I. Introduction

The current Asian crisis holds many lessons for Singapore even though our economy suffered mildly compared with nations like S. Korea, Indonesia, Thailand, Malaysia and Hong Kong. This essay will attempt to explain how and why we got affected by the Asian Crisis, what structural problems became evident and what strategies we must pursue to ensure our future prosperity and stability.

II. The Asian Crisis: Trigger Point

The Crisis began with Thailand when the Baht fell dramatically overnight [15%] and floated on 2\textsuperscript{nd} July 1997. A few observers, including the IMF, had forewarned Thailand that she was headed for trouble, but nobody anticipated the severity of the Crisis nor its spread to Indonesia, S. Korea, Malaysia and the Philippines. Absolutely nobody imagined that the Asian Crisis would later become a global one, engulfing Russia and Brazil and threatening others. Even countries with strong fundamentals like Hong Kong, Singapore and Taiwan suffered speculative attacks, although in milder degree.

Thailand’s problems began with the bursting of the asset bubble: property prices turned down from 1992 and the Stock Market from 1994. There had been a marked lending boom. In 1994 credit extended to the private sector amounted to 128\% of GDP; in 1995, it was 139\% and in 1996, 100\%!

With the bursting of the asset bubble, bank loans collateralized by stocks and property became bad: by 1997 such non-performing loans amounted to 15\% of bank assets. Construction activities declined in 1996. Meanwhile, export growth decelerated due to poorer global demand and adverse terms of trade.

Between June 1995 and June 1997, Thailand’s real effective exchange rate rose 16.1\%, worsening her international competitiveness. As shall be seen later, the undue weight of the US$ in the exchange rate pegging system of Asian countries led to overvaluation. Consequently, the current account deficit increased to 7.9\% of GDP in 1996, providing one of the trigger points of the Crisis. The debt exposure of Thailand was also inordinately high. The debt-equity ratio of corporations rose to 2.3, the second highest in Asia [next to S. Korea]. The banking system was highly vulnerable as foreign liabilities amounted to one-third of the money supply [M2] while short-term external debt increased to almost 150\% of foreign exchange reserves.

Against the former backdrop of rapidly weakening fundamentals, the Central Bank of Thailand made two terrible blunders in early 1997. The first was to bail out financial institutions which had gone bust. The second was to compromise Thailand’s foreign exchange reserves in a vain attempt to defend the Baht via forward operations. Both actions resulted in the loss of virtually all her foreign exchange reserves and pumped up liquidity unduly, guaranteeing the free fall of the Baht.
III. Explanations For The Crisis

Explanations for the Crisis fall into three broad categories: factors causing the loss of international competitiveness, domestic governance issues and imperfections in international capital markets.

The East and South-East Asian economies became very competitive after the Plaza Accord of September 1985 which devalued the US dollar by some 50% against the Yen. Officially their currencies were pegged to a basket of currencies: de facto, the US dollar carried a weight in excess of 75 percent. This meant that the Asian economies became more competitive whenever the dollar weakened and lost competitiveness when it strengthened. In late 1995, the Yen depreciated 30% against the dollar and continued to weaken. Earlier in early 1994, the Chinese Yuan was devalued 35%. There was also a large deterioration in the terms of trade in the nineties. The early nineties also saw the emergence of several new actors on the global market, viz., the former members of the Soviet Union, Latin America, some African countries and India. Since 1990 the Japanese economy had been stagnating as a result of the unwise deflation of the property bubble, and in the months preceding the Asian Crisis, it weakened significantly. Moreover, the electronics industry was in a downturn from 1996 until last year. In the summer of 1997 there were also expectations of a monetary tightening by the Federal Reserve Bank. The impact of all these factors undoubtedly severely eroded the competitiveness of the Asian economies.

Most analysts focus instead on domestic governance issues in the Asian countries. Asian fiscal and monetary policies were largely conservative, unlike Latin American countries: budgets were generally in surplus and Asian inflation was mild. Sovereign debt, with one or two exceptions, was not a serious problem. The real problems had to do with overly hasty financial liberalization and opening up of the capital account. A number of serious consequences emerged. Together with the impact of the Plaza Accord, liberalization resulted in huge capital inflows. Undue credit creation took place, even though attempts were made at sterilization. The pegging of the exchange rates [with the overwhelming weight of the US dollar noted earlier] under such circumstances meant widening interest rate differentials which encouraged even more unhedged capital inflow, especially of a short-term nature.

Overly rapid financial liberalization also resulted in the proliferation of banks and other financial institutions. Central banks lost valuable key personnel and were unable to exercise proper supervision, make assessment and manage financial risks. Moreover, there was lack of transparency in the accounting system of financial institutions and corporations: financial and economic data became unreliable.

Economic theorists must share part of the blame too. The increasing current account deficits did not alarm observers unduly because they did not stem from public sector excess spending but were the result of private sector investments. The theorists had failed to see the vulnerability to a sudden foreign capital withdrawal. They had also failed to see the over-exuberant investments in real estate and infrastructure, which led to the collapse of asset markets.

Another governance issue faulted was that on cronyism, collusion and corruption which supposedly led to excessive lending and excessive risk-taking, especially in unproductive, rent-seeking enterprises. However, somehow the Asian countries in question had managed to grow rapidly for over thirty years in spite of such a system. This is not to endorse the evil but rather to question whether it was a major
causative factor in the Crisis or whether it represented a fault-line which exacerbated
the Crisis.

Other analysts downplay the importance of the erosion of international
competitiveness and the problem of poor domestic governance. Instead they attribute
more blame to the structural deficiencies of the international capital market for the
suddenness, contagion, severity and persistence of the Crisis. Students of international
economics have long recognized that short-term capital flows are extremely large in
relation to trade flows and foreign exchange reserves of countries and that, in the
short-run, exchange rates are determined more by capital flows than by the trade
account. The extreme volatility is also well known. The Asian countries had become
too dependent on foreign short-term capital. They were, in effect, borrowing short
from abroad and investing long domestically, without hedging for currency risks. This
process brought about a triple risk situation: currency mismatch, maturity mismatch
and credit risk. Like a typical bank operation, a bank can be solvent but not liquid,
precisely because it borrows short to lend long--a perfectly normal financial
intermediation. It is also well known that a run on a bank can occur even if no question
of solvency arises. A crisis of confidence in a solvent bank is readily resolved by the
Central Bank which steps in with the necessary liquidity injection. Unfortunately, no
such mechanism exists to help a country which borrows short from abroad to invest
long at home. The IMF is not a lender of last resort: it was never set up to do so and
its resources are far too slender to permit such an operation. Consequently, as for the
Asian countries, a panic pullout of short-term capital meant a triple deflation of assets:
currency [devaluation], stocks and property. Debts denominated in foreign currencies
balloon with the devaluation, domestic assets get severely deflated: consequently non-
performing loans increase enormously, ruining balance sheets and sending the financial
system into a tail-spin. In such a situation, the extreme of which was experienced by
Indonesia, even trade credit dried up. Meanwhile international credit rating agencies
downgrade its financial institutions so much so that even letters of credit issued by its
banks are worthless. No wonder then that a severe domestic recession sets in,
requiring three to five years for recovery. Costs of repairing financial institutions can
amount to 40-50 percent of GDP.

Yet other analysts have questioned whether the rescue operations of the IMF
made matters worse. In the first place, it is argued that the latter applied the same
patent medicine of fiscal and monetary contraction which was inappropriate because
the Asian countries did not have irresponsible macro-economic policies. Their
problems, as pointed out above, were brought about by the private sector borrowing
too much from abroad on a short-term basis. The IMF-mandated fiscal and monetary
stringencies and too rapid closure of financial institutions created panic resulting in
capital flight and exacerbated the insolvency of corporations and others. To be fair to
the IMF, it later eased up on fiscal and monetary policies. More crucial was the failure
or inability of the IMF to help the afflicted countries sort out their short-term foreign
indebtedness, thereby prolonging the agony. S. Korea benefited from the intervention
of the US Secretary of the Treasury who reportedly arm-twisted global banks to roll
over the loans, thus giving it time and space to resolve the Crisis. Poor Indonesia is still
struggling to restructure private sector foreign debts, nearly two years into the Crisis.
Meanwhile, millions lost their jobs and some 25 million people have been pushed
below the poverty line in Indonesia alone. That poor country is teetering on the brink
of social and political chaos.
IV. Contagion

Another critical issue in the analysis of the Asian Crisis is that of contagion. Why did the Crisis spread so rapidly from Thailand to Indonesia, to S. Korea, Malaysia and the Philippines? Why did it also affect, though in much lesser degree, Hong Kong, Taiwan and Singapore?

When the Thai Baht fell on 2nd July 1997, neither the IMF nor the US Treasury saw any threat of contagion. Japan offered US$100 billion to set up an Asian Monetary Fund but this was reportedly vetoed by the US because it did not want Japan to increase its influence in Asia. Ironically and somewhat belatedly, Japan is now giving US$30 billion to the afflicted countries.

The Crisis then spread to Malaysia [14th July], Singapore [17th July], Indonesia [13th August], Hong Kong [15th August], the Philippines [4th September], Taiwan [14th October] and S. Korea [8th November]. Of particular concern to Singapore is why and how it got affected by the Crisis. Singapore is well known for its Budget surpluses and excess private savings, both of which result in an annual current surplus of 15 percent or so of GDP. Singapore has no sovereign external debt. Its internal debt is merely the reflection of reshuffling of funds between Statutory Boards via the Treasury.

For Singapore, interest rate differentials have historically meant lower domestic rates because the twin surpluses mentioned earlier, together with substantial capital inflows, especially of FDI, have meant currency appreciation. Hence Singapore corporations and financial institutions had not been substantially exposed to short-term foreign debts, as were the afflicted Asian countries. The contagion Singapore suffered came via trade and financial links as well as the behaviour of international investors.

Fifty percent of Singapore’s trade is with Asian countries including Japan. Singapore banks had substantial exposure to the region as well. Singaporeans had invested in stocks and property in the region. Moreover, the behaviour of international portfolio investors provided three channels of contagion.

The first channel is herd behaviour: because of asymmetric information, fund managers follow investment trends of other investors to protect themselves from blame in the event of losses. The reward system for fund managers apparently make them especially prone to this. Alternatively, they may regard emerging markets as an asset class, regardless of differing fundamentals: this obviously at the disadvantage of Singapore. A second channel is portfolio allocation: any shock to one emerging market’s returns will contribute to changes in allocation to all other emerging markets. A third channel is portfolio interdependence: losses in one market will cause fund managers to sell out in other markets to meet contingent investor redemptions. It should be noted that small shifts in industrial countries’ portfolios result in inflows and outflows that are large in relation to emerging markets whose bourses are small in capitalization and most of whose stocks are usually thinly traded.

Investors from the region too undoubtedly contributed to the asset deflation. Heavy losses incurred in one country led them to sell out in markets that were still relatively unscathed. Hence stocks in Singapore suffered a sell-off when markets plunged in Thailand and Indonesia.

Banks in Singapore had substantial exposure to the region: consequently their bad debts increased as currencies and assets deflated in the region.

Singapore is also Southeast Asia's entrepot. Moreover, nearly 55% of her commodity exports go to East and Southeast Asia. The region is also a major market for Singapore’s exports of services, especially in the areas of tourism and finance. It is
easy to see why Singapore suffered when the financially crippled Asian countries drastically reduced their imports.

V. Impact On Singapore

Table 1
Gross Domestic Product at 1990 Market Prices

<table>
<thead>
<tr>
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<th>1998</th>
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<th>1999</th>
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<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
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<tr>
<td>Total</td>
<td>6.2</td>
<td>1.6</td>
<td>-0.6</td>
<td>-0.8</td>
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<tr>
<td>Manufacturing</td>
<td>6.5</td>
<td>-0.4</td>
<td>-4.2</td>
<td>-2.7</td>
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<tr>
<td>Construction</td>
<td>15.5</td>
<td>7.9</td>
<td>-0.2</td>
<td>-5.3</td>
</tr>
<tr>
<td>Commerce</td>
<td>0.9</td>
<td>-4.5</td>
<td>-5.9</td>
<td>-6.3</td>
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<tr>
<td>Transport &amp; Communications</td>
<td>6.9</td>
<td>6.3</td>
<td>4.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Financial &amp; Business Services</td>
<td>6.6</td>
<td>2.2</td>
<td>1.8</td>
<td>2.1</td>
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</tbody>
</table>

Source: Ministry of Trade & Industry, Singapore, First Quarter 1999 Economic Survey of Singapore

The Singapore economy was clearly affected by the Crisis, though much less than others in the region, with the exception of Taiwan. Overall, the growth rate plunged from 8 percent in 1997 to only 1.5 percent in 1998. Technically, the economy slipped into recession in the last two quarters of 1998, recovering by 1.2 percent in the first quarter of 1999. Commerce was the worst hit, followed by manufacturing and construction. Transport and communications was the most resilient sector while financial and business services came through fairly well in 1998, slipping marginally in the first quarter of this year.

The unemployment rate rose from a normal of 2 percent to 4.4 percent last December, easing a little to 3.9 percent in March this year.

From Chart 1 below, it can be seen that the Sing$ fell nearly 19 percent against the US$ between June 1997 and August 1998. As at April 1999, it was still down 16.7 percent.

Chart 2 shows the real effective exchange rate of the Sing$ which adjusted downwards by about 8 percent from June 1997. This smaller depreciation in real effective terms reflects the effect of trade weights and the much greater depreciations of the other Asian currencies, particularly Indonesia's [-35%], Thailand's [-18.6%], S. Korea's [-16%], and Malaysia's [-35%]. Hong Kong, on the other hand, because of its currency board system which pegged the HK$ rigidly to the US$, had a real effective exchange rate appreciation of nearly 10 percentage points between June 1997 and August 1998 but subsequently depreciated by 1.9 percent. Consequently, Hong Kong's economy had to absorb a greater shock than Singapore's: in 1998, the former's economic growth was -5.2 percent, compared to Singapore's +1.5 percent.

Singapore's Stock Market also suffered severe deflation of -47 percent [from July 9, 1997 to August 5 1998] compared to -49 percent for Hong Kong and only -20 percent for Taiwan for the same period. The sharp downturn had significant adverse effects on the banking sector [increase in non-performing loans], wealth [decrease in consumption and investment] and, equally important, confidence. It should be noted that market capitalization of traded equities is substantially more important for
Singapore than for the US or Japan: in 1993, it was 254 percent of GDP compared to only 82 percent for the US and 71 percent for Japan. For the period 1980 to 1998, capital gains and losses from the Stock Market ranged between -91 percent to +145 percent of GDP!

The Crisis also impacted property prices in Singapore. Although the decline had already begun in 1996 with the anti-speculation measures of the Government, the property price index fell another 35 percent last year.

The triple asset deflation of currency, stocks and property adversely affected the economy directly via the increase of non-performing loans from about 2 percent in 1997 to between 8 and 12 percent. Fortunately, the Monetary Authority of Singapore requires a capital adequacy ratio of 12 percent for banks while the latter actually hold about 16-17 percent. These provisions stood Singapore in good stead during the Crisis. Nevertheless, the fear of rising non-performing loans caused the banks to tighten credit: increasing interest rate spreads and decreasing loan-deposit ratios. Domestic demand was consequently dampened, contributing to the recession.

**Chart 1**

**S$/US$ - Monthly Average**
VI. Short-Term Strategy

The Singapore Government responded to the Crisis by a series of measures. The 1998-99 Budget announced in February 1998 clearly underestimated the Crisis. The income tax rebate of 5 percent on individual income tax was half that given for the previous year. The Budget was not designed to be anti-recession in terms of a stimulatory deficit: instead, the projected surplus was $7.27 billion! Tax incentives were given to promote fund management, the Bond Market among others for the financial sector. The only measures having a direct bearing on the Crisis were a property tax rebate of 15 percent for commercial and industrial properties [from July 1998], property tax exemption for land under development for a period of up to five years, and abolishment of stamp duties on all instruments except for those relating to stocks and shares and immovable properties [from February 1998].

The deceleration of the economy during the second quarter of 1998 prompted the Government to introduce a three-pronged off-budget package worth approximately $2 billion, designed to alleviate the Crisis. The first was aimed at reducing business costs: additional property tax rebate of 40 percent on commercial and industrial property, rental rebates by Jurong Town Corporation and Housing and Development Board by up to 20 percent. The Civil Aviation Authority extended a rebate on the rentals of its office, warehouse and retail tenants [15 percent] and concessions on airport fees. Telecommunications, power and port charges were also reduced. The second prong was to accelerate and bring forward development projects, expand the Skills Redevelopment Programme, provide sufficient capital to local enterprises via the Local Enterprise Financing Scheme; additional funds were also given to the Economic Development Board's Economic Development Assistance Scheme and the Trade Development Board. To help absorb graduates and also to expand the education
system, more teachers were recruited. The third prong was aimed at stabilization of specific sectors. Government land sales were suspended until the end of 1999, stamp duty on uncompleted properties was deferred until Temporary Occupation Permit or sale. Developers were also allowed to reassign land parcels bought from Government. Penalties for delays in project completion were suspended for up to 8 years. To help the banking sector, the 3 percent limit on tax deduction for general provisions was lifted, subject to case by case approval. Hotels were encouraged to upgrade via a tax allowance of up to 150 percent of approved refurbishment.

The most significant move made by the Government, however, was the Cost Reduction Package worth $10.5 billion, introduced in November last year, which aimed to reduce business costs by 15 percent. Wages were cut by between 15-18 percent, with 10 percent from the Central Provident Fund contribution by employers [from 20 to 10 percent]. The foreign workers levy for skilled workers was reduced from $100 to $30 while that for unskilled workers was reduced by $90 for manufacturing, marine and services. A corporate tax rebate of 10 percent was also announced. Industrial and commercial rentals were further reduced. Port, airport charges, telecommunications and utility rates were also lowered or extended.

The two off-budget packages turned the projected 1998 Budget surplus into a small deficit of $466 million, barely 0.3 percent of GDP. Although this was less deflationary than the usual previous budget surpluses [2-6 percent of GDP], there was not the fiscal stimulus needed to offset the two quarters of recession last year. Nevertheless, the direct cost-cutting measures improved the competitiveness of our industries.

Real fiscal stimulus came only in February 1999, nearly 20 months into the Crisis! For fiscal year 1999 beginning April, the projected Budget deficit is $5.05 billion, about 3.5 percent of GDP. Revenue shortfall, arising from the November cost-cutting measures and other tax concessions plus the impact of the recession, accounts for the bulk of the deficit while development expenditure increased by $1.2 billion, or 10 percent. The Budget also doubled the personal income tax rebate to 10 percent and provided corresponding rebates on conservancy and utilities for HDB households. Various tax incentives and exemptions were provided to boost the bond market, the finance sector, global OHQs, contract manufacturers, logistics, conference organizers and offshore oil activities.

How helpful were the short-term measures to deal with the Crisis? The main criticism must be that the measures were taken rather late into the Crisis. In February last year I was urging the Government to undertake cost-cutting and budgetary measures. Such measures should be preemptive, not reactive! The Government view was that it did not want to impose unnecessary hardship on workers by cost-cutting without firm evidence of recession. This view was unfortunately reinforced by most observers’ underestimate of the seriousness of the Crisis. There is also a prevalent view among Government economists that, since external demand normally accounts for two-thirds total demand, it is useless to stimulate domestic demand. Moreover, in their opinion, since the Singapore economy is highly open, with total exports accounting for 135 percent of GDP, there is too much import leakage for any domestic stimulus to work significantly. In my opinion, keeping the economy afloat even at 2 or 3 percent by stimulating domestic demand is still worth it. This is not, however, to argue for habitual pump-priming which creates problematic perennial budget deficits.
VII. Recovery

As noted earlier, the first quarter GDP growth rate was 1.2 percent over the same period a year ago. The recovery is led by manufacturing, particularly electronics and chemicals. The question has been raised as to whether the recovery is only a flash in the pan or will be sustained. I believe it will be sustained and that the growth will exceed the Government forecast of 0-2 percent. It will more likely be 3-5 percent. My reasons are as follows: the next three quarters' growth will be measured against substantially lower growth rates for the corresponding previous quarters. Moreover, the Stock Market has recovered vigourously and the property market is reviving with strong sales and increasing prices. Finance, business services, retail and the property sectors should benefit. The afflicted Asian economies are also recovering faster than expected even as they repair their devastated financial systems and rebuild their corporations. Since Singapore's trade with the region is about 55 percent of her total, domestic and re-exports to the region should increase in tandem. There are already signs of recovery in tourism.

The fears that are often expressed about the recovery have to do with a potential bursting of the Stock Market bubble in Wall Street, with a US recession brought about by declining consumer spending. My view is that it is not a question of the Bubble bursting but the US Federal Reserve's response to such an event. Institutional memory of the monetary contraction associated with the Great Depression plus the more recent happier responses to the 1987 Crash and last year's Long-Term Capital Management Crisis should be helpful in anticipating better bubble management. A soft landing for the US economy would be more likely.

There is also fear that, shortly, the Federal Reserve would raise interest rates and cause an abortion of the Asian recovery. I believe that, although such moves would curb Stock Market exuberance here and elsewhere, the impact on the real economy would be minimal. The Asian economies have been suffering from badly damaged financial systems. The reforms and re-capitalization of banks are enabling them to import and export: there should be enough momentum for recovery, although, from past experience of currency and banking crises elsewhere, full recovery is still 2-3 years away.

Another reason for optimism is the Japanese economy. The reforms and restructuring of banks there plus the fiscal stimulus and monetary expansion should result in some growth shortly. At least, catastrophe has been averted.

The launching of the Euro earlier this year should be helpful to the EU: there should be efficiency and economies of scale gains that should help offset the structural rigidity for the next 5-10 years.

Closer to home, the biggest anxiety is Indonesia: whether the June election will produce a stable government or anarchy.

VIII. Medium and Long-Term Strategy

Looking beyond the Crisis, what are the prospects for the Singapore economy? With a per capita GNP of US$22,191 what kind of growth rate can we expect? On the positive side, Singapore is a totally urban economy unlike the normal industrial country: hence our growth potential should be measured against cities like New York, London etc. Moreover, our labour productivity and total factor productivity [TFP] indicate that there is still ample room to catch up with the more advanced countries. TFP estimates for Singapore are generally low, close to zero, or even negative.

Productivity improvement measures should be focussed on local enterprises, particularly in the non-traded goods and services sectors. Local enterprises in the
manufacturing, commerce and services sectors accounted for 72 percent of employment and 61 percent of value-added in 1996. Local small and medium scale enterprises provided 47 percent of employment but only 29 percent of value-added! The room for productivity improvement is obvious—particularly for small and medium scale firms. The construction industry, for example, is very inefficient compared to Australia and the quality leaves much room for improvement. What is paid for renovation in Singapore for a modest house can pay for a beautiful bungalow in Australia inclusive of land.

It is well-known, that, in the process of economic development, non-traded goods and services rise in price. Without corresponding productivity increases, the price increases would be greater. Consequently, the traded goods and services sectors become uncompetitive. It is therefore not sufficient to pay attention only to the latter while ignoring the former. The Asian Crisis illustrates the problem. The boom in traded goods and services exports caused the prices of non-traded goods and services to rise, e.g. property. This triggered a further capital inflow. The local currency appreciated. The Central Bank attempts to limit the appreciation and sterilizes the resultant liquidity. This increased the interest rate differential, causing further capital inflow, with disastrous consequences. Analysts have pinned the blame on the pegging of Asian currencies. However, if exchange rates had floated, the process described above would have caused Asian currencies to appreciate because of the capital inflow induced by rising non-traded goods and services prices. The appreciation would have made traded goods and services uncompetitive, resulting in a current account deficit, with lower growth rates or stagnation. The key to preventing or ameliorating both processes—described above is to improve productivity in the non-traded goods and services sectors. Exchange rate flexibility may prevent a currency crisis but cannot prevent lower growth rates or stagnation.

Another cause for reflection is the structure of the Singapore economy. Government [including Statutory Boards] plus Government-Linked Companies [GLCs] account for 60 percent of the economy while MNCs control 80 percent of manufacturing. By way of contrast, Taiwan is more dependent on small and medium-scale enterprises: for example in manufacturing, such enterprises account for 59 percent of employment and 56 percent of value-added.

The Far Eastern Economic Review has noted that, in Singapore, the best and brightest graduates are deployed in the public sector or else they go to the MNCs and GLCs. It also stated that Singapore banks are risk averse while local investors preferred the safety of the property market. Taiwan, on the other hand, seemed to produce more entrepreneurs, had more venture capital and emphasized R&D, in the process, developing a broadly diversified electronics industry that dwarfs Singapore's. Recognizing this, the Singapore Government recently launched a technopreneurship drive together with a US$1 billion venture capital fund. If successful, the programme should help redress the economic imbalance and help make the Singapore economy more vibrant.

Singapore also needs to deal with the problem of upgrading skills for the workers above 40, many of whom have little education. When such workers lose their jobs they are not easily reemployed even when the economy recovers. Re-training requires further investment in basic reading and writing and numeracy skills.

Another lesson from the Crisis may be for Singapore to diversify its export destinations beyond Asia, as currently about 55 percent go to East and Southeast Asia. One reason for Taiwan's better performance during the Crisis may be because it is less
dependent on the region [41 percent; 29 percent excluding China]. Latin America is under-represented in our exports [1.7 percent] and exports to the EU could be increased beyond the current 14 percent.

Singapore's outward investments in the region including China have tended to be in industrial parks and real estate, both of which are easily vulnerable to political and economic changes. By way of contrast, Taiwan's outward investments have been more in manufacturing and, consequently more dynamic and profitable. Singapore needs to pay more attention to the bottom-line in her investments abroad.

Domestically, under the Industry 21 initiative, the industrial sector will be widened to include R&D, product design and development, process engineering, testing and market research. The aim is to achieve world-class capability as well as to diversify manufacturing to achieve greater stability.

Despite the Crisis, the Monetary Authority of Singapore has pushed ahead to liberalize the financial market, to make it more competitive. The Stock Exchange and Banks will face more foreign competition and higher standards of disclosure. The MAS is also actively promoting fund management and developing a long-term bond market. The latter is a very important move as much of Asian savings are invested outside the region while foreign funds are solicited for domestic investment and financing. The Crisis has shown the vulnerability that such a practice can produce. Singapore is clearly committed to globalization with a vengeance, despite the risks. It is clearly banking on good governance to keep currency and banking crises at bay. The resilience of its economy during the Asian Crisis shows that the confidence is not misplaced. The strategies outlined above should assure Singapore of a good future.

1 Takagi [1996]
2 The IMF has argued that, because of the unofficial currency market, the effective devaluation was much less [Noland et.al. p.13]. I believe, however, that the rationalization of the currency market would have boosted foreign investments and exports. Black markets do exact transaction costs which may not be exactly small.
3 [Park & Song, p.7] and [CPR1998, p.2]
4 See for example [Corden 1994]
5 [Radelet & Sachs, 1998]
6 [Kamisky & Schmukler, 1998; World Bank, 1998/99, p.48]
7 [Feldman & Kumar, 1995, Table 1]
8 [Tan, 1998]
9 [Wan, 1999]
10 [Young 1992; Sarel 1996; Hsieh 1998]
12 The corresponding figures for Singapore manufacturing are 32 and 16 percent respectively.
13 August 6, 1998
14 Straits Times, 14 June 1998.
15 Straits Times, 27 May and 13 August, 1999.
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10. Takagi 1996:
14. World Bank 1998/1999: