreet Limited, 2002 to be understated.

On Jan. 29th, 2003, the Egyptian Prime Minister, had announced that the floatation of the Egyptian pound against the US dollar was underway. The decision was deemed as an initial step towards a restoration of market confidence, nonetheless, as the economy has suffered a state of stagflation, additional measures should be on the Egyptian government own agenda.

DYNAMIC HYPOTHSES

1-The interrelation and causality among different variables involve some non-linearity that could be better demonstrated through "Business Dynamics". The developed framework is based on the "third generation models"-which mitigate some shortcomings of the first two generation- models.

2-The basic model presumes an interaction between a currency and a banking crisis -a TWIN CRISIS -in which three main players are involved: the government of the diseased country, the international investors, and the private sector.

3- The model depicts the **dynamics** of three main interrelating groups of factors: economic fundamentals of the country, trade and capital flows, and vulnerability indicators, it is important to note that any occurring changes in one group can affect the dynamics of the other two, and ultimately have the composite influence on the dependent variable.

The inherent Causality is demonstrated as follows, (Ahmed, 2003):

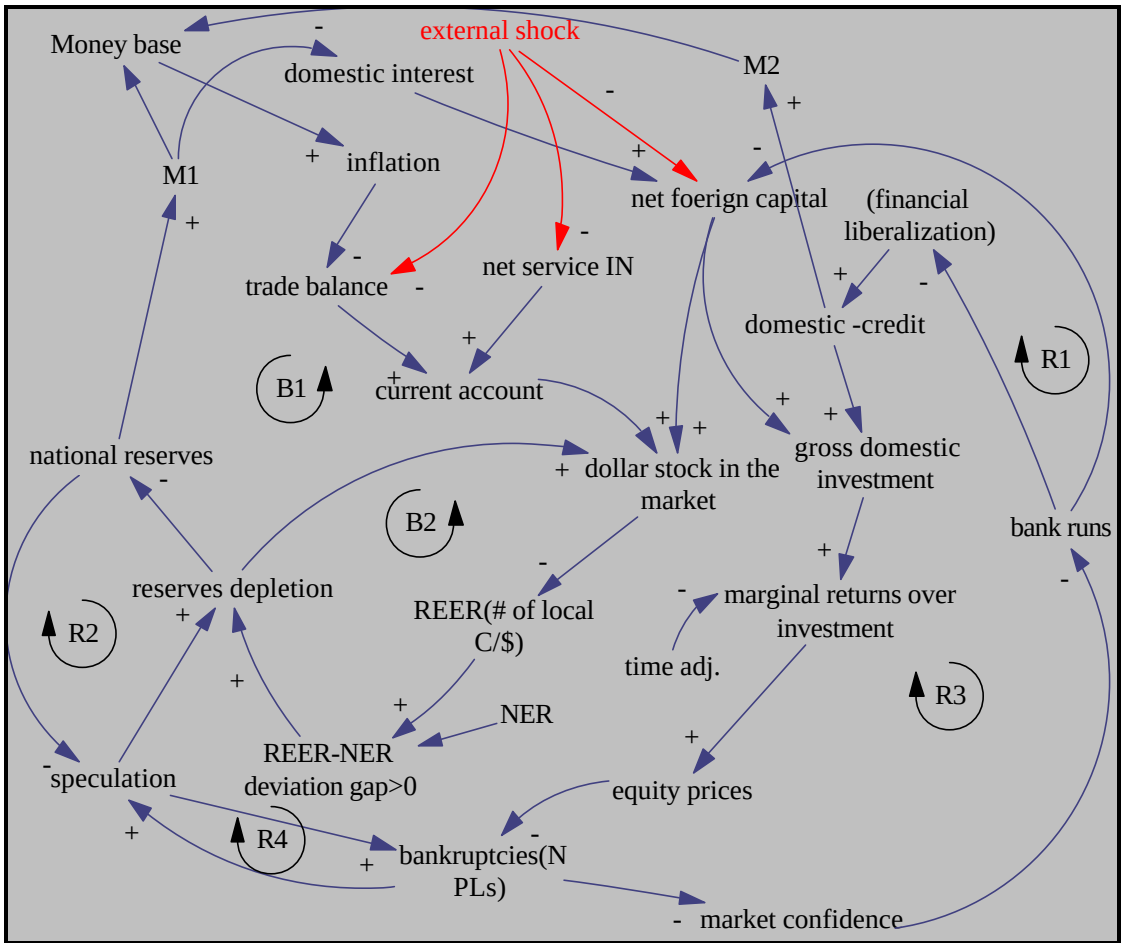

Figure (1) Detailed Causal Loop Framework

The Basic Depiction of Causality

(B1) The effect of economic fundamentals

A main feature of this model lies in the assumption of a managed float exchange regime of the country under study, which recently has been going into a process of financial liberalization, although it might be prudent to implement such a system in the first years of financial liberalization to maintain financial stability and attract capital inflows, the endurance of a managed float is itself a mixed blessing, first it puts the country under inflationary pressure; if everything goes ok and capital starts to flood into the economy, the domestic currency would be increasingly overvalued (the deviation gap would be less than 0), while this will accumulate national reserves, the monetary policy under a relatively fixed exchange regime is certainly **not** independent, an excess domestic liquidity could result in an overheating inflation, especially if that economy is operating at full or close to employment levels, or even if productivity rates were lagging behind domestic money creation, which could ultimately hurt the nation's trade competitiveness.

Theoretically the *exchange rate of that country's domestic currency should devalue* to reflect the deteriorating trade competitiveness; according to the PPP theory, if the country's domestic inflation has risen, holding other things constant, imports would become less expensive and exports would become more expensive, the demand for imports and exports would rise and fall respectively, empirically this was neither the condition in Asia nor Egypt,

the systems were managed peg with different rigidities, and there was somewhat a PPP misalignment.

(R1) The investment bubble effect

The extent of financial liberalization is mostly determined by the reserve requirement ratio, a decrease in that ratio would tend to encourage domestic credit, given a flow of foreign capital.

An the amount of domestic credit could increase too much to finance the growth in gross domestic investment, initially the marginal returns over investment would rise exponentially, equity and assets prices would sour, profits rise, bankruptcies rates tend to decline, eventually this would bring about an increase in market confidence, which would **reinforce back** the government's willingness to speed up financial liberalization, the ultimate outcome is an "assets bubble"-as the bubble gets larger, it would be just a matter of time, when this bubble would burst.

(B 2) Too much cost defending the peg

Now what happens if the economy was subject to an exogenous shock?

An exogenous shock could adversely affect sources of foreign currencies through the current account (a currency squeeze), the capital account (a banking crisis), or simply both; a twin crisis. As the economy is operating under a managed float exchange regime, the government would try to defend its peg through direct/indirect intervention; initially it would expand open market operations, that is; buying the domestic currency from those who are increasingly supplying the domestic money for sale, and selling them dollars-the main objective would be restoring the supply and demand equilibrium of dollars at the defined peg, nonetheless the severity of the external shock accompanied by other factors would determine the sustainability of the fixed peg, for instance the level f reserves and the rate of its depletion must be taken into consideration, in addition the contraction of domestic money supply (M1) that results from too much open market operations, would raise domestic interest too high, which would SEVERELY hurt private investment, employment levels and GDP.

(R2) A self-fulfilling prophecy

As Obstfeld (1994,96) had suggested, the cost of maintaining the peg can become too high to bear; defending the peg would signal a probability for an upcoming devaluation, which would increasingly urge speculators to sell the domestic currency in exchange for dollars, eventually that would reinforce back the process of open market operations and reserves' depletion, till it becomes impossible to maintain the peg with too much reserve depletion and interest rate hikes.

Empirically, small successive devaluations are being made to ease the pressure on reserves' depletion, however that could urge investors' sentiments around the sustainability of the managed float system, leading to much more speculation and reserves' depletion-at the end there's an increasing probability that the government would decide to float the domestic currency, if the impact of the exogenous shock would have persisted for too much long.

(R3) Capital Flight

The surge in net foreign capital flows is positively related to the rate of domestic interest, given other things constant, as capital starts to flow, this would fuel the pace of growth in the economy, as well as financial liberalization, however as time passes the blowing assets bubble would be extremely vulnerable; profits tend to slow down as the economy become overcapitalized, or simply if those investments turned unprofitable, things can also get worse

if an exogenous shock, such as a rise in international interest rates had followed; falling marginal returns over investments would depress domestic equity prices, raise bankruptcy rates, shake market confidence, lead to bank runs, inevitably to capital reversals.

(R4) A twin crisis link

The elements of twin crises are interrelated, this is why the impact could be overwhelming, as the number of defaulting businesses increases, this would constitute a sign for a fragility in the banking sector, which urge speculators to take positions against the local currency, a much severity in the currency squeeze would reinforce back the number of bankruptcies.

FINDINGS

A simplified CLD on which the stock and flow dynamics are based, is illustrated as follows.

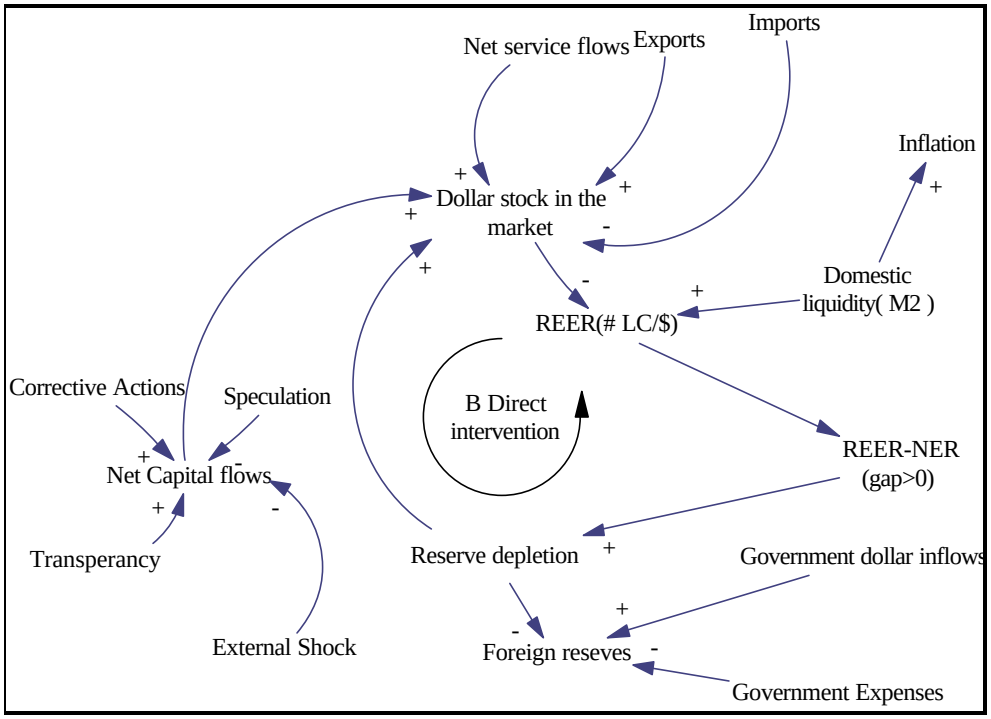

Figure (2) Simplified Causal Loop Framework

The developed stock and flow is illustrated in the following page.

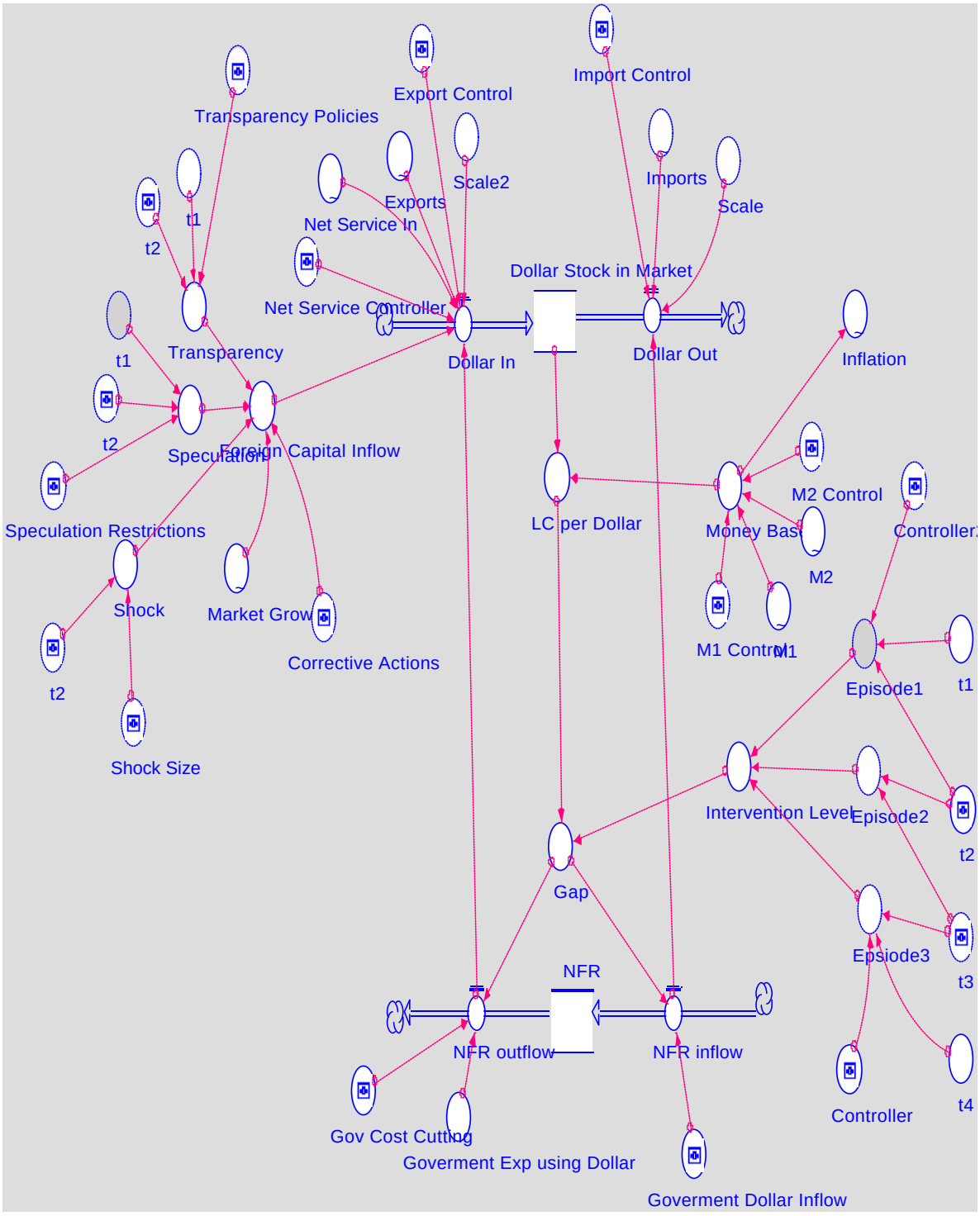

Figure (3) Stock and Flow Model

Model Boundary: The following table 1 demonstrates the relevant exogenous and endogenous model variables.

Table 1: Model Boundary

	Exogenous Variables		*Endogenous Variables*
1-	$ Imports	15-	Dollar inflows
2-	$ Exports	16-	Dollar Outflows
3-	M1, M2, Money Base	17-	Local Currency/$
4-	Net Service Inflows	18-	Currency Gap
5-	Speculation	19-	Dollar Stock in the Market
6-	External Shock	20-	Net Foreign Reserves IN
7-	Episode 1	21-	Net Foreign Reserves Out
8-	Episode 2	22-	Net Foreign Reserves
9-	Episode 3	23-	Intervention level
10-	Government dollar Inflows	24-	Inflation
11-	Government dollar expenditures	25-	Foreign Capital Inflows
12-	Transparency Policies		
13-	Market Growth		
14-	Corrective Actions		

Model Assumptions:

1-The model is based on a four-phased scenario:

- The first one corresponds to the interval, which had coincided with the application of a fixed/managed exchange regime (t1)
- The second interval corresponds to the interval onset the external shock (t2)
- The third one corresponds to the application of a floating exchange regime (t3)
- The fourth one corresponds to the very short months after floatation, where longer ranges are not applicable to the model due to changes in causality among some leading factors.

2- Local Currency/$ corresponds to the hypnothized definition of the relevant exchange rate in terms of the quantity of LC/1$, while the following relationship prevails

Since: Local Currency value in the market related to 1/value of the Egyptian pound local Currency Value/Foreign currency which hence related to Dollar Stock in the market

Then: The government intervenes through the injection of $ inflows to the market by increasing its net foreign reserves outflows,
If the Value of LC/$ exceeds the targeted intervention level (Target foreign exchange rate), that is **If** the Intervention Gap is > 0, the opposite condition holds true by increasing the net foreign reserves inflows **If** the Gap is < 0.

3- Government dollar inflows corresponds to increases in reserves inflows, through exogenous factors such as institutional assistance, or/ and borrowing, however the impact of this variable is only limited to changes in net foreign reserves, other consequences of an increased/decreased government debt/aid are beyond model boundaries.

4- Corrective actions correspond to government efforts to attract capital flows such as new legislations, high interest.

5- The inherent external shock effect is implicit within the exogenous variables of exports, imports, and net service flows, the only source on which the impact of an external shock could be adjusted is that of net capital.

Model Results

The dynamic impact of the developed system on the different endogenous variables is demonstrated as follows:

Figure (4) illustrates the overshooting of the LC/$ onset the external shock, note the continuous appreciation in the LC/$ during the few years preceding the crisis, the rise also corresponds to the resulting undershooting in net capital flows.

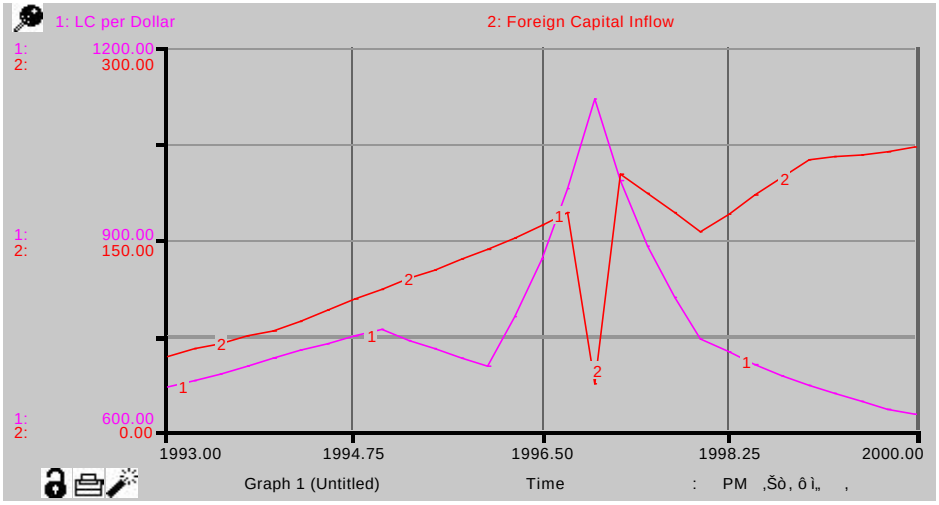

Figure (4) The resulting overshoot the national currency foreign exchange rate

The following figure illustrates the corresponding behavior of net foreign reserves, and M2 respectively, note the decline in NFR and the steep increase in M2 during onset the crisis, in addition the M2 has continued to expand even after the crisis, as the government was reluctant to follow a TMP.

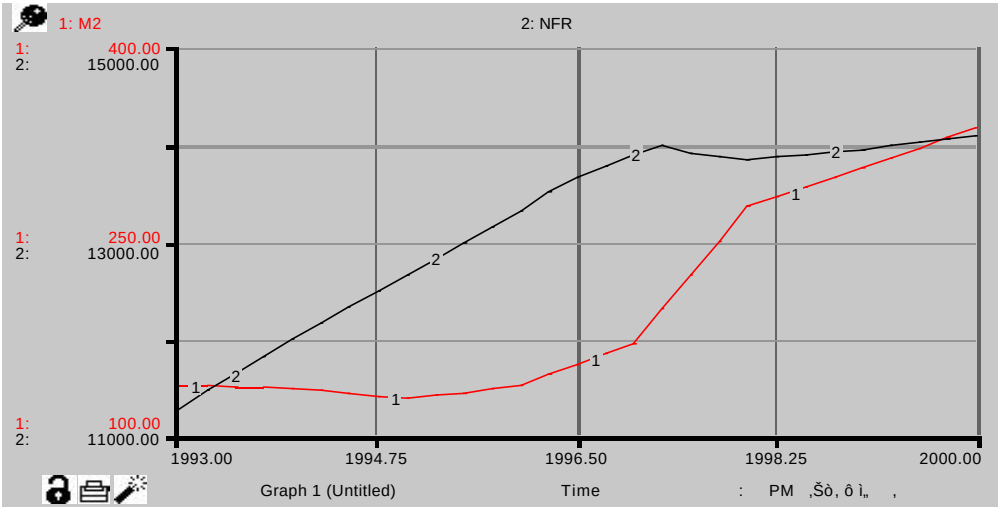

Figure (5) Net Foreign Reserves and M2

The following figure illustrates the currency gap (the deviation of LC/$ of the exchange rate target), and the corresponding sharp decline in dollar inflows to the market onset the crisis.

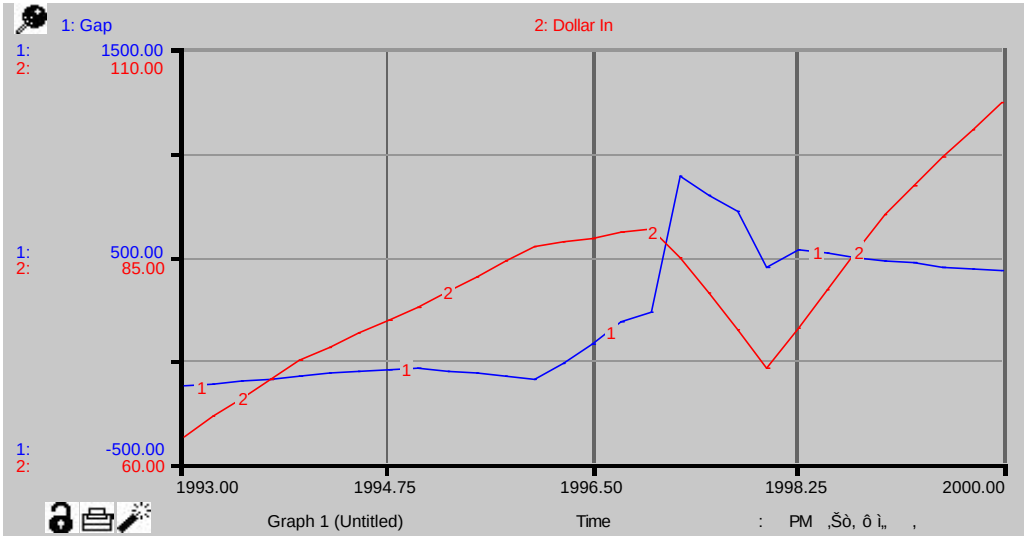

Figure (6) Dollar Flows Gap Upon the Crisis

The following figure illustrates the overshooting of inflation, which coincides with the floatation decision, the decline in M1, which corresponds to the government open market operations to defend its exchange rate target and the rise in speculation onset the crisis.

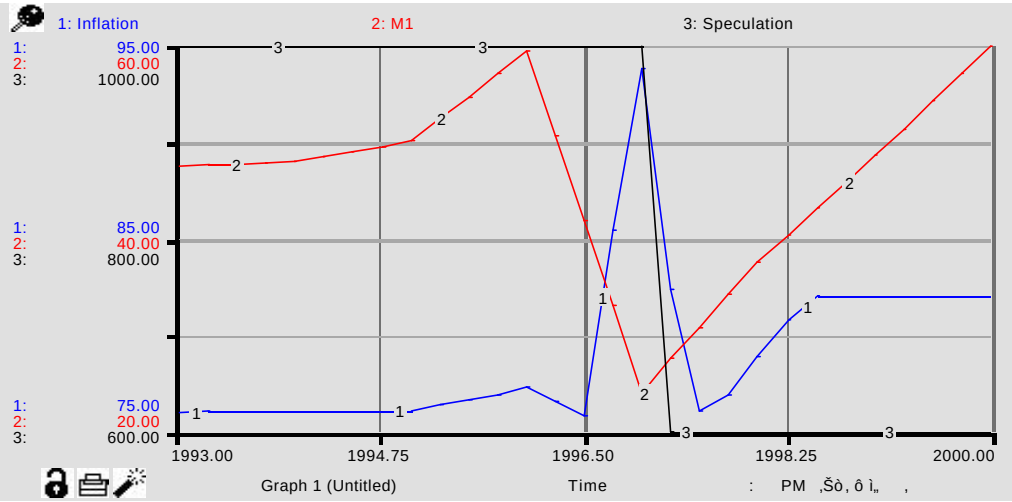

Figure (7) The Resulting Increase in National Prices

Note that inflation has increased, even though M1 has certainly declined just before the external shock, this could be justified by the overall increase in the money base through the constant rise in M2, and the impact of speculation adversely affecting net dollar inflows, the net effect would be an increasing rate of MB relative to a decreasing dollar stock in the market-a higher inflation.

The following subsection examines the impact of varying some of the exogenous variables on the primal endogenous one; the exchange rate.

Scenario analysis

1-Increasing exports:

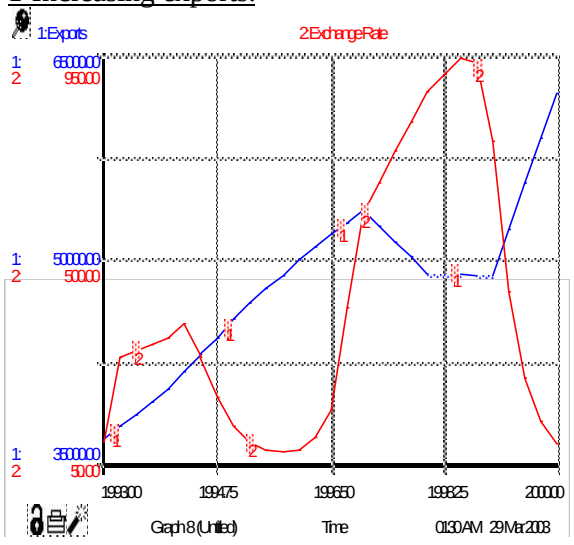

Figure (8) Export standard level

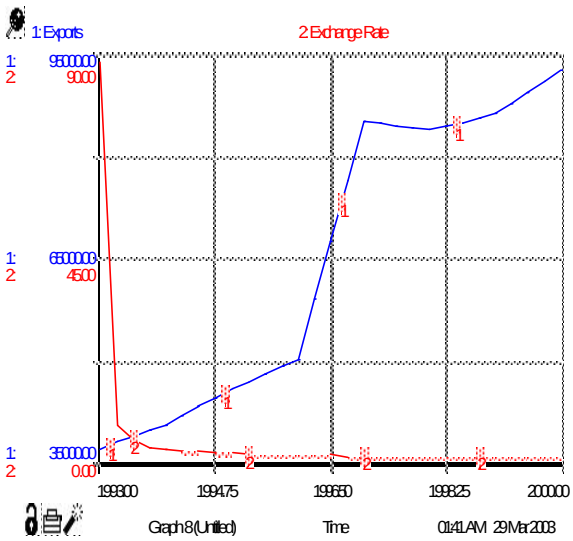

Figure (9) Increase in Export

Figure (8) illustrates the standard model level of exports, and the corresponding exchange rate onset the external shock, figure (9) illustrates the maximum increase allowed in exports, and the corresponding impact on the exchange rate, obviously, the resulting overshooting in the national currency exchange rate has been less enduring.

2-Decreasing Imports:

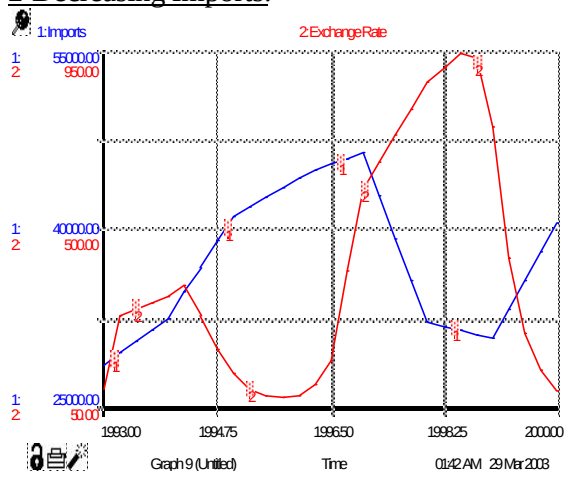

Figure (10) Standard level imports

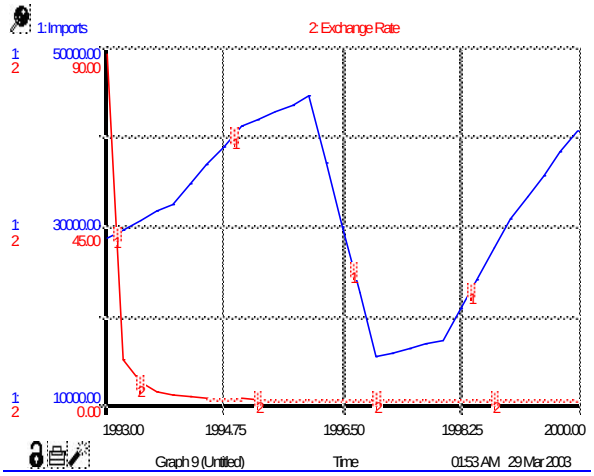

Figure (11) Reducing imports

Figure (10) illustrates the standard model level of imports and the corresponding exchange overshooting onset of the crisis, note the impact of a decreasing trend of imports on the relevant exchange rate, realistically it's impossible to decrease imports indefinitely, nonetheless the result gives an insight to the possible impact of reducing imports on the rate of foreign exchange, given other things constant.

3-Increasing capital flows:

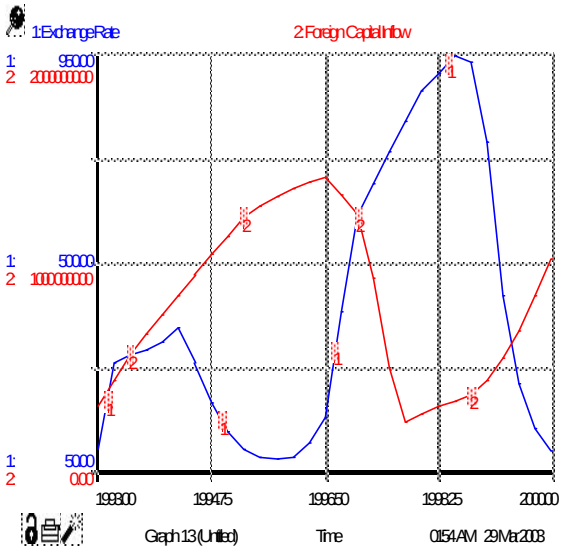

Figure (13) Increasing Capital Flows

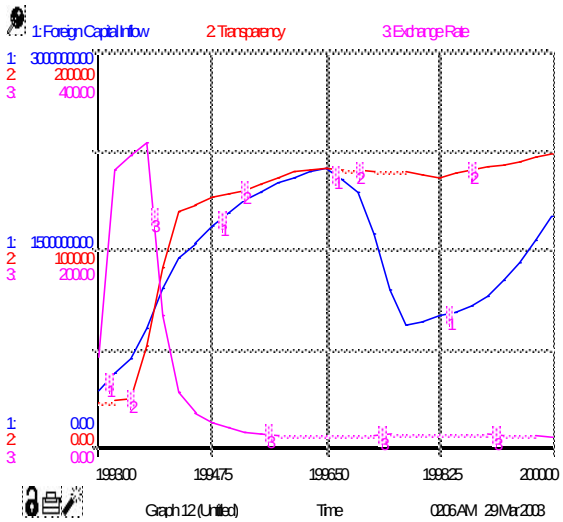

Figure (12) Standard Model Capital Flows

Figure (12) illustrates the standard model level of capital flows, and its corresponding undershooting onset the external shock, in the right hand figure, note the relatively lesser rate of decrease in capital flows that resulted from an indefinite increase in transparency, the exchange rate may have appreciated earlier due to the increase in transparency (at then some disguised vulnerabilities would be much apparent, this might hastens the overshooting of the exchange rate, however with the level of transparency remains intact, other things remain equal, market confidence would be gradually restored, people would be less inclined to

exchange the local currency for the US dollar, and the exchange rate would start to decline in an even higher pace than that of the standard level after the external shock effect had taken place.

4-Contracting local currency:

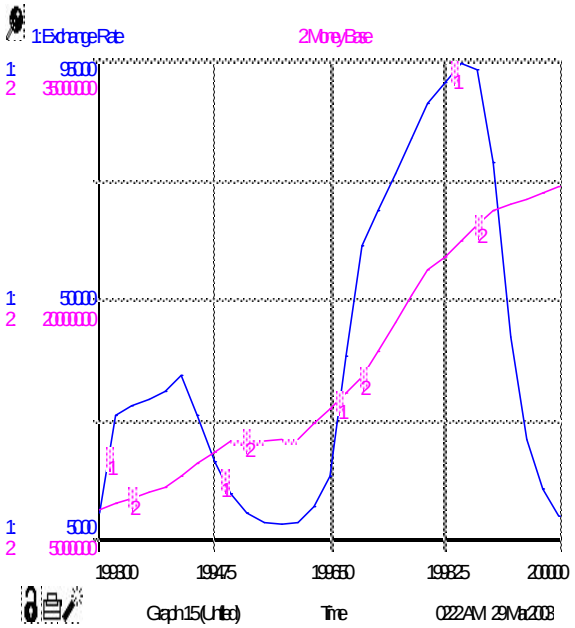

Figure (14) Standard money base

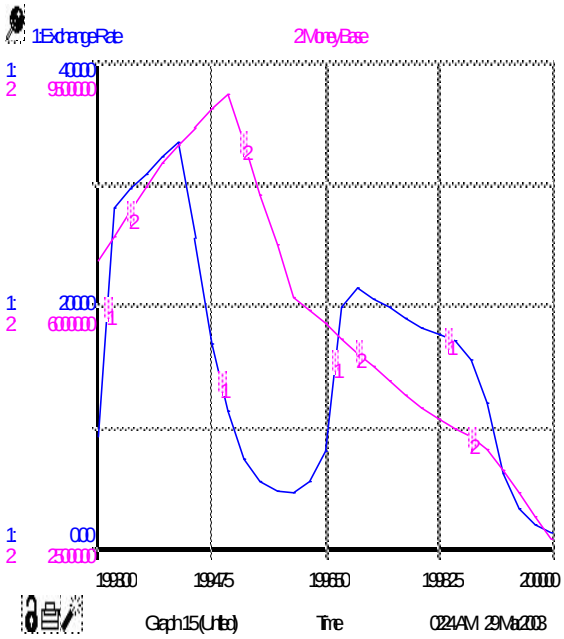

Figure (15) Contracting money base

With the standard money base, which reflects a steep increase in the broad money during the few years preceding the external shock, we can note the corresponding overshooting in the exchange rate onset the crisis in the left figure, now turn to the right figure, what if the rate of increase in broad money has started to decline just at the time the growth rate of the economy was starting to decline in 1994 (it means a more precautious responsive monetary policy when the economy was starting to slow down), note that initially the exchange rate was appreciating , coinciding with the initial increase in the money base, holding other things constant, however as the government followed a much TMP , the rate of *increase in exchange rate has begun to decline, this* might be also similar to the time the GOI tightened the rate of increase in money aggregates at the end of 1998 which reduced the Rupiah from an average of 10000R/$ to 8ooo R/$, once the rate of increase in M2 has rebounded in the beginning of Y2000, a re-increase in the exchange rate has followed.

5-Speculation:

Figure 16 illustrates the impact of standard model level of speculation (an increasing speculation against the local currency) and the corresponding undershooting and overshooting in capital flows, and the exchange rate respectively, note the impact of a minimal speculation on the exchange rate, that is, if we decreased speculation to the minimum allowable level (figure 17), then model dynamics should mostly reflect the worsening in economic fundamentals, this could be illustrated in the right hand figure.

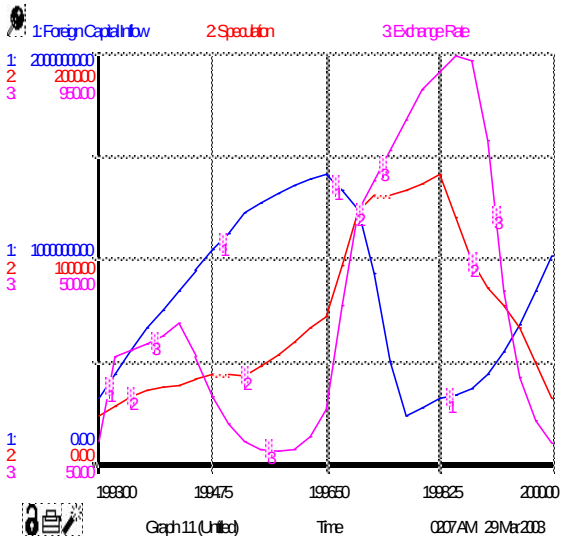

Figure (16) Standard level of speculation

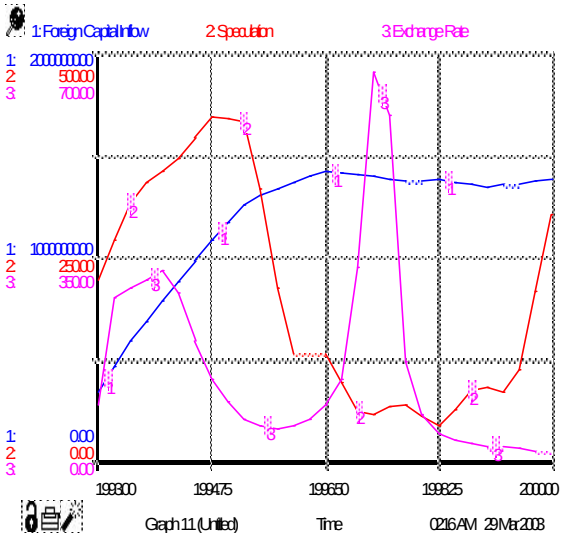

Figure (17) Minimizing speculation

While the impact of a decreased speculation on capital flows is remarkably positive, the exchange rate has, yet, overshooted however less severely and within a relatively shorter time interval, this could be justified by the remaining impact of increasing imports and decreasing exports, and net service flows on the relevant dollar stock in the market during the few years that had preceded the external shock.

The bottom line is, the impact of the external shock could have been less severe on the exchange rate if not all the exogenous factors had deteriorated all together, blaming speculation solely could not be justified, eliminating speculation from the system dynamics' could not have prevented the crisis; a structural weakness had contributed to the crisis, the government could have played a more effective, and responsive role, not in preventing the crisis, but in reducing its magnitude, this could have been achieved through either one or more of the following:

- The increase in transparency
- A more precautious monetary policy
- A discouragement of imports
- An encouragement of exports.
- Prudent regulatory and supervisory regulations.

CONCLUSION

ARE WE SIMILAR, OR DIFFERENT?

In terms of economic ideology, social, demographic and political contexts, Indonesia may have some similarities to Egypt, in fact this is why I have chosen Indonesia as the anchor country for comparison, I was motivated by similar ***symptoms*** occurring onset of two exogenous shocks, nonetheless I find the **roots** to such financial turmoil in the two countries to be somehow different, this is illustrated in the upcoming lines.

Being objective, I would try to disregard the relevant exogenous shocks for the time being, the objective is to identify the roots of trouble in the two countries before those shocks, in order to decide on the major question.

Based on the above analysis, the following causality illustrates vulnerability zones within the Indonesian system, where hidden zones are marked in red (first three variables on the upper left).

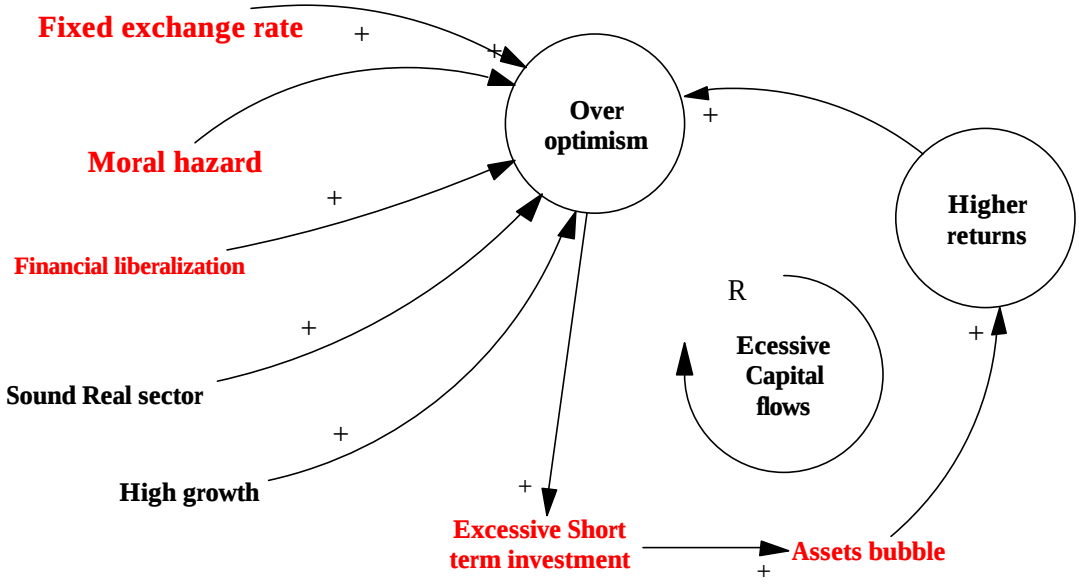

Figure (18) Forces behind excess capital in Indonesia

A state of over optimism was behind the excess of capital flows to Indonesia, while sound trade and growth indicators were contributing factors, however there were other factors that were mixed blessings; the **combination** of moral hazard, financial liberalization and a fixed local currency, was the original factor behind low-quality, unhedged, excessive short-term investments leading to an assets bubble, overvalued returns, and even larger surges in short-term capital (R).

To further illuminate on the dynamics of such hidden vulnerabilities, the following causal relation illustrates how things were going in Indonesia onset the 1997.

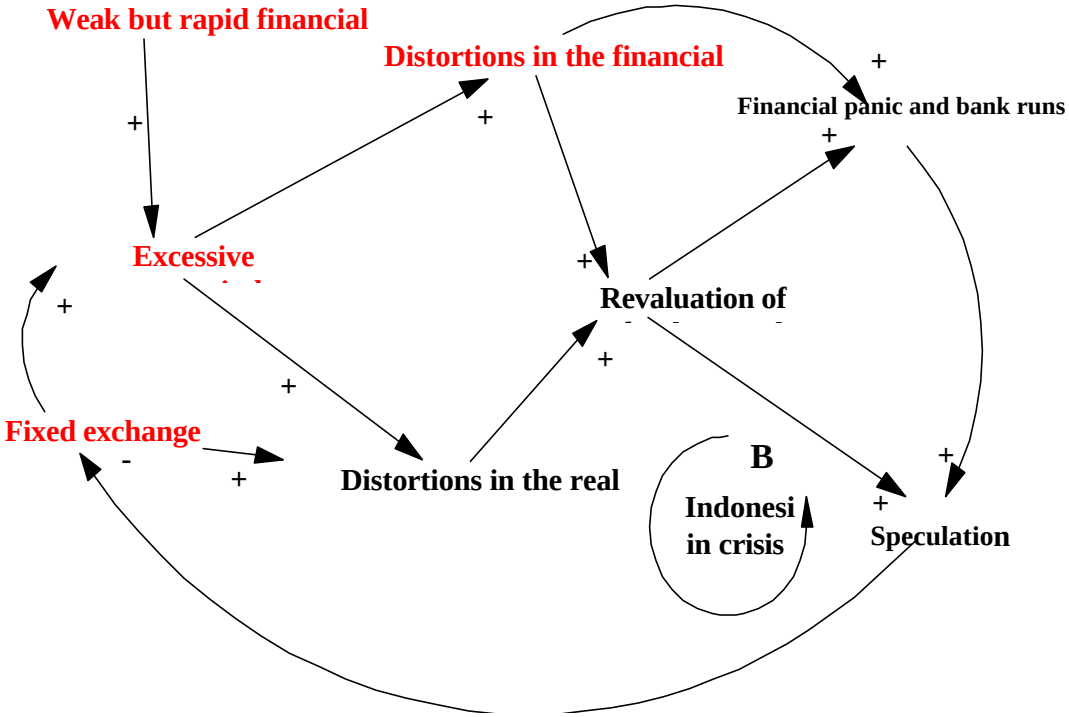

Figure (19) Hidden Vulnerably in Indonesia

We could trace almost all symptoms of the crisis in Indonesia to inherent distortions in the financial sector and policy inconsistency, the impossible trinity is a symptom of policy inconsistency, that is, a fixed exchange rate per se is not a hidden vulnerability, rather, it is the combination of the trinity which was constituting the real problem.

Distortions in the real sector was not a cause, they were rather symptoms as well, the combination of hidden distortions in the financial sector along with the resulting distortions in the real sector had moved market sentiments to reappraise what they sought as sound fundamentals, eventually speculation could not have been considered as an independent variable as we presumed, in fact it is also a symptom and a catalyst of inherent weakness, without which the impact of financial spill over would have been less severe, but could never be prevented.

On the other hand, given the 1998 exogenous shock, I could argue that the conditions that led to the current economic scenario were somehow different, even though there might be similar symptoms; the following causality illustrates my point.

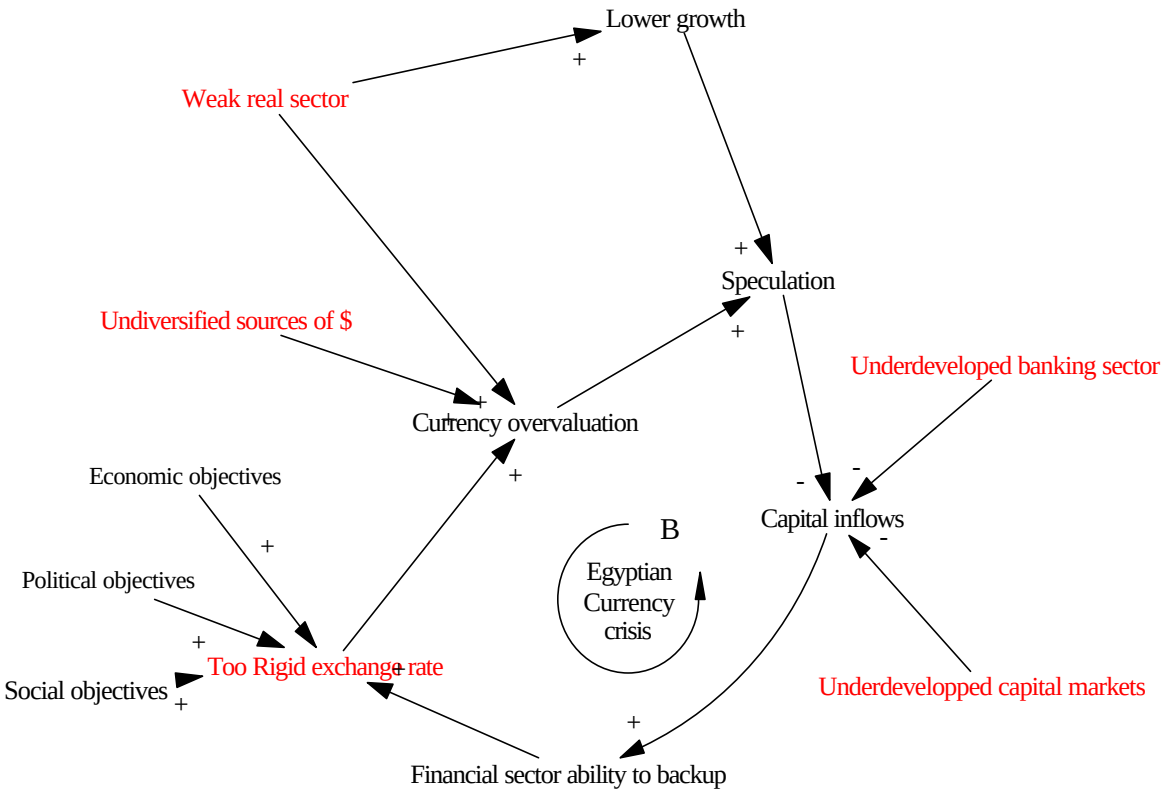

Figure (20) Egyptian Currency crisis

Even though there could be some inherent vulnerabilities within the financial sector, I believe such vulnerabilities reflect a natural pace of underdevelopment that is heading towards an improvement, on the contrary the financial sector in Indonesia was over-liberalized, however I could trace the origins of turmoil in Egypt to a ***combination*** of three factors; a weak real sector, undiversified and exogenously determined sources of dollar flows, too rigid exchange regime that lasted for very long, I also believe that weaknesses in the financial sector are mere catalyst rather being a source of trouble.

The Egyptian economy did not suffer from excessive capital flows, however the system was too rigid to absorb any normal increases; a fixed exchange rate as a target policy was over-emphasized at the expense of other objectives, again I find speculation as a symptom rather than being a source, which opposes some Egyptian policy makers who blame speculation and the black market for what actually happened, in addition the decline in capital flows affected the financial sector ability to backing up, and maintaining the system, leading to the decision to abandon the managed float at the very end.

Although, a float may ***balance*** currency overvaluation overtime, sources of hidden vulnerabilities may still exist, which threatens a continuous appreciation of the Egyptian pound, the coexistence of a weak trade sector along with undiversified sources of $ remains a major obstacle, in other words, although floatation might be a good step, it may not be the ultimate and complete solution to the currency crisis as long as these vulnerabilities do exist.

Key Policy Considerations

- The time interval that elapses just after a currency floatation is usually very critical for any economy; market participants' responses may differ; a higher appreciation within the short and medium terms is quite possible; this could be justified by the rational expectations of an even higher appreciation that would result in much more local currency selling in favor for the US currency, which would inevitably depress the local currency much more, I could argue that this is the most important point where a restoration of market confidence should be of a highest priority, if successfully achieved, and those who need the dollar can at least find it, the process of dollarization would tend to decrease over time.

- The bottom line is, there are two dimensions in order to stabilize the currency crisis; securing a stable source of dollar flows, restoring market confidence

- As for market confidence, policy transparency entails a full disclosure of monetary and fiscal targets, a prioritization of these targets, a development of an advanced and accurate online data bases, an early warning system for financial crisis, the enhancement of stock market and a secondary market for government bonds, speeding up the new legislation for banking, bank restructuring and privatization of unprofitable public banks, speeding up the privatization of publicly owned enterprises and utilities, securing dollar deposits, and most importantly, allowing banks to transact dollars at the real effective exchange rate; till the moment the difference between the spot announced rate and the actual rate with which dollars are transacted is passed through in the form of "administrative fees for providing currency"!

- Reducing vulnerability to exogenous shocks entails the diversification of dollar source inflows; the dependence on the returns of Suez Canal, tourism, and workers' remittances should be evened by other sources of inflows that are much endogenously determined; I find the development of an export strategy as a right step towards that objective, nonetheless the implementation of an export strategy needs a great determination on the side of the GOE, yet the ability of the private sector to enhance quality standards is an obstacle, in addition major incentives to the private sector should be introduced in terms of tax alleviation on imported raw materials and machinery, International fair exhibitions, and a government direction for those investors to invest in sectors that possess comparative advantages.

- Another strategy for evening volatilities in dollar flows would be the discouragement of excessive increases in short-term investments, and the encouragement of foreign direct investment, the Chilean experience in taxing short-term flows in the early eighties could be a good example, as for the FDI, the government is exerting a tremendous effort in enhancing the infrastructure, however FDI is also dependent on the extent of market confidence and the overall functioning of the economy, major incentives are needed in terms of raising the allowed percent of foreign ownership, insuring fast litig ation and law enforcement.

- Another important aspect is the conduct of monetary policy after the floatation; one of the most distinguishing features of a flexible exchange rate regime is that the central bank is no longer committed to exchange foreign currency for the domestic one in order to maintain a pegged rate, the implications of an independent monetary

policy on the economy should be remarkably assessed, for instance if the central bank follows An expansionary monetary policy, interest rate would decline, and economic activity would flourish, however the question would be; the extent of targeted economic growth, interest rate decline, and yet the overall impact on the exchange rate.

- It is essential within this very critical stage to re-identify the appropriate targets of such a policy, as well as the intermediate targets, especially if high inflation is actually one of the expected consequences of flexible exchange rate, a more transparent policy response would ensure a full disclosure of the type of the chosen economic targets; a monetary, an inflation, or a multiple targeted, a choice that should not overlook the extent of financial system status of development, for instance in order to target inflation, the central bank should have operational independence from the GOE's budgetary institutions, some countries; such as the USA, choose to apply a multiple targeted policy, HOWEVER they must have the institutional capacity and sufficient transparency to do so.

- Finally, a more responsive interest rate would be needed in order to capitalize on the monetary policy, with the current rigidity of interest rate, it would be impossible to achieve the monetary target with the required accuracy.

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