

## CHAPTER 7

# Were Malaysia's Capital Controls Effective?

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**F**OURTEEN months after the East Asian currency and financial crises were sparked off by the floating of the Thai baht in July 1997, Malaysian Prime Minister Mahathir Mohamad introduced several controversial currency and capital control measures. In the last quarter of 1998, the regional turmoil came to an end as East Asian currencies strengthened and stabilized as a result of the US Federal Reserve Bank's decision to lower interest rates. This effectively halted capital flight from Asia to the US. Given that respite, Asian currencies strengthened and stabilized. In the first quarter of 1999, Thailand, Indonesia and South Korea posted positive growth rates, while Malaysia slipped into its fifth quarter of recession. However, by the end of 1999 and into 2000, Malaysia's recovery was second only to South Korea's (Figure 1.1).

Thailand, Indonesia and South Korea had received International Monetary Fund (IMF) emergency credit and were subject to its deflationary conditionalities, which had aggravated the regional recession and crises. Although the Fund continued its emphasis on strict monetary policy, it seemed more willing to abandon its earlier insistence on "fiscal discipline". By late 1998, it lifted curbs on counter-cyclical (reflationary) fiscal policies by allowing debtor nations to run budget deficits — perhaps belatedly recognizing that most East Asian crisis economies (not including Indonesia) had run budget surpluses for years.

Malaysia's bold measures of 1–2 September 1998 received very mixed reception. There has been a tendency since for both sides in

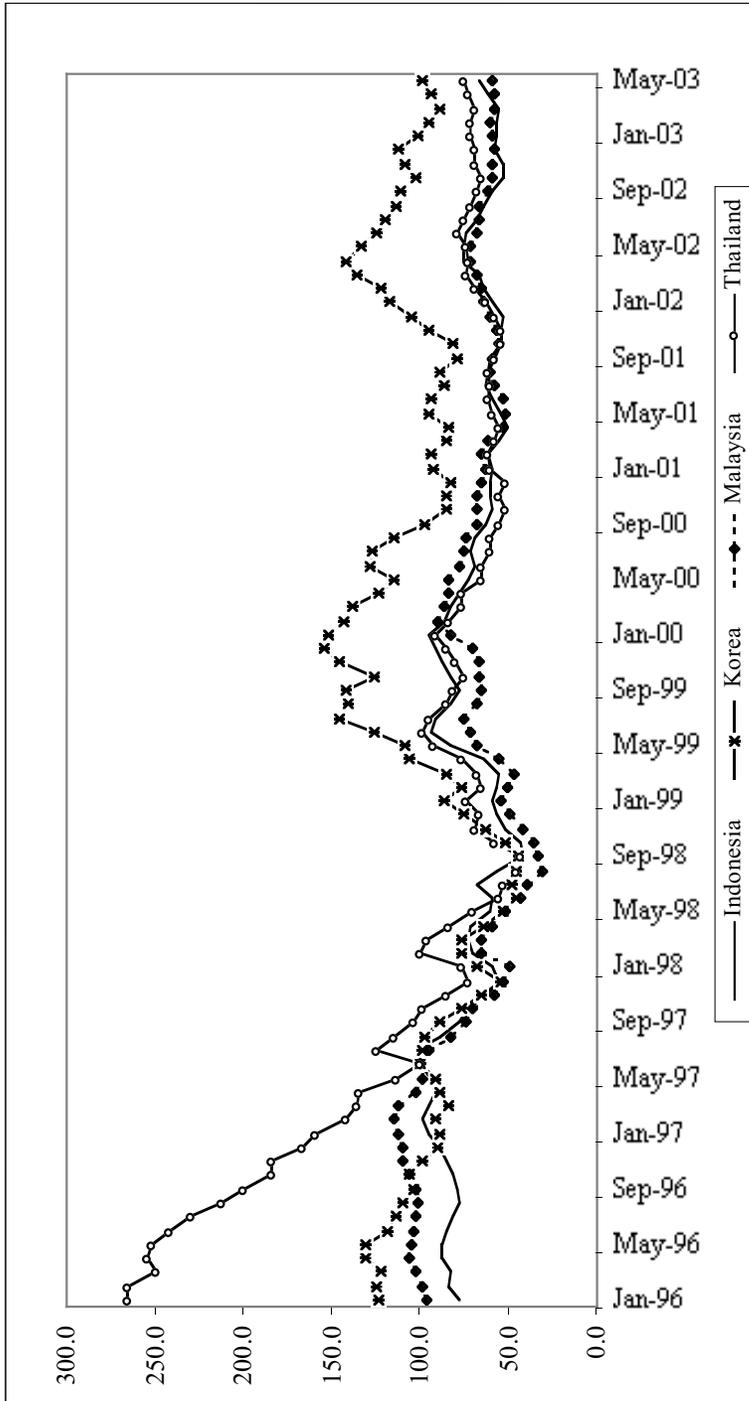


Fig. 7.1 Average Stock price Index, in Local Currency (June 1997=100), 1996–2003

the debate over Malaysia's capital control measures to exaggerate their own cases, with little regard for what actually happened. Initially, market fundamentalists loudly prophesied doom for Malaysia, and after Malaysia recovered more strongly than Thailand and Indonesia, only second to South Korea, the criticisms have shifted ground, always predicting that the economic chickens must eventually come home to roost, e.g. by citing the difficulties Malaysia has been facing since 2001, while conveniently ignoring the parlous state of the rest of the region. Besides the chequered record of Malaysian recovery, there are clearly also complications in pointing the finger at any particular cause of the recovery. Both sides often forget that capital controls are often necessary means to other policy objectives, rather than ends in and of themselves.

Malaysia's bold introduction of capital controls on 1–2 September 1998 in response to the crisis, elicited mixed reactions. Amidst the debate, critics and proponents tended to exaggerate their cases, with little regard for accuracy. Initially, market fundamentalists loudly prophesied Malaysia's doom, little knowing that Malaysia's recovery would be stronger than Thailand or Indonesia's. Since then, the critics have reversed their opinion.

Proponents of capital account liberalization generally opposed capital controls because they were viewed as a setback to the gradual capital account liberalization that had taken place in the last two decades. They claim that the measures undermined freer capital movements and capital market efficiency — including net flows from the capital rich to the capital poor, cheaper funds, reduced financial system volatility, lower inflation and higher growth — besides encouraging reversal of the larger trends towards greater economic liberalization and globalization.

Some more doctrinaire neo-liberals also disagree with the IMF's interventionism, albeit minimalist, on the grounds that the Fund represents a super-state of sorts and such intervention undermines market forces. Meanwhile, counter-cyclical interventionists condemned the IMF's early pro-cyclicality. The Fund's own policy stance has also changed over time, and has often been shown to be doctrinaire, poorly informed, and heavily politically influenced, especially by western interests, led by the US. Most — though not all — heterodox economists endorse this Malaysian challenge to

contemporary orthodoxy for converse reasons. They emphasize that financial and capital account liberalization has exacerbated financial system vulnerability and macroeconomic volatility. More importantly, they point out that such measures create conditions for restoring the monetary policy autonomy considered necessary for fostering economic recovery. Many intermediate positions have also emerged, e.g. the IMF's then Deputy Managing Director Stanley Fischer endorsed Chilean-style controls on capital inflows, implying that the September 1998 Malaysian controls on outflows were far less acceptable, presumably because they involved controls on outflows, rather than inflows, besides undermining government credibility, and thus likely to generate greater adverse consequences.

The Malaysian experience suggests that the orthodoxy's predictions of disaster (e.g. by the late Nobel Laureate Merton Miller, among others) were inaccurate, as plainly proven by later events. However, it is much more difficult to prove that the Malaysian controls were the resounding success portrayed by its proponents. After all, the regional currency turmoil came to an end throughout the region by the last quarter of 1998, after the regional crisis seemed to be spreading dangerously westward. The tremors were felt with the August 1998 Russian crisis and its subsequent reverberations on Wall Street. Most importantly, the highly leveraged hedge fund Long-Term Capital Management (LTCM) collapsed, requiring an immediate US Fed-orchestrated bail-out to contain its repercussions. As previously mentioned, East Asian recovery was probably also less due to capital controls than to lower interest rates in the US. However, proponents of reflationary measures generally agree that fiscal measures tend to be far more effective than monetary policies in this regard. Ironically, Malaysia continued to maintain a budget surplus in 1997 while the other crisis economies in the region under IMF programmes ran budget deficits.

The actual efficacy of Malaysia's measures is difficult to assess. However, Malaysia's recovery (6.1 per cent in 1999 and 8.3 per cent in 2000) was more modest than South Korea's (10.9 per cent in 1999 and 9.3 per cent in 2000). It seems likely that the relatively stronger recovery in Malaysia and South Korea can be attributed to stronger fiscal reflationary efforts as well as increased electronics demand (probably in anticipation of the Y2K problem come year 2000).

Since South Korea was also subject to an IMF bailout programme, one cannot attribute the different rates of recovery in 1999 to different monetary policy measures or IMF conditionalities at this stage. After September 1998, Thai interest rates fell below Malaysian rates after being well above Malaysian rates for years (Jomo 2001: 206, Figure 7.1). This suggests that the US Fed's interest rate reduction did more to reduce interest rates in the East Asian region than did the September 1998 Malaysian initiatives. This is also consistent with the general observation that monetary policy is far less effective than fiscal measures in reflatting the economy.

Malaysian Prime Minister Mahathir's September 1998 capital controls were correctly seen as a bold rejection of both market orthodoxy as well as IMF market-friendly neo-liberalism. Where Thailand, South Korea and Indonesia had gone cap in hand — humiliatingly humbly/accepting IMF imposed conditions to secure desperately needed credit, the Malaysian initiative reminded the world that there were alternatives to capital account liberalization. For many, enthusiastic support for the Malaysian controls and claims of its success are crucial in opposing market fundamentalism and IMF neo-liberalism.

The capital control measures were significantly revised in February 1999. The modifications represented attempts to mitigate some problematic consequences of the capital controls regime. As of 1 September 1999, the September 1998 regime was fundamentally transformed, ending the original curbs on capital outflows. There have since been no new curbs on inflows, rather, strenuous efforts to encourage the return of capital inflows (including short-term capital) have been undertaken.

Despite the administration's efforts to attract capital, foreign direct investment flows have decreased since 1996. Neo-liberal critics have claimed that this is due to the Malaysian authorities' reduced credibility, after its imposition of the September 1998 controls. However, there is considerable evidence of a decline in FDI throughout Southeast Asia, including the countries that maintained open capital accounts. Considering this, a more plausible explanation for reduced FDI flows to Southeast Asia would be that the 1997–8 crises dramatically highlighted the region's declining competitiveness and attractiveness, compared to, say, China (Figure 1.3).

Meanwhile, many opponents of capital account liberalization have gone to the other extreme, with some exaggeration about the actual implications of the measures undertaken Malaysia and their achievements. For example, one supporter has extolled the virtuous consequences for labour resulting from capital control measures with scant regard for the Malaysian authorities' self-confessed motive of protecting big business interests, professedly to protect jobs.

### **Did Mahathir's September 1998 Controls Succeed?**

Did Malaysia's September 1998 selective capital control measures accomplish its task? The merits and drawbacks of the Malaysian government's capital controls regime in dealing with the regional currency and financial crisis will be debated for a long time to come as the data does not lend itself to clearly support any particular position. The diverse interpretations of the data enable proponents to claim that the economic decline and stock market slide halted soon after the onset of the controls, while opponents can counter that such reversals have been more pronounced in the rest of the region.

Industrial output, especially for manufacturing, declined even faster after the introduction of capital controls in Malaysia until November 1998, and continued downward in January 1999 before turning around. Since then, with the exception of a few sectors (notably electronics), industrial output recovery has not been spectacular, except in comparison with the previous years' deep recession. Meanwhile, unemployment has risen, especially affecting those employed in construction and in financial services. Domestic investment proposals have almost halved, while "green field" FDI seems to have declined by much less, though cynics noted that actual trends had been obscured by quicker application processing, approval of previously rejected applications as well as some redefinitions of the FDI measures (see Jomo 2001: Figure 7.2).

As is now generally recognized, the one-year lock-in of foreign funds in the country came too late in averting the crisis, or in retaining the bulk of foreign funds that had earlier fled. Instead, the funds "trapped" were those that had not already left in the preceding 14 months, inadvertently "punishing" those investors who had not already withdrawn funds from Malaysia.

It appears that the actual contribution of the capital controls to the strong economic recovery in Malaysia in 1999–2000 is ambiguous at best. However, it may even have slowed down the recovery led by fiscal counter-cyclical measures and the extraordinary demand for electronics, thus explaining the weaker recovery in Malaysia compared to South Korea. In the longer term, many critics claim that it diminished the recovery of foreign direct investment — which has compelled the authorities to seek more domestic sources of economic growth, though the evidence for this argument is highly ambiguous. More importantly, the regime remains untested in checking international currency volatility, as such instability abated throughout the region at around the same time following the US Fed's interest rate reduction. Although recovery of the Malaysian share market, which had declined more than other stock markets during the crisis, lagged behind the other (relatively smaller) markets in the region, it is not clear what should be made of this

If, indeed, Malaysia's capital controls stemmed from near-desperation, as Mahathir said during the symposium on the first anniversary of the controls, then its timing was most fortunate. When it was introduced, the external environment was about to change significantly, while the economy had seen the outflow of the bulk of short-term capital, so that in a sense, the regime was never tested. If the turmoil of the preceding months had continued until the end of 1998 or longer, continued shifts and re-pegging would have been necessary, with deleterious effects.

Clearly, the ringgit peg brought a welcome respite to businessmen after more than a year of currency volatility. But as noted earlier, exchange rate volatility across the region abated shortly thereafter, when the Brazilian and other crises did not cause renewed volatility. Moreover, it is ironic that a presumably nationalistic attempt to defend monetary independence against currency traders should, in effect, hand over determination of the ringgit's value to the US Federal Reserve through partial or quasi-dollarization.

If the US dollar had strengthened significantly against other currencies, then Malaysia may have had to re-peg against the US dollar to retain export competitiveness. In view of that, the greenback initially weakened due to lowered US interest rates. After strengthening from 1999, it has again weakened since 2001, which has created

much less pressure for re-pegging or de-pegging. For reasons that are not clear, there does not seem to be any inclination of the Mahathir government to remove the peg, though it is uncertain how long the peg will last after his retirement in October 2003.

While interest rates were undoubtedly brought down by government decree in Malaysia, the desired effects were limited. Interest rates have been reduced dramatically across the region, in some cases, even more than in Malaysia, without others having to resort to capital controls. For example, while interest rates in Thailand were much higher than in Malaysia for over a year after the crisis began, they declined below Malaysian levels during September 1998 (see Jomo 2001: Figure 7.1). Perhaps more importantly, loan and money supply growth rates actually declined in the first few months after the new measures were introduced despite central bank threats to sack bank managers who failed to achieve the 8 per cent loan growth target rate for 1998. It has become clear that credit expansion is a consequence of factors other than capital controls or even low interest rates. Across the region, especially in South Korea and Thailand, counter-cyclical spending also grew, without resorting to capital controls.

The Malaysian authorities' mid-February 1999 measures effectively abandoned the main capital control measure introduced in September 1998, i.e. the one-year lock-in. While foreign investors were prohibited from withdrawing funds from Malaysia before September 1999, they were allowed to do so from mid-February 1999 after paying a scaled exit tax (lower taxes for longer term investment in Malaysia), in the hope that this would reduce the rush for the gates come September 1999. The very low volume of actual capital outflows since the end of the lock-in on 1 September 1999 has been interpreted in different ways. One view is that since the stock market had recovered and could be expected to continue rising, there was little reason to flee.

A second view emphasizes the role of the nominal exchange rate, which has been fixed against the US dollar at RM3.8. With the greenback perceived to be still strengthening, there was little exchange rate risk to discourage investors from holding ringgit. A third perspective suggests that the capital controls were probably unnecessary, having been introduced 14 months after the crisis began, i.e. after most of the capital flight had already taken place. Meanwhile, in an

attempt to attract new capital inflows, new investors were granted a less onerous capital gains tax.

However, it is unlikely that the capital gains tax will deter exit in the event of a panic as investors rush to cut their losses. At best, it could discourage some kind of short-selling from abroad owing to the higher capital gains tax rate of 30 per cent as opposed to 10 per cent on withdrawals performed within less than a year. The differential may have discouraged some short-selling from abroad, but will not deter capital flight in the event of financial panic. In September 1999, the capital gains exit tax rate was set at a uniform rate of 10 per cent, thus eliminating the only feature of the February 1999 revised controls that might have deterred short-selling from abroad.

Malaysia remains virtually defenceless in terms of new control measures in the event of a future exodus of portfolio capital. Admittedly, this is not the most urgent problem for the time being in the light of the limited international interest in Malaysia's capital market. In mid-1994, as the rising stock market renewed foreign portfolio investors' interest in Malaysia, those who stood to gain from a stock market bubble successfully lobbied for abandoning the early 1994 controls on portfolio capital inflows. This rendered Malaysia vulnerable to the 1997–8 portfolio capital flight, resulting in the stock market collapse by about four-fifths of its market capitalization in the February 1997 (Figure 7.1).

Malaysian authorities set the peg at RM3.8 to the US dollar on 2 September 1998, after it had been trading in the range of RM4–4.2 per US dollar, in a bid to raise the value of the ringgit. Since mid-September 1998, however, other regional currencies stabilized after the US Federal Reserve Bank lowered interest rates in the aftermath of the Russian and LTCM crises, strengthening the yen and other regional currencies. Thus, the ringgit became undervalued for about a year thereafter, which — by chance rather than by design — boosted Malaysian foreign exchange reserves from the trade surplus, largely due to import compression, as well as some exchange rate-sensitive exports. Malaysia's foreign exchange reserves depleted rapidly from July until November 1997, before improving in December, and especially after the imposition of capital controls in September 1998 (Jomo 2001: Figure 5.10). Thus, the ringgit undervaluation may have helped Malaysian economic recovery, but

certainly not in the way the authorities intended when initially pegging the ringgit.

While the undervalued ringgit backed an export-led recovery strategy, this was not the intent. (As now, government efforts then were focused on a domestic-led recovery strategy.) The undervalued ringgit is said to have had a (unintentional) “beggar-thy-neighbour” effect. Due to trade competition, the undervalued ringgit is said to have discouraged other regional currencies from strengthening earlier for fear of becoming relatively uncompetitive relative to Malaysian production costs and exports. There were also fears that the weak Southeast Asian currencies might cause China’s authorities to devalue the renminbi, which could have had the undesirable effect of triggering another round of “competitive devaluations”, signalling danger for all.

Kaplan and Rodrik (2001) have argued that the controls averted another crisis that had yet to hit Malaysia. They note that the offshore overnight ringgit market interest rates (principally in Singapore) had remained at high levels (around 40 per cent) for some months, putting tremendous upward pressure on domestic interest rates. A leading Malaysian neo-liberal economist, R. Thillainathan, has disputed this assertion, claiming a very thin, and mainly speculative offshore market despite the huge amount of ringgit held abroad (reputedly RM25–30 billion). The significance of these conflicting claims can only be settled empirically.<sup>1</sup>

The desirability of some measures associated with the capital controls is also in doubt as evidence of favouritism or cronyism mounts, while the contribution of “rescued” interests to national economic recovery efforts is dubious (Wong 2002). Simon Johnson and Todd Mitton (2003) have shown that the market prices of stocks associated with Mahathir cronies rose disproportionately more after the introduction of the September 1998 capital controls. However, the evidence does not really allow one to conclude that the capital controls per se were solely or principally responsible for this outcome. As the Malaysian authorities had also undertaken several other important measures from mid-1998, more careful analysis is required before one can conclusively attribute this favourable effect on Mahathir crony stock prices to the capital control measures.

After all, counter-cyclical fiscal spending had been re-introduced by then Finance Minister Anwar Ibrahim from around May–June

1998, possibly with an eye to the ruling party's annual general assembly at the end of that month. Around this time too, the IMF had begun to reconsider its earlier policy conditionality and advice for the crisis-affected East Asian economies to avoid budgetary deficits. During this time too, the Malaysian authorities set up three important institutions to facilitate restoration of bank liquidity by taking over many large non-performing loans (Danaharta), bank re-capitalization (Danamodal) and corporate restructuring (Corporate Debt Restructuring Committee, or CDRC). Furthermore, the popularity of crony stocks before the crisis — contrary to the neo-liberal presumption that minority investors have an aversion to such shares — suggests that portfolio investors understandably preferred such stocks, especially after intense political conflict preceding the capital controls suggested that Anwar-connected stocks were doomed, while those linked to Mahathir would be the principal beneficiaries of government policy interventions

### Some Policy Lessons

Capital controls have not caused the recovery in Malaysia to be slower than in the other crisis countries. The 1998 collapse was less pervasive in Malaysia than in Thailand and Indonesia, while recovery in Malaysia has been faster since early 1999. Of course, the pre-crisis problems in Malaysia were less serious to begin with owing to strengthened prudential regulations after the late 1980s' banking crisis (when non-performing loans went up to 30 per cent of total loans). There were strict controls on Malaysian private borrowing from abroad, with borrowers generally required to demonstrate likely foreign exchange earnings from the proposed investments to be financed with foreign credit. Hence, although Malaysia had the most open economy in the region after Hong Kong and Singapore, with the total value of its international trade around double its annual national income, its foreign borrowings and share of short-term loans in total credit were far less than the more closed economies of South Korea, Indonesia and Thailand.

The coincidental timing of Paul Krugman's *Fortune* article advocating capital controls reinforced the impression that the measures were primarily intended to provide monetary policy independence to reflate the economy. However, as noted earlier, foreign developments

from August 1998 also created new international monetary conditions that facilitated the adoption of reflationary policies in the rest of the region. Though Malaysia missed out on most of the renewed capital flows to the region from the last quarter of 1998, it is not clear that such easily reversible capital inflows are all that desirable. The more serious problem is the future credibility of government policies, which appear to adversely affect the inflow of foreign direct investment (FDI) (despite official protests to the contrary) as well as risk premiums for Malaysian bonds.

The subsequently undervalued pegged ringgit also had negative implications for a broad recovery, which depended upon imported inputs. It is not clear that the peg gave a major boost to exports, as the official export figures suggest. The post-September 1998 regime has also not produced other desired effects as the export base remains narrow with the most significant growth coming from electronics due to external demand increases and with the increase in foreign reserves largely resulting from massive import compression.

There are costs to maintaining an undervalued ringgit, especially in the context of an economic upturn of what is still a very open economy. Undervaluation may help some exports in the short term, but it also makes imports of capital and intermediate goods more expensive, thus impeding recovery and capacity expansion in the medium term. (Before the crisis, imports were almost equivalent to GDP.) The trade surplus subsequently declined as import compression due to the undervalued ringgit declined. Coupled with an apparently stubborn negative services balance, a reduced current account surplus accompanied the economic upturn.

While there is a need to continue pressing for international financial reform and new regional monetary arrangements in the absence of adequate global reform, there is little to gain by retaining Malaysia's temporary capital controls regime. Instead, even if the regime succeeds in attracting short-term portfolio capital, as its various amendments sought to do, it would still be largely ineffective in the event of another currency and financial panic.

Contrary to official claims, the controls may have had some negative effects on desired long-term (FDI), e.g. among potential foreign investors who might mistrust a government for apparently renegeing on an implicit commitment not to impose capital controls

on outflows. However, there is no conclusive evidence to this effect. In fact, surveys by Japanese government agencies — notably the Japan External Trade Organization (JETRO) and Japan Bank for International Cooperation (JBIC) — suggest that such investors have been indifferent to or even approving of the controls.

In any case, FDI throughout the world has declined significantly since the late 1990s, with China receiving a significantly greater share of such investments. While total FDI may have dropped more in Malaysia compared to the other crisis-affected economies, it is not clear that green-field FDI to Malaysia has dropped significantly more than in other countries. Four-fifths of world FDI in the 1990s has been in the form of mergers and acquisitions (M&As) rather than in other types of FDI (UNCTAD 2000). The share of such FDI in the East Asian economies has increased significantly in the aftermath of the 1997–8 crisis, raising concerns about the ill-effects of “fire-sale FDI” (Krugman 1999).

The subsequent reduction of FDI cannot be conclusively attributed to the September 1998 measures. The authorities attributed the FDI decline to misperceptions, and had to spend inordinate energy and resources trying to rectify the situation. Confidence in the consistency and credibility of the Malaysian government’s policy was seriously eroded as were years of successful investment promotion. This was not helped by unnecessarily hostile and ill-informed official rhetoric, though the Mahathir administration has subsequently sought to dramatically change its international image, especially since 11 September 2001.

The capital controls regime was thus counter-productive in terms of the overall consistency of government policy and probably had some adverse long-term consequences. The problem was exacerbated by the Prime Minister’s declared intention to retain the regime until the international financial system was reformed. Hence, the government phased out the September 1998 and subsequent capital and currency control measures in the light of their ambiguous contribution to economic recovery and the adverse consequences of retaining the measures.

Since the desired reforms to the international financial architecture are unlikely to materialize in the foreseeable future, the Malaysian government should institute a permanent, but flexible,

market-based regime of prudential controls to moderate capital inflows and deter speculative surges, both domestic and foreign, to avert future crises. This would include a managed float of the currency with convertibility, but no internationalization, minimally meaning, no offshore ringgit accounts and limits on off-shore foreign exchange accounts, and limits on foreign borrowings.

There is also an urgent need for some degree of monetary co-operation in the region. It is now clear that currency and financial crises have primarily regional effects. Hence, regional co-operation is a necessary first step towards establishing an East Asian monetary facility. Only responsible Malaysian relations with its neighbours will contribute to realizing such regional co-operation.

The window of opportunity offered by the capital controls regime has been abused by certain powerfully-connected business interests, not only to secure publicly funded bail-outs at public expense, but to consolidate and extend their corporate domination, especially in the crucial financial sector. Capital controls have been part of a package focused on saving friends of the regime, usually at public expense. For example, while indirectly not involving public funds, the government-sponsored restructuring of the ruling party-linked Renong conglomerate will cost the government, and hence the public, billions of ringgit in toll and tax revenue. Also, non-performing loans (NPLs) of the thrice-bankrupted Bank Bumiputra — taken over by politically well-connected banking interests — have not been heavily discounted like other banks' NPLs, although it has long abandoned its "social agenda" of helping the politically dominant Bumiputera community.

Other elements in the Malaysian government's economic strategy since then reinforce the impression that the capital control measures were probably motivated by political considerations as well as the desire to protect politically well-connected businesses. For example, the Malaysian ringgit's exchange rate was pegged against the US dollar in the afternoon of 2 September 1998, hours before Deputy Prime Minister and Finance Minister Anwar Ibrahim was sacked, probably to pre-empt currency volatility and speculation after the firing. The Malaysian experiment with capital controls has been compromised by political bias, vested interests and inappropriate policy instruments. Hence, it would be a serious mistake to reject the

desirability of capital controls on account of the flawed Malaysian experience.

Capital controls on outflows and other such efforts to prop up a currency already under attack may be ineffective and may actually unwittingly subsidize further speculative actions. Instead, measures to insulate the domestic banking system from short-term volatility through regulatory measures and capital controls on easily reversible short-term inflows as well as stricter prudential regulation and supervision may be far more effective and sustainable. International co-operation and co-ordination have often not only provided the best responses during crisis episodes, but have also been important for effective prudential and regulatory initiatives as well as to reduce “policy arbitrage”.

## **Addendum 1: Capital Controls**

There are many different types of capital control measures with consequences often varying with circumstances as much as the nature of the instruments. Until capital account liberalization from the 1980s, most countries retained some such controls despite significant current account liberalization in the post-war period. Most of such measures can only be understood historically, in terms of their original purposes, and there are no ready-made packages available for interested governments.

Economists favouring capital account liberalization have made three main arguments in favour of such a policy. It is argued that capital tends to flow from capital-rich to capital-poor economies, or between economies with different savings rates, investment opportunities, risk profiles or even demographic patterns. Capital flows thus enable national economies to trade imports in the present for imports in the future, i.e. to engage in inter-temporal trade. Capital flows also allow national economies to offset pressures to reduce imports by borrowing from abroad or by selling assets to foreigners. Such imports and borrowings may be used to enhance national economic output capacity, i.e. a country's ability to increase production in the future. The foregoing arguments are similar to those for international trade liberalization. Foreign direct investment is also expected to involve technology transfer, which should enhance industrial capabilities. Restrictions on capital flows are considered undesirable by advocates of capital account liberalization because they prevent capital from being utilized where it is most demanded.

On the other hand, advocates of capital controls emphasize the adverse effects of free capital flows on national economic policy-making and implementation, or worse still, by undermining economic stability. Any policy intended to restrict or redirect capital account transactions can be considered a capital control. This includes taxes and price or quantity controls, including bans on trade in certain kinds of assets. Hence, there are many different kinds of capital controls, which may be introduced for various reasons. The effects of specific controls may change over time and could become quite different from what may have been intended. The major reasons advanced for the introduction of capital controls have included the following:

1. Achieve greater leeway for monetary policy, e.g. to reflate the economy.
2. Enhance macroeconomic stability by limiting potentially volatile capital inflows.
3. Secure exchange rate stability, e.g. protect a fixed exchange rate or peg.
4. Correct international payments imbalances, both deficits and surpluses.
5. Avoid inflation due to excessive inflows.
6. Avoid real currency appreciation due to monetary expansion.
7. Reduce financial instability by changing the composition of — or limiting — capital inflows.
8. Restrict foreign ownership of domestic assets, which might cause nationalistic resentment.
9. Ensure the domestic utilization of national savings by restricting outflows.
10. Enable governments to allocate credit domestically without risking capital flight.
11. Enable domestic financial houses to attain scale economies in order to better compete internationally.
12. Facilitate revenue generation, particularly taxation of wealth and interest income; by allowing higher inflation, more revenue can be generated.

Capital controls may well be the most acceptable alternative to the destabilizing effects of capital flows on inadequately regulated financial systems characteristic of developing economies. Effective regulation may be compromised by limited capabilities and experience, fewer personnel and other resources as well as politically or otherwise compromised regulatory capacity. When a country with a fixed exchange rate experiences a net capital outflow, it can either raise interest rates or devalue. But with a sudden large capital outflow, usually associated with easily reversible capital inflows, either option is likely to exert strong recessionary pressures due to higher interest rates or further capital flight. Monetary contraction may not only dampen economic activity involving higher interest rates, but may also adversely affect the economy through the (invariably government-

guaranteed) banking system, which may be exposed to foreign borrowings (Kaminsky and Reinhart 2002).

Capital controls may be used to limit capital flow volatility to achieve greater economic stability by checking outflows in the event of crisis or influencing the volume or composition of inflows. Sudden massive capital outflows — usually attributable to herd behaviour — are more likely to occur in developing countries for various reasons. The greater likelihood of asset price changes to cause further changes in the same direction increases the likelihood of greater volatility as well as boom-bust cycles. Discouraging capital inflows would reduce the quantity of capital that might take flight at short notice. But changing the composition of capital inflows — e.g. to favour FDIs as opposed to more liquid portfolio investments — may better reduce such instability.

Different types of capital controls may be distinguished by the types of asset transactions they affect as well as by the very nature of the control measure itself, e.g. taxes, limits, or bans. Capital controls are not identical with exchange controls, though the two are often closely related in practice. Exchange controls mainly involve monetary assets (currency and bank deposits), and may be used to control the current account of the balance of payments rather than the capital account. While exchange controls function as “a type of limited capital control, they are neither necessary to restrict capital movement nor are they necessarily intended to control capital account transactions” (Neely 1999: 21–2). Some of the major differences among the types of capital controls involve:

1. *Taxes versus quantitative* controls. Taxes rely on price or market mechanisms to deter certain types of flows. Such taxes may be imposed on certain types of transactions or returns to foreign investment, or may even involve mandatory reserve requirements, which raise the cost of the flows concerned. Quantitative controls may involve quotas, authorization requirements or even outright bans.
2. Controls on *inflows as opposed to outflows*. Limits on inflows may allow for higher interest rates, to check money supply and inflation. Checks on outflows allow lower interest rates and greater money supply than would otherwise be possible, and

have often been used to postpone hard choices between devaluation and tighter monetary policy, as with Malaysia's September 1998 controls.

3. Controls on different types of inflows, especially in terms of *expected duration*. Governments may seek to encourage long-term inflows (e.g. FDI) while discouraging short-term (e.g. bank loans or money market instruments) or easily reversible (portfolio investments) inflows.

It is important to establish at the outset what particular controls seek to achieve. With the benefit of hindsight, it is crucial to determine to what extent the measures actually achieve their declared objectives, as well as their other consequences, intended or otherwise. For instance, it is important to know whether specific controls are meant to avert crisis or to assist recovery. In its *1998 Trade and Development Report*, the United Nations Conference on Trade and Development (UNCTAD) recommended capital controls as means to avoid financial crises. Almost as if he was endorsing the Malaysian measures, Paul Krugman recommended capital controls in his *Fortune* magazine column in early September 1998 to create a window of opportunity to facilitate economic recovery — which is a different objective, though some of the mechanisms or processes involved may not be altogether different.

## **Addendum 2: Malaysia's 1994 Temporary Controls on Inflows**

The September 1998 capital controls were not completely unprecedented. In fact, temporary capital controls had been introduced in early 1994 after an earlier experience of sudden and considerable capital flight with the sudden reversal of earlier massive net portfolio capital inflows in 1992–3 (Table 7.1). The 1994 measures sought to deter capital inflows by “taxing” them, unlike the 1998 measures that restricted capital outflows. If they had not been withdrawn so soon, barely half a year later, it is quite likely that the magnitude of capital flight from mid-1997 would have been much less, and the 1997–8 crisis would have been less catastrophic for Malaysia. As noted earlier, the massive build-up of portfolio capital inflows contributed to a new stock market bubble during the period 1995–6 before peaking in early 1997.

The early 1994 controls — introduced after the sudden collapse of the Malaysian stock market in late 1993 — were withdrawn around August of the same year, without introducing a more permanent regime of market-based controls that could be flexibly adjusted in response to policy priorities and concerns. The central bank saw the problem in late 1993 as one of excess liquidity due to the massive inflow of short-term funds from abroad due to higher interest rates in Malaysia, the buoyant stock market and expectations of ringgit appreciation. Several monetary measures were introduced during early 1994 to manage excess liquidity, especially to contain speculative inflows, restore stability in financial markets and control inflationary measures; for a fuller account, see the Malaysian central bank's *1994 Annual Report* (BNM 1995):

- The eligible liabilities base for computing statutory reserve and liquidity requirements were redefined to include all funds inflows from abroad, thus raising the cost of foreign funds compared to domestic funds.
- Limits on non trade-related external liabilities of banking institutions were introduced; net external liabilities of the banking system declined from a peak of RM35.4 billion in early January 1994 to RM10.3 billion at the end of 1994.

**Table 7.1. Net Capital Flows**

<i>Net Private Capital Flows to Malaysia (US\$ million)</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>Private flows, net</b>	1,817	5,768	8,908	11,371	1,507	7,854	10,041	2,562	-2,719	1,448	-770	-125
<b>Equity investments, net</b>	2,078	4,169	4,061	4,297	2,693	3,743	4,810	4,889	2,447	1,448	-770	-125
Direct investment, net	2,332	3,998	5,183	5,006	4,342	4,178	5,078	5,137	2,163	2,473	1,762	287
Portfolio investment, net	-255	170	-1,122	-709	-1,649	-436	-268	-248	283	-1,025	-2,532	-412
<b>Private creditors, net</b>	-260	1,599	4,847	7,074	-1,186	4,112	5,231	-2,327	-5,166	n.a.	n.a.	n.a.
Commercial banks, net	847	1,312	3,631	4,225	-5,070	28	3,339	-979	-2,677	n.a.	n.a.	n.a.
Nonbank, net	-1,107	287	1,216	2,849	3,885	4,084	1,892	-1,348	-2,489	n.a.	n.a.	n.a.
<i>Net Private Capital Flows to Malaysia (US\$ billion)</i>												
<b>Private flows, net</b>	1.82	5.77	8.91	11.37	1.51	7.85	10.04	2.56	-2.72	1.45	-0.77	-0.12
<b>Equity investments, net</b>	2.08	4.17	4.06	4.30	2.69	3.74	4.81	4.89	2.45	1.45	-0.77	-0.12
Direct investment, net	2.33	4.00	5.18	5.01	4.34	4.18	5.08	5.14	2.16	2.47	1.76	0.29
Portfolio investment, net	-0.25	0.17	-1.12	-0.71	-1.65	-0.44	-0.27	-0.25	0.28	-1.02	-2.53	-0.41
<b>Private creditors, net</b>	-0.26	1.60	4.85	7.07	-1.19	4.11	5.23	-2.33	-5.17	n.a.	n.a.	n.a.
Commercial banks, net	0.85	1.31	3.63	4.22	-5.07	0.03	3.34	-0.98	-2.68	n.a.	n.a.	n.a.
Nonbank, net	-1.11	0.29	1.22	2.85	3.88	4.08	1.89	-1.35	-2.49	n.a.	n.a.	n.a.

Source: Extracted & computed from BOPs CD-ROM Database, IMF

- Sale of short-term monetary instruments was limited only to Malaysian residents to prevent foreigners from using such investments as substitutes for placements of deposits (this measure was lifted on 12 August 1994).
- Commercial banks were required to place ringgit funds of foreign banks in non-interest bearing vostro accounts.
- Commercial banks were not permitted to undertake non-trade-related swaps (including overnight swaps) and outright forward transactions on the bid side with foreign customers to prevent offshore parties from establishing speculative long forward ringgit positions while the ringgit was perceived to be undervalued (this measure was lifted from 16 August 1994).
- The statutory reserve requirements of all financial institutions were raised thrice during 1994 — by one percentage point each time — to absorb excess liquidity on a more permanent basis, absorbing an estimated RM4.8 billion from the banking system.

### **Addendum 3: Mahathir on the September 1998 Control Measures**

#### ***How Selective Exchange Controls Work***

On 2 September 1998, the controls came into effect. The world was shocked and practically everyone, including, of course, the great economic and financial experts predicted the total collapse of the Malaysian economy. It was madness for Malaysia, a small developing country, to go against the rest of the world — almost.

What exactly were the selective exchange control measures? Actually the measures were minimal. There were only three measures, namely:

1. The offshore ringgit market was eliminated and currency speculators no longer had access to ringgit accounts of the non-residents in Malaysia. They were not allowed to sell or lend the ringgit to another non-resident but could invest their funds freely in Malaysia. Thus the currency traders were unable to short-sell the ringgit and change its exchange rate. Only the government could determine the exchange rate.

2. The government fixed the exchange rate at RM3.80 to the US dollar.
3. A "twelve-month rule" was imposed, prohibiting the repatriation of portfolio funds for 12 months. This twelve-month rule was necessary, given the prevailing instability of the financial market. There was the possibility that the bad publicity following Malaysia's unorthodox measures could result in massive short-term capital outflows. A twelve-month restriction was therefore considered necessary. However, when the situation stabilized six months down the road, this twelve-month rule expired in September 1999. There was no massive outflow. The market perception had obviously changed dramatically between September 1998 and September 1999. Foreign investors were happy with the appreciation of their shares in the KLSE and the general performance of the Malaysian economy.

The primary objective of Malaysia's selective exchange control regime implemented in September 1998 was for Malaysia to regain control of its economy from the currency speculators and manipulators, so that Malaysians could decide the destiny of Malaysia. The measures implemented were very carefully crafted so as to optimize the positive aspects of globalization and remove the negative aspects of globalization. The positive aspects of globalization that were retained were the complete freedom in matters of international trade and FDIs. The liberal regime that governed trade transactions and FDIs were left unchanged. The negative aspects of globalization that were eliminated were the offshore market for the trading of ringgit and the free flow of short-term funds that destabilized the economy.

The government fixed the ringgit exchange rate at RM3.80 to the US dollar, the rate which prevailed at the time the controls were imposed.

The government could have fixed the ringgit at the old rate of RM2.50 against the US dollar. This would have enriched Malaysia and Malaysians. However, such a strong level for the ringgit would have made Malaysia less competitive relative with its neighbours. The ringgit's exchange rate of RM3.80 against the US dollar restored the previous rate of 1:10 against the baht and the peso. True, imported goods priced in US dollars would be more expensive at RM3.80

compared to RM2.50, but this is actually good for the Malaysian economy. While imports would be reduced, exports would increase, and, therefore, a trade surplus would be easier to achieve. Indeed, Malaysia's trade surplus has never been bigger than now.

Once CLOB (Central Limited Order Book International) was put out of action by the new rules in September 1998, the prices on the KLSE rallied strongly. The KLCI (Kuala Lumpur [Stock Exchange] Composite Index) rose quickly from 262 to above 800 and market capitalization increased substantially. Malaysians investing in listed companies saw the value of their shares appreciate significantly, and the margin calls became a thing of the past. Those who needed to raise cash had no problem selling their shares at very much higher prices than before.

Holders of shares bought through CLOB were not able to sell their shares immediately after the closure of CLOB in September 1998 as logistical arrangements had to be worked out to migrate the shares to the CDS (Central Depository System) in Kuala Lumpur on an individual basis. The migration was completed in the middle of the year 2000. During the period, the value of shares had increased by more than 300 per cent. The holders of CLOB shares should really be grateful to the government of Malaysia for delaying the sale of their shares.

The same is true with the twelve-month rule imposed on non-resident investors in the KLSE, which prohibited them from repatriating their capital for 12 months. If the twelve-month rule was not imposed, the non-residents would have sold their shares at very much lower prices and repatriated their funds. As a result of the twelve-month rule, most foreign investors could not sell their shares and today, they are able to enjoy the greatly appreciated prices of the shares they hold. Given that their holdings accounted for 30 per cent of the KLSE's capitalization, had they sold their shares in 1998, this would have resulted in a sharp downturn in the KLSE and a depletion of Malaysia's external reserves. This would have destabilized the Malaysian economy and would have made the subsequent recovery that much more difficult. The twelve-month rule therefore created a win-win situation for both the non-resident investors and the Malaysian government.

An important point that needs emphasis is that FDIs were not in any way subject to the selective exchange control measures. They were allowed not only to repatriate their profits but also to repatriate

the proceeds from the sale of their assets, if they chose to do so. It must be noted that the rules for FDIs in Malaysia do not require the FDIs to bring in 100 per cent of the capital to meet all their financing needs. For every ringgit they bring in, they are allowed to borrow RM3 from the banks in Malaysia. The selective exchange control measures did not change this policy. Malaysia is able to be liberal in this respect because it has large external reserves, as well as ample liquidity in the domestic financial system. The most important consideration in Malaysia's policy towards the FDIs is job creation and technology transfer. The foreign exchange inflow aspect of the FDIs was never an important consideration in Malaysia's policy towards FDIs. In order to ensure that the local borrowing of the FDIs is not entirely with the subsidiaries of foreign banks operating in Malaysia, a 60:40 rule was imposed which requires the FDIs to meet at least 60 per cent of their domestic borrowings from Malaysian-owned banks in Malaysia.

The liberal policy of allowing the foreign (direct) investors to borrow from banks in Malaysia has also brought about a win-win situation. Such investors have been good paymasters, and banks in Malaysia, including Malaysian-owned banks, make good profit by lending to them. Given that Malaysia has a high savings rate of 38 per cent of GDP, the banks have a need to lend a significant portion of the national savings.

However, an interesting phenomenon of FDIs in Malaysia is that they invariably add on to their investments in Malaysia either through new capital or through the retention and ploughing back of their profits. Even during the bad patch of the 1997–8 financial crisis, the FDIs in Malaysia continued to increase their investments.

Malaysia's policy on the repatriation of export proceeds needs to be explained, as this was an important factor in Malaysia's ability to implement the selective exchange control regime in September 1998. Government regulation requires exporters (including FDIs) to repatriate their export proceeds to Malaysia immediately when the export proceeds are received. There are some exceptions attached to this repatriation requirement, but these expectations are very minor. Exporters are allowed to give credit to their importers for a maximum of six months. This means that, within six months after the date of export, at the latest, all export proceeds are repatriated to Malaysia and sold to banks in Malaysia. The banks in Malaysia, after meeting

the demands from the importers, will sell the net balance to the central bank daily. This policy has resulted in a convincing build-up of Malaysia's external reserves over the years, and gave Malaysia the confidence to implement the selective exchange control regime in September 1998 on the basis of a strong external reserves position. It should be noted that the combination of a liberal attitude of allowing the FDIs to borrow from the domestic financial system and strictly forbidding them to retain their export proceeds overseas has resulted in Malaysian banks being able to recycle the high level of Malaysian savings and the central bank to build up its external reserves. Having stabilized the currency market through the selective exchange control measures and having stabilized the KLSE through the closure of CLOB, the government had the opportunity, from September 1998 onwards, to focus more directly on reviving the economy.

### ***Reviving the Economy***

The non-performing loans (NPLs) of the banking system by that time had risen from 4.7 per cent at the end of 1997 to 13.2 per cent. The capital strength of banking institutions had been severely tested, with 11 of them requiring new capital injection. The performance of the banking system was badly affected, with 46 banking institutions registering losses. The total loss registered by the banking system amounted to RM2.3 billion.

The flowing chronology of events reflects the fast gear that was engaged by the Executive Committee of the NEAC (National Economic Action Council) to revive the economy:

- *1 September 1998*  
The statutory reserves requirement was reduced from 8 per cent to 6 per cent, injecting RM 8 billion into the financial system.
- *3 September 1998*  
The BNM intervention rate was reduced from 9.5 per cent to 8 per cent per annum to bring about an equivalent lowering of interest rates across the board in the financial system. The liquid asset ratio requirement was also reduced from 17 per cent to 15

per cent, freeing RM8 billion of liquid assets that could be sold by the financial institutions to fund their operations. The requirement for commercial banks to maintain their vostro balances with the central bank was uplifted and this provided extra liquidity to the banks of more than RM1 billion.

- *8 September 1998*  
Loans for the purchase and construction of houses costing RM250,000 and below were exempted from the 20 per cent limit on lending to the broad property sector to further stimulate the construction sector.
- *15 September 1998*  
The maximum margin over the quoted Base Lending Rate (BLR) was reduced from 4 percentage points to 2.5 percentage points to lower the lending rate for companies and individuals so as to facilitate viable projects and encourage consumption as well as reduce the interest servicing burden of companies.
- *16 September 1998*  
The SRR (statutory reserve requirement) was reduced from 6 to 4 per cent, releasing another RM8 billion into the economy.
- *23 September 1998*  
The limit for financial institutions on lending for the purchase of shares and unit trust funds was increased from 15 per cent to 20 per cent of total outstanding loans so as to encourage investment in the KLSE.
- *25 September 1998*  
The non-performing loan classification was lengthened from three months to six months to provide borrowers with some breathing space to regularize their accounts.
- *5 October 1998*  
The BNM intervention rate was reduced from 8 per cent to 7.5 per cent per annum, to lower further the general interest rate level in the system. The maximum margin of financing of 60 per

cent imposed on loans for the purchase of residential properties and land was abolished, so as to give a boost to the property sector, which had a serious overhang as a result of the crisis.

- *13 October 1998*  
The Loan Complaints and Monitoring Unit (LCMU) was established in Bank Negara Malaysia to assist borrowers facing difficulties in securing financing.
- *10 November 1998*  
The BNM intervention rate was reduced from 7.5 per cent to 7 per cent per annum to reduce further the interest rate level in the financial system.
- *19 November 1998*  
The government established a RM750 million 'Rehabilitation Fund for Small and Medium Industries', to provide financial assistance to viable small and medium industries (SMIs) which were facing temporary cash flow problems.
- *November 20 1998*  
The minimum monthly repayment of credit cards was reduced from 10 per cent to 5 per cent to promote consumer spending.
- *21 November 1998*  
Every banking institution was required to set up a "Special Loans Rehabilitation Unit" to assist borrowers who had problems repaying their loans. The maximum margin of financing of 85 per cent for passenger cars costing RM40,000 and below was abolished.
- *5 December 1998*  
BNM reduced the maximum lending rate under the Small and Medium Industries Fund and the Special Scheme for Low and Medium Cost Houses from 10 per cent to 8.5 per cent.

The Executive Committee of the NEAC gave particular attention to the operations of Danaharta (Assets Management Company), Danamodal (Bank Refinancing Company) and the Corporate Debt Restructuring

Committee (CDRC), which had all been set up during the crisis, to address the problems of non-performing loans and bank recapitalization. The role of Danaharta was to carve out the NPLs from the banking system so that the banks could refocus on their function of lending to revive the economy. The role of Danamodal was to recapitalize the financial institutions and thereby restore the capital strength of the banking system to a much healthier level. The role of CDRC was to provide a platform for the companies and banks to come together and work out a debt restructuring programme in an informal manner.

Once the selective exchange control measures were implemented, the three organizations went into high gear. By 31 March 1999, Danaharta had acquired NPLs amounting to RM16 billion; Danamodal had recapitalized 10 banking institutions amounting to RM6.2 billion; and the CDRC was fully focused on the restructuring of a number of large companies.

The Executive Committee of the NEAC scrutinized every aspect of the economy daily. Figures of trade performance, external reserves, interest rates, lending by banks, sales of property and motor vehicles, retail sales, tonnage and containers handled by the ports, passengers and freight at the airports, details of goods manufactured and exported, details on imports, new businesses registered and bankruptcies, unemployment and job vacancies, wages, government projects and contracts, electricity consumed, and so forth were all laid out daily before the committee for discussion. Quite often, specific actions were immediately taken. When motor vehicles were not selling well, the Committee decided on special hire-purchase terms and ensured that the prices were right.

Two property ownership campaigns were held to reduce the large overhang in the property sector. The first campaign was held in December 1998 and the second in October 1999. The developers participated enthusiastically in the property fairs, bringing in their models and brochures and equipping their booths with many sales people. Banks, insurance companies, lawyers and government officers concerned with registration of property sales and other legal procedures were all brought under one roof. A total value of RM6.4 billion of properties were sold during the two campaigns. This result was gratifying for everyone, including the government, which knows very well the adverse side effects of a big property overhang.

When retail sales were low, the government gave a temporary allowance of RM600 to all its employees. The allowance was disbursed at RM100 per month to ensure that it is spent in the country for the purchase of daily necessities. The local retailers benefited from this extra purchasing power of government employees.

Complaints by the business community were heard by the Executive Committee and frequent briefings were given by various government agencies and by the private sector. Very often, immediate actions were taken, always with the objective of ensuring that nothing stood in the way of a quick turnaround towards a path of rapid growth.

It is now two years since Malaysia imposed selective capital controls and the signs are clear that the controls have successfully prevented currency trades and short-term investors from further damaging the Malaysian economy. The exchange rate of the ringgit has remained fixed at RM3.80 to the US dollar and the composite index of the KLSE has risen from 262 points in September 1998 to its present value of approximately 800 points. Judging by this development, the Malaysian companies and banks have seemingly nearly all recovered. Consumer confidence has returned, bolstered by increased incomes.

## Note

1. In private communications, R. Thillainathan has asserted that the offshore ringgit market was “speculative”, “thin”, and therefore incapable of precipitating another currency crisis, as suggested by Kaplan and Rodrik. While initially persuaded by Thillainathan’s argument, I am now more sympathetic to Kaplan and Rodrik after Thillainathan’s failure to provide supporting evidence and the widespread view that the sustained high interest rates in Singapore’s overnight market of around 40 per cent were seriously straining the Malaysian central bank’s ability to keep interest rates from rising.

## References

- Athukorala, Prema-Chandra (2001). *Crisis and Recovery in Malaysia: The Role of Capital Controls*. Edward Elgar, Cheltenham.
- BNM (1995). *Annual Report, 1994*. Bank Negara Malaysia, Kuala Lumpur.
- Cambridge Journal of Economics*, November 1998.

- Haggard, Stephan and Linda Low (2000). "The Political Economy of Malaysia's Capital Controls". In Stephan Haggard, *The Political Economy of the Asian Financial Crisis*. Processed, August. Institute of International Economics, Washington, DC.
- Johnson, Simon and Todd Mitton (2003). "Cronyism and Capital Controls: Evidence from Malaysia". *Journal of Financial Economics* 67: 351–82.
- Jomo K.S. (ed.) (1998). *Tigers in Trouble: Financial Governance, Liberalization and Crises in East Asia*. London: Zed Books.
- (2001). *Malaysian Eclipse: Economic Crisis and Recovery*. London: Zed Books.
- Kaminsky, Graciela and Carmen Reinhart. 2002. "The Center and the Periphery: The Globalization of Financial Turmoil". IMF Global Linkages Conference, Washington DC, 30 November 2002.
- Kaplan, Ethan and Dani Rodrik (2001). "Did the Malaysian Capital Controls Work?" National Bureau of Economic Research Working Paper No. 8142. Presented at NBER meeting on The Malaysian Currency Crisis, Cambridge, MA, February.
- Krugman, Paul (1998). "Fire-sale FDI". Paper prepared for NBER conference on "Capital Flows to Emerging Markets". February 20-21. Available from URL: <http://web.mit.edu/krugman/www/FIRESALE.htm>
- Mahathir Mohamad (2001). *The Malaysian Currency Crisis: How and Why It Happened*. Petaling Jaya: Pelanduk.
- Neely, Christopher J. (1999). "An Introduction to Capital Controls". *Federal Reserve Bank of St. Louis Review*, November/December, 81 (6): 21-2.
- Rojas-Suarez, Liliana (2001). "Comment on: 'Did the Malaysian Capital Controls Work?' by Ethan Kaplan and Dani Rodrik". Processed, Institute of International Economics, Washington, DC.
- UNCTAD (2000). *World Investment Report, 2000*. Geneva: United Nations Conference on Trade and Development.
- Wong Sook Ching (2002). "The Role of Government in Managing Corporate Distress After the 1997 Crisis: Theories and Case Studies of Selected Malaysian Corporations". M. Ec. Research Paper, Faculty of Economics and Administration, University of Malaya, Kuala Lumpur.