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Malaysia: Selected Issues

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MALAYSIA

Selected Issues

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Approved by Asia and Pacific Department

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I. Use of Capital Controls and Evolution of the Capital Control Regime[1]

A. Introduction and Summary

1. **Following a period of strong downward pressures on the ringgit, the Malaysian authorities introduced on September 1, 1998 a wide range of capital controls along with pegging the exchange rate at RM 3.8 vis-à-vis the U.S. dollar**. The measures effectively eliminated the offshore ringgit market and prohibited nonresidents from repatriating portfolio capital held in Malaysia for a period of 12 months; foreign direct investment (FDI) flows and payments and transfers affecting current international transactions were excluded from the measures. In February 1999, the authorities replaced the 12-month restriction on the repatriation of portfolio capital with a system of exit levies, with the levy decreasing with the duration of investment.

2. **This paper reviews Malaysia's experience with the use of capital controls**, reviews the adequacy of Malaysia's prudential framework to manage the risks involved in cross-border capital movements, discusses issues related to the strategy for exiting from the capital controls, and examines the options for the evolution of the capital control regime. It finds:

- While the capital controls have provided the authorities with a breathing space in which to implement more fundamental policy reforms, a key objective now should be to promote foreign investor confidence. The elimination of the exit levy on profits would send an important signal that the capital controls have been temporary;

- In view of its emerging market status, Malaysia would need a robust prudential framework that can handle the risks in cross-border capital flows. Most key elements of this framework are already in place and others will need to be implemented. It will be critically important that Malaysia also adopt a consistent monetary and exchange rate policy framework.

- Careful consideration would need to be given to the benefits and risks of cross-border transactions in ringgit.

3. **The rest of the paper is outlined as follows**. Section II provides a brief review of Malaysia's approach to capital account liberalization prior to September 1998. Section III reviews the circumstances surrounding the imposition of the controls in September 1998, and their impact. A discussion of the modification of the September measures in February 1999 is provided in Section IV. Section V discusses issues in exiting from the capital controls. Section VI provides conclusions.

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[1]This paper was prepared by R. Barry Johnston (ext. 38980) and Inci Otker (ext. 7810).

B. Malaysia's Approach to Capital Account Liberalization

4. **Malaysia is a highly open economy and traditionally followed an approach to economic development that included the liberalization of capital movements.** Exports plus imports of goods and services account for more than 150 percent of GDP. After accepting the obligations of Article VIII in November 1968 and the floating of the ringgit in 1973, the authorities implemented a first round of liberalization of the regulations on foreign exchange transactions, and reviewed the exchange control rules periodically. These periodic reviews led to further liberalization of controls in 1986–87 and 1994–96. The process of capital account liberalization was interrupted in early 1994 when the authorities introduced a number of temporary inflow controls on portfolio transactions following a period of heavy inflows.[2]

5. **Malaysia's capital control regime was comparatively liberal prior to the imposition of the outflow controls in 1998–99**. For a number of years, prior to September 1998, Malaysia had adopted a fairly liberal approach to ***cross-border transactions in ringgit***, including the use of ringgit in trade payments and receipts, relatively few restrictions on ringgit financial transactions with nonresidents, and tolerance of offshore over-the-counter trading in equities and bonds listed on the Malaysian exchanges. An active ***offshore market in ringgit*** developed, mainly in Singapore, with the majority of cross-currency hedging of ringgit taking place there rather than in Malaysia. Until 1997, Malaysian banks were unrestricted in providing forward cover against ringgit to nonresidents, thus facilitating arbitrage between the domestic and offshore markets.

6. **Concerning other capital movements,** ***portfolio capital inflows*** by nonresidents were unrestricted into all types of Malaysian financial instruments (bonds, equities, money market, and derivative instruments, as well as bank deposits). ***FDI*** inflows were actively encouraged through tax and other incentives, although prior approval was needed for investment in certain sectors. Nonresidents were completely free to repatriate their investments through a system of external accounts. ***Outward FDI*** was not restricted. *For portfolio outflows*, prior to September 1, 1998, there was no restriction for corporate residents with no domestic borrowing to remit money for overseas investment. However, corporate residents with domestic borrowing were required to seek prior approval to remit funds in excess of RM 10 million per corporate group per year for overseas investment, including extension of loans to nonresidents. The primary ***issue of securities*** in Malaysia by nonresidents, and of securities abroad by residents, required approval. No controls applied to the extension of ***suppliers' credits*** to nonresidents for periods up to six months. ***Borrowing abroad*** by authorized dealers and Tier-1 merchant banks, as well as their ***lending in foreign exchange*** to residents and nonresidents, was unrestricted, subject only to meeting prudential net open position limits. Foreign currency borrowing by residents was subject to limits, and amounts above this limit required approval (granted for foreign exchange saving or earning projects).

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[2]See Table I.1 for summary of changes in Malaysia's capital account regulations in 1994–99.

7. **The liberalization of the capital account was accompanied by measures to *deregulate the financial system* beginning in the late 1980s** with key reforms targeting a gradual liberalization of interest rates, reduction of credit controls, and enhancement of competition and efficiency in the system. The authorities took measures to improve the ***legal and regulatory framework and supervisory practices***. A new law on governing the banking and financial institutions, was enacted in 1989 that provided broad regulatory, enforcement and intervention powers to the supervisory authorities, and Bank Negara Malaysia (BNM) followed active policies to update regulations and to address prudential concerns, including loan classification, provisioning and disclosure requirements, limits on large exposures, capital adequacy, and bank liquidity. The authorities have also made significant efforts to ***deepen the financial markets***. The interbank money and foreign exchange markets had developed rapidly; however, the domestic bond market remained relatively underdeveloped because of the limited supply of government securities and captive demand for securities resulting from high minimum liquid asset requirements. The stock market had developed significantly and became a major source of funds for economic development, supported by the establishment of the Securities Commission in 1993, improvement in trading and settlement systems, establishment of credit rating agencies, and strengthening of the regulatory framework of the capital market.

C. The September 1998 Exchange and Capital Control Measures

Economic and financial environment

8. **Malaysia entered the 1997 economic crisis with generally stronger fundamentals than the other Asian crisis economies**, but potential vulnerabilities also existed from rapid credit expansion and deterioration in the asset quality of banks. Following the onset of the crisis in mid-1997, which revealed structural weaknesses in regional banking systems and resulted in a more general reassessment of regional lending risks, the ringgit came under significant depreciation pressure along with other regional currencies. Much of this pressure occurred through currency trading in the more efficient offshore ringgit market. As agents took short positions in ringgit in the expectation of a depreciation, offshore ringgit interest rates increased relative to domestic interest rates and resulted in capital outflows.[3]

9. **In order to try and break the link between the domestic and offshore interest rates, in early August 1997**, the authorities imposed limits on noncommercial-related offer-side swap transactions. As a result, wide spreads emerged between domestic and offshore interest rates.[4] However, the breaking of the direct arbitrage link did not prevent capital outflows, which now occurred through various legal channels to take advantage of the large offshore/onshore interest

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[3]In the second and third quarters of 1997, net outflows of portfolio capital amounted to RM 24.6 billion.

[4]As of August 1998, the offshore ringgit market was offering deposit interest rates exceeding 20-40 percent compared with 11 percent in Malaysian banks; by that time, the ringgit had depreciated to around RM 4.20 per U.S. dollar from around RM 3.75 in April 1998.

differentials.[5] The flow of ringgit funds from the onshore to the offshore market resulted in an increase in domestic interest rates (see Chart I.2), accelerating the contraction in the economy, and exacerbated the difficulties in the corporate and banking sectors. The economy contracted by 4.8 percent in the first half of 1998, and initial estimates indicated that NPLs in the banking system could be as high as 25 percent of total loans.

September 1998 measures

10. **Against this background and breaking political developments in the late summer of 1998, the authorities introduced on September 1, 1998 a wide range of capital controls** targeted at eliminating the offshore market for ringgit, protecting the foreign exchange reserves and regaining monetary independence; payments and transfers for current international transactions and FDI were not subject to restriction. The introduction of the controls was accompanied with pegging the ringgit at RM 3.80 per U.S. dollar and an immediate further cut in interest rates. The exchange control measures eliminated practically all legal channels for the transfer of ringgit abroad, required the repatriation of ringgit held offshore to Malaysia by end-September 1998, blocked the repatriation of portfolio capital held by nonresidents in Malaysia for a 12-month period, and imposed tight limits on transfers of capital abroad by residents (Table I.1). Concurrently, changes in the rules for the transfer of shares on the Kuala Lumpur Stock Exchange (KLSE) closed the over-the-counter offshore market in Malaysian equities (the so-called Central Limit Order Book, (CLOB)), which froze the shares of 172,000 investors then worth about RM 10 billion in 112 Malaysian corporations, and it was announced that large denomination ringgit notes would be demonetized. The Companies Act was also subsequently amended to close possible loopholes. The wide-ranging nature of the control measures seem to have been one of the main factors behind the effectiveness of the control measures in preventing outflows (Box I.1).

11. **There were initially markedly different internal and external reactions to the measures.** The initial international response was nearly uniformly negative. Rating agencies (such as Moody's Investor Service, Thompson Bank Watch, and Fitch IBCA) downgraded Malaysia's credit and sovereign risk-ratings immediately following the measures, citing concerns that the controls threatened Malaysia's relative openness to trade and foreign

[5]These channels included transfers of nonresident deposits in Malaysia to offshore banks, and portfolio outflows by residents. The net outflow of portfolio capital was RM 5.5 billion in the last quarter of 1997.

Box I.1. Effectiveness of Controls: The Malaysian Experience

One of the main concerns in applying capital controls is that such measures are not particularly effective in achieving their objectives. In addition, they distort the allocation of resources. It is generally agreed that capital controls can be effective for a period, in terms of reducing the overall quantity of capital flows; but effectiveness of individual controls tends to be eroded as means of circumventing the controls are exploited; and controls therefore may need to be wide-ranging to ensure effectiveness. Controls may also be more effective if they are used for the right reasons (i.e., to buy time to correct macroeconomic imbalances and/or to make rapid progress in structural reforms).

In the case of Malaysia, available evidence suggests that the controls have so far been effective in achieving the objective of eliminating the offshore ringgit market. Among the various measures introduced, the restrictions on the internationalization of the ringgit are believed to be the most instrumental. In particular, the freezing of the external accounts, which prevented ringgit funds from being transferred from one account to the other, and from being used to settle transactions or lend to other nonresidents, effectively eliminated offshore ringgit trading and the desire to hold ringgit overseas. The 12-month holding period rule for repatriation of portfolio capital, on the other hand, was not seen essential in eliminating the offshore ringgit trading; instead, the 12-month rule seemed helpful in containing the potential outflows by requiring capital to remain in the country for a period of 12 months.

The effectiveness of the controls is also evident in the absence of speculative pressures on the ringgit since the controls and the fixed peg were introduced, notwithstanding the significant relaxation of monetary and fiscal policies; in the absence of significant indications of the emergence of a parallel market (initial indications of black market activity developing in the cash market apparently subsided once market participants realized that there were adequate reserves to meet their needs); and in the lack of significant evidence of the emergence of an nondeliverable forward (NDF) market.[1] Preliminary information also suggests that there are only a few reports of efforts to evade controls,[2] and no indications of circumvention through underinvoicing of exports or overinvoicing of imports.[3]

The effectiveness of the controls in containing capital outflows in Malaysia's case may have been contributed by a combination of factors. These include: (i) the adequacy of foreign exchange reserves; (ii) the timing and the circumstances under which the capital controls had been adopted (in particular, relatively strong fundamentals of the Malaysian economy at the time of their introduction) and acceleration of macroeconomic and financial reform efforts; (iii) ex post under-valuation of the ringgit following its fixing at RM 3.8 per U.S. dollar as other regional currencies have started to appreciate around the time the ringgit was pegged, which limited the incentives for circumvention; (iv) the wide-ranging nature of the controls that has covered essentially all the potential loopholes in the system, including the effective closing of the CLOB, amendment of the Companies Act to limit distribution of dividends, and demonetization of large notes of denomination; (v) strict implementation of the measures by BNM; (vi) a disciplined banking system which strictly interpreted the measures and has not sought for potential loopholes; and (vii) dissemination of information on the nature of and changes in exchange control rules to provide greater transparency and understanding of the measures.

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[1]Some market reports indicated that occasional trades were being done on bilateral basis based on RM 3.80 per U.S. dollar as spot, but the trading volumes were too small to constitute a market. Anecdotal evidence suggests that difficulties in finding an onshore counterparty to execute the operation prevented the development of such a market.

[2]One such incidence took place through swaps of portfolio investment for FDI among market participants; this transaction was approved by BNM.

[3]Based on a comparison of the value of Malaysia's exports to its three largest trading partners against the value of the trading partners' imports from Malaysia, a Morgan Stanley report found no signs of misinvoicing of external trade to circumvent the controls, due primarily to the ringgit's undervaluation.

investment, which was one of the cornerstones of its rapid economic development. Malaysia was also removed in September 1998 from key indices that track emerging country stock markets and are used as investment benchmarks for fund managers (the investment and capital indices of International Finance Corporation, Morgan Stanley (MSCI) and FT-S&P) for reasons, inter alia,

of lack of liquidity in the local market and, thus, out of the list of options available to many equity investors. Malaysia's risk premium in international markets also increased raising the costs of foreign currency funding to Malaysian corporations and banks.[6] Notwithstanding the announced exclusion of FDI and current international transactions from the controls, there was considerable initial uncertainty about the coverage and impact of the measures. Because of ambiguities in the nature of announced controls, the Fund conducted an immediate on-site review to determine whether the measures were in conformity with Malaysia's obligations under Article VIII, Sections 2, 3, and 4 of the Articles of Agreement. The measures were found to be in conformity with the Articles, but their implementation would need to be kept under review.

12. **The initial domestic reaction was more mixed.** There was also confusion domestically about the precise nature of the measures, in part reflecting the very short time (three days) that the Exchange Control Department of BNM had to prepare the implementation regulations and notices. The exercise had been much longer in planning, but also a very well kept secret. To address such concerns, BNM subsequently issued many clarifications and press releases, met with investors, and provided seminars on the new controls.[7] These efforts have been effective. The stock market initially fell by 13.3 percent, to its lowest level in 1998, but rose significantly subsequently (Chart I.2), in part reportedly because of purchases by state-controlled institutional funds, investments by nonresident investors that had their funds blocked in Malaysia, and in part due to an improvement in confidence in the region more generally. Domestic businesses generally viewed the package of measures positively, particularly the sharp cut in interest rates and the relative stability provided by pegging the exchange rate at a level that export was believed to be undervalued relative to long-term trends.

Economic performance in the period following the imposition of the controls

13. **The pattern of economic performance in Malaysia since the emergence of the crisis has in many respects been similar to that of other countries in the region**. This makes it very difficult to disentangle the impact of Malaysia's capital controls from broader international and regional developments. In the period after the imposition of the controls in Malaysia:

- The overall balance of payments continued to strengthen reflecting a steeper decline in imports than in exports, reflecting the real depreciation of the ringgit and weak domestic demand. Net portfolio capital outflows were contained following the September measures, and foreign exchange reserves increased (see Chart I.1). However, realized net private **FDI** and new FDI commitments fell in 1998.

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[6]While the spreads on all emerging markets debts increased in August 1998 following the Russian default, those on Malaysian obligations rose further in September following the implementation of capital controls (Chart I.2).

[7]Recently (April 15, 1999), BNM published *A Guide to the Exchange Control Rules*, with illustrative examples on how the rules apply.

- The authorities have pressed ahead with bank and corporate sector restructuring. The reduction in interest rates that accompanied the controls helped to contain the increase in NPLs of the banking system.[8] Also, the overall process of cleaning up the bad loans and recapitalizing the banking sector through Danaharta and Danamodal appears to compare favorably with efforts elsewhere in the region, with some positive results already achieved. There is a need to speed up corporate restructuring.

- The **corporate sector** reported that the pegging of the exchange rates and lowering of the interest rates reduced uncertainty and made it easier for businesses to plan ahead their revenues and costs.[9] The lower interest rates also helped prevent a further erosion of their repayment capacity.

- Despite the significant decline in interest rates and increase in financial sector liquidity, bank lending growth remained subdued, and real GDP contracted by 6.7 percent in 1998, owing to sharp falls in investment and, to a lesser extent, in consumption, compared with the 7.7 percent growth in 1997.

- Activity in the spot and swap currency markets and the futures markets declined sharply after September.[10] The decline in activity reflects both the fixing of the exchange rate and the limitations on forward transactions. Moreover, finding a nonresident counterparty to hedge longer-term currency risks became much more difficult after the imposition of the exchange and capital controls.

- The exchange controls imposed an administrative burden on the parties involved, including BNM, those conducting commercial transactions who had to supply necessary documentation and proof to execute their transactions, and on the commercial banks which were delegated the responsibility to implement the controls, and had to report to BNM on a frequent basis.

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[8]In its most recent upgrading of Malaysia's credit outlook, Standard and Poor's indicated that if the interest rates had not been cut sharply in the last six months, the NPLs could have risen to above 30 percent of total loans, computed on a three-month basis, including Danaharta sales.

[9]The most recent Federation of Malaysian Manufacturer's Quarterly Survey on Manufacturing shows that September measures had little impact on most respondents' investment plans, export orders, import costs, and overall business operations in the last quarter of 1998. About one-third said that the controls had a positive impact on their import costs and overall business operations.

[10]The monthly volume of total transactions in the foreign currency spot and swap markets declined from an average of RM 73.8 billion in January–August 1998 to RM 28.4 billion in the last four months of 1998 (RM 115.8 billion in the same period in 1997).

D. February 1999 Modification of Capital Controls: The Exit Levy System

14. **Against the background of the continued weakness in foreign investor confidence and concerns about the possibility of a massive capital outflow upon the expiry of the 12-month holding period** on portfolio investments in September 1999 (see BNM Annual Report, p. 65), the government replaced the 12-month holding period with a system of exit levies on February 4, 1999, effective from February 15, 1999. The system involved two main elements: (i) for capital brought in before February 15, 1999, the one-year holding period restriction on the repatriation of portfolio investment was replaced with a declining scale of exit levies; and (ii) for capital brought in after February 15, 1999, the repatriation of profits, but not the capital, would be subject to one of two rates of exit levies depending on the length of the investment (see Table I.1).

15. **Profits were defined to exclude dividends and interest earned.** Moreover, certain exemptions were given with regard to repatriation of funds relating to investment in immovable property (which was already subject to a capital gains tax); repatriation of principal relating to FDI; profit, dividend, interest, and rental income from investments of immovable property and FDI; and transactions in the financial futures exchanges. The exit levy regulations also empower the ministry of finance to exempt any transaction or class of transactions from any or all of the provisions of the exit levy system, and in this regard, the newly established over-the-counter share market, the MESDAQ, is exempted from the exit levy. The levy, therefore, would impact mainly on portfolio equity investments, other than MESDAQ.

16. **Generally, the replacement of the 12-month rule with the graduated levy on capital repatriation was viewed as a positive development**, since it made it possible to withdraw funds before the end of the 12-month holding period, albeit at a price that punished earlier repatriations. Despite the high levy of 30 percent on early repatriations of investments, some fund managers promptly liquidated part or all of their holdings on the KLSE in the days following the announcement.[11] As a result of the introduction of the exit levy, IFC announced that it was planning to reinclude Malaysian equities in its capital index (in November 1999), and discussions with Morgan Stanley are in progress on the reinclusion of Malaysian equities in their emerging market index.[12] In upgrading Malaysia's international credit ratings in April 1999, the rating agencies also cited the changes in these controls.

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[11]Such liquidations may have been driven by regulatory conditions in home countries, which established the parameters of eligible markets where unit trusts could invest their funds. The total amount of outflows since then, however, has been limited to RM 154 million as of April 21, 1999 ($40 million at the fixed exchange rate, compared with the estimated amount of $10–15 billion that had been blocked by the 12-month rule).

[12]Morgan Stanley has announced, however, that Malaysia has been taken out permanently from its developed country stock index, where its previous inclusion was seen as an aberration. This may have a permanent affect on volume of foreign equity investment in Malaysia, even if Malaysia is reinstated in the emerging markets index.

17. **Many concerns were expressed about the levy on the repatriation of profits for funds that came after February 15, 1999**. The levy is collected by authorized dealers in foreign currencies and permitted merchant banks and deposited into the consolidated federal account as provided by the Exchange Control Act of 1953. The levy is applied at the time of the conversion of ringgit into foreign exchange and is thus not considered a capital gains tax that can be offset through double taxation agreements. The fact that a 10-percent levy would apply to profits even if held for periods in excess of 12 months suggests that the levy is intended to discourage portfolio investors more generally, rather than the stated objective of changing the maturity composition of the flows. The technical procedures for implementing the levy are highly complex, and led to confusion among investors and required subsequent modifications and clarifications by the authorities.

E. Exiting From the Capital Controls

18. While the September measures appear to have been effective in buying the authorities some time, it was acknowledged at the time they were imposed that the controls would be temporary. This section examines the strategy for exiting from the controls and the necessary supporting policies. This strategy will need to balance the benefits and risks of retaining or eliminating specific capital control measures in designing the sequencing of the liberalization.

The exit levy

19. **While it is too early to assess the impact of *the levy on the repatriation of profits* on the level and composition of investment flows into Malaysia**, the benefits of eliminating the levy are likely to exceed any protection it may provide. The following are some observations:

- **The exit levy has added an additional degree of administrative complexity to investing in Malaysia**. While the controls are focused on portfolio investment, the additional administrative complexities of the exchange control system may have detrimental effects on all types of foreign investment flows in spite of the explicit exclusion of FDI from the controls.

- **The degree of protection provided by the levy against volatile capital flows appears limited**. Since the levy applies to profits excluding interest payments, the levy affects primarily capital gains on equity investments; other forms of portfolio capital flows would be less affected (including nonresident investments in short-term instruments, bank deposits, bonds, derivatives, and property investments) since a larger element of the profits on such investments reflect interest payments. In addition, under the implementation procedures agreed with the banks, investors can repatriate funds invested in equity as capital, rather than profit, up to the amount of the initial investment before becoming subject to the levy. In order to restrict capital flows, capital inflow controls would then have to be wide ranging, which may be potentially highly distortionary.

- **The levy will do little to reduce volatility in the stock market, since it does nothing to reduce the buying and selling of shares against the ringgit**. Other actions taken by the

KLSE on trading shares on margin and on strengthening supervision of brokers are likely to be much more important in reducing stock market volatility;

- **The levy may raise the cost of capital in Malaysia**. The levy will reduce the expected rates of return on equity to foreign investors and thus raise the rates of return that are necessary on investments in Malaysia relative to other markets. The levy may be viewed as an additional risk factor in doing business in Malaysia, since investors may be concerned that the levy would be adjusted depending on economic circumstances. Because of the "last in, first out" rule, prudent fund managers and investors that plan to add Malaysia to their portfolio may choose to apply the higher rate of levy to all investments regardless of the expected maturity of the investment.[13]

20. **By contrast, an elimination of the levy on profits is likely to send an important signal that Malaysia is exiting from its capital controls, and will underpin the improvements in domestic and international investor confidence;** indeed, since the replacement of the 12-month holding period with the exit levy, the total net inflow of capital amounted to RM 1.44 billion as of mid-May, compared with the net inflow of RM 18.5 million as of March 10 this year, indicating some return of confidence in the stock market (also see Charts I.1 and I.2).

21. **Investor confidence would also respond positively to a resolution of the frozen CLOB shares in an equitable and transparent manner.** Among the various schemes that were suggested to resolve this problem,[14] the proposed replacement of the frozen CLOB shares with a closed-end fund could provide liquidity to the shareholders, while minimizing the impact of unfreezing the shares on the KLSE. The value of shares in the closed-end funds should preferably reflect their present market value.

22. **At this juncture, modifying the graduated levy on the repatriation of capital invested before February 15, 1999 may not be warranted.** To the extent that investors wish to repatriate their capital, the graduated nature of the levy will provide some scope for phasing this repatriation, although the high rates of the levy will limit the extent to which investors take advantage of this. At the same time, the additional time bought may provide scope for Malaysia to strengthen further international investor confidence and thus help to reduce the size of any eventual outflow.

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[13]Under this rule, in calculating the rate of levy, the exchange control authorities assume that the last investments to be made are the first to be repatriated.

[14]These proposals include: (i) selling CLOB shares at a steep discount (for those investors who would want immediate cash); (ii) exchanging CLOB shares for units in a closed-end mutual fund (for those investors who would want to have the option for liquidity); and (iii) setting up an irrevocable request and authority scheme, under which CLOB shareholders would be able to register their shares into individual central depository accounts with the shares then suspended from trade in Malaysia for a three- to five-year period (for those investors who would want to take a long-term view of the market).

Supporting reforms for a more liberalized capital account

23. **Cross-border capital flows typically involve different dimensions of risk (credit, liquidity, interest rate, and foreign exchange risk) from those found in purely domestic transactions**. In opening its capital account, Malaysia will need a robust system that can handle these risks. Such a system would involve three main elements: (i) strengthening the corporate and banking systems; (ii) promoting prudent risk management through best practice prudential regulations, in order to increase the ability of the financial institutions and markets to cope with the risks involved in capital flows; and (iii) following consistency in monetary and exchange rate polices to reduce the incentives for more volatile capital flows. The main elements of the system are outlined in Box I.2.

24. **Malaysia already has made considerable progress in strengthening the *regulatory and supervisory framework* for the financial and corporate sectors**, and toward adopting and implementing best practice ***prudential regulations***. Box I.3 provides a summary of the measures already taken and some suggestions for further refinements; more detailed descriptions are provided in Table I.2.

25. Malaysia **will need to adopt a *consistent monetary and exchange rate policy* framework, under** which either the exchange rate is managed and interest rates are allowed to adjust, or monetary policy is targeted toward managing the domestic interest rate, in which case the exchange rate would have to be permitted to adjust (see Chapter IV for details). Countries with liberal capital accounts should either have very strong commitments to a pegged exchange rate or a flexible exchange rate. Experience has shown that implicit or explicit exchange rate guarantees in the form of currency pegs that were unsustainable have resulted in large and volatile capital flows as investors and borrowers have tended to underestimate the currency risks and have taken large unhedged currency positions. As few countries have been able to make the policy commitment required for a credible exchange rate peg, many emerging market countries that have opened their capital accounts have adopted more flexible exchange rates.

26. **Concerning the *sequencing of the supporting reforms and capital account liberalization*, such liberalizations are not "all or nothing"** affairs, and in an orderly liberalization certain components of the capital account can be liberalized before all the supporting reforms are in place and indeed can help support the reform and economic objectives of the authorities. In this regard, the elimination of the levy on the repatriation of profits would not pose significant risks in the present regulatory environment. Broader liberalization of portfolio capital flows (e.g., approval requirements for resident investments abroad and derivative transactions) should be phased consistent with the implementation of the above supporting reforms.

Box I.2. Main Elements of a Modernized Approach to Capital Account Regime

An internally consistent monetary and exchange rate policy framework

A crucial component of a more liberal capital regime is an internally consistent exchange rate and monetary policy mix, which would help minimize incentives for such short-term capital flows. A **consistent mix** would entail either a flexible interest rate policy if the exchange rate is pegged or tightly managed, or greater exchange rate flexibility if monetary independence is to be preserved.

As capital account transactions become more liberalized, the desirability of greater exchange rate flexibility tends to increase. Greater exchange rate uncertainty under a more flexible exchange rate regime would stimulate foreign exchange market development and better risk management; in addition, it may provide a "natural control" over volatile capital flows, as it would limit incentives for speculative, short-term capital inflows.

Existence of a healthy and sound financial system

If the banking system is weak and restructuring efforts are ongoing, broad liberalization of capital transactions that affect weak bank balance sheets must proceed cautiously; such balance sheet growth should be subject to adequate controls and administration and bank reform measures must be accelerated.

Financial sector development and the regulatory and supervisory framework

Liberalization of capital controls, particularly those on short-term capital transactions, has been problematic when such liberalization has not been accompanied by adequate financial sector reforms. Main elements of the financial system reform include:

- **Establishing appropriate limits** to manage risks involved in cross-border transactions (e.g., net open foreign exchange position limits to manage foreign exchange risk; limits against maturity mismatches (involved in different types of currencies), maturity ladder, and liquid asset requirements incorporating foreign currency liabilities and off-balance sheet operations in order to manage interest rate and liquidity risk; and tighter exposure limits for foreign currency loans to manage credit risks involved in capital transactions).

- **Incorporating cross-border risks into loan classification and provisioning, capital adequacy, and disclosure requirements**: this may involve, for example, applying risk weights to capital requirements that specifically reflect elements of cross-border risk and higher capital adequacy requirements for banks with large international business; requiring greater provisioning against NPLs to incorporate risks involved in off-balance sheets, offshore, and derivative activities, and foreign currency loans; and imposing additional information disclosure requirements on banks' cross-border transactions, such as offshore or derivative activities.

- **Strengthening of accounting and auditing standards and consolidated supervision** as part of a more general strengthening of the regulatory and supervisory framework; existence of such systems would facilitate adequate measuring of the overall financial condition of banks and proper enforcement of compliance with regulatory requirements for managing and limiting risk.

- **Accelerating development of financial instruments and markets,** including (spot and forward) foreign exchange, interbank money, and securities markets. Deep and liquid money and foreign exchange markets and adequate instruments would facilitate efficient allocation of financial resources; risk management and hedging by market participants against interest rate, liquidity, credit, and foreign exchange risks, and implementation of monetary policy under greater capital mobility. Presence of deep and developed securities markets would reduce the burden on banking institutions in intermediation of capital flows.

Box I.3. Prudential Risk-Based Framework for Cross-Border Transactions

Cross-border capital flows typically involve different dimensions of risk (credit, liquidity, interest rate, and foreign exchange risks) from those found in purely domestic transactions.

In opening its capital account, Malaysia would need a robust system that can handle these risks, including the existence of a healthy and sound financial system and the promotion of prudent risk management through best practice prudential regulations, in order to increase the ability of the financial institutions and markets to cope with the risks involved in capital flows.

BNM's initiatives that would facilitate such a system

- **Bank restructuring efforts started in early 1998 and have continued to date to strengthen the financial system** under a four-pronged approach.
- **Use of internal techniques to assess and manage risks involved in cross-border transactions**: BNM has started to move toward a system where banks manage their own risk through internal control mechanisms, and, since March 1998, have required financial institutions to conduct monthly stress tests under a variety of scenarios and report to BNM on a quarterly basis. Existence of an appropriate infrastructure for risk management and internal controls has been a requirement for banks to use derivative products since 1995.
- **Existence of limits against various sources of cross-border risks**: Appropriate limits to manage credit risk, including those to limit banks' exposure to foreign currency loans, are in place; a prudentially based liquidity framework based on maturity ladder approach was introduced in August 1998 to replace the liquid asset requirement by January 2000.
- **Incorporating cross-border risks in loan classification and provisioning, capital adequacy, and disclosure requirements**: Since March 25, 1998, off-balance sheet items are incorporated in loan classification and provisioning requirements, and sensitivity to potential losses from adverse movements in interest rate and exchange rates are assessed. Market risks were also incorporated in capital adequacy requirements, to be fully implemented sometime in 2000. BNM will impose different minimum risk-weighted capital adequacy requirement on individual banking institutions according to their overall risk profile and internal controls. Disclosure requirements were tightened in early 1998, but somewhat relaxed in September 1998.

Recommendations and further refinements

- **BNM should proceed speedily with bank and corporate restructuring programs** to restore balance sheet strength of the financial institutions and increase their resiliency to potentially large and volatile capital flows following liberalization.
- **The existing open foreign exchange position limit** (though not binding at present) **is large and should be reduced** to no more than, for example, 25 percent of regulatory capital, from the existing 50 percent.
- **Regulation of liquidity should separate management** of liquidity risk for each currency component on a regular basis within the new liquidity framework.
- **Loan classification, provisioning and disclosure requirements and supervision activities should pay due attention to banks' offshore activities in Labuan, and ensure that off-balance sheet items cover derivative activities in view of a likely increase in such activities** under greater capital mobility; banks should disclose more frequent data on such activities, and BNM should return to quarterly frequency for disclosure requirements as soon as feasible to enhance market confidence and discipline; and extension of capital adequacy requirements to incorporate market risks should be implemented as soon as possible.
- **Conditions conducive to financial market development should be created**, including the removal of the restrictions that may interfere with the efficient functioning of the markets and that limit risk management capability of market participants.

Cross-border transactions in ringgit and the offshore ringgit market

27. **Among the controls introduced on cross-border transactions in ringgit, it would generally seem desirable that as economic and financial stability is restored, some of the more onerous restrictions that Malaysia has imposed on cross-border transactions in ringgit be relaxed.** These would include replacing the restrictions on the exports and import of ringgit currency notes with higher limits; raising the RM 10,000 limit above which residents need exchange control approval to remit funds for investment abroad; and removing the restriction on banks' use of ringgit in trade transactions. Whether some liberalization in ringgit transactions would lead to the reemergence of an offshore market in ringgit, will largely depend on the institutional and market incentives. However, the following observations can be made:

- Offshore markets can provide benefits to the economy. Access to more developed and diversified financial hedging products and instruments in the offshore market may have served to reduce the costs of conducting trade and investment in Malaysia and therefore helped to promote FDI inflows and trade transactions.

- The existence of an offshore market can result in a somewhat more rapid transmission of changes in international interest rates to domestic interest rates or swap currency premiums. However, the risks that this will disrupt policy would depend on the consistency of the monetary and exchange rate policy mix.

- Since banking business will tend to relocate to the least cost centers, to avoid disintermediation to offshore markets, monetary authorities have to avoid the use of instruments that impose large costs on their banking systems. Malaysia has reduced the level of noninterest bearing reserve requirements, and thus reduced the incentives for conducting business offshore.

- There have been active nondeliverable forward markets in many currencies that were not fully convertible, such as in Korea, Hungary, and Poland, and such a market could emerge in the case of the ringgit if there are incentives to do so even if the present controls are retained, particularly if expectations about the future direction of the ringgit change. Most of the emerging market economies—many with lesser developed financial and regulatory systems than those of Malaysia—have not found that these markets impose insurmountable constraints on their economic policies, and many are accelerating their external liberalizations in view of the perceived benefits of such liberalizations.

F. Conclusions

28. **The pattern of economic performance in Malaysia since the emergence of the crisis has, in many respects, been similar to that of other countries in the region.** This makes it very difficult to disentangle the impact of Malaysia's capital controls from broader international and regional developments.

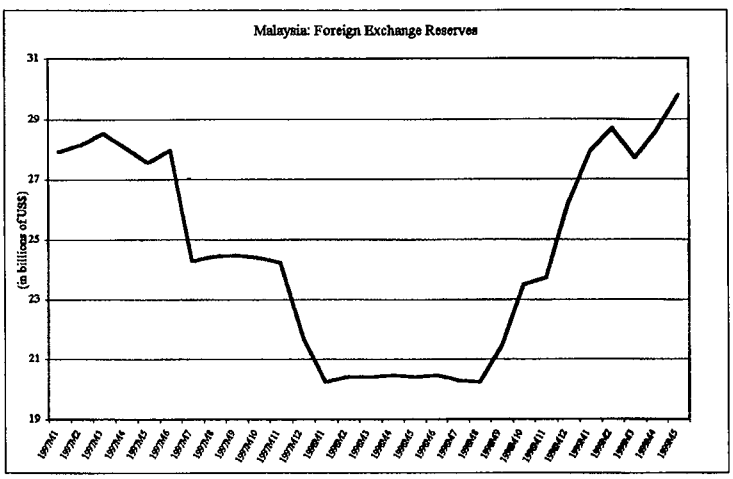
29. **The controls appear to have been effective in limiting outflows.** Initially, the main reasons were that the capital controls were wide ranging, effectively implemented, and generally supported by the business community. Later, the undervaluation of the ringgit relative to other regional currencies, and the return of international investor confidence to the region reduced the pressures for capital outflows. The use of controls has also been accompanied with an acceleration in the implementation of structural reforms, including bank and corporate restructuring programs, and further strengthening of the prudential framework for the banking system. The replacement of the 12-month rule with an exit levy was broadly well received, and has helped the return of investor confidence in Malaysia.

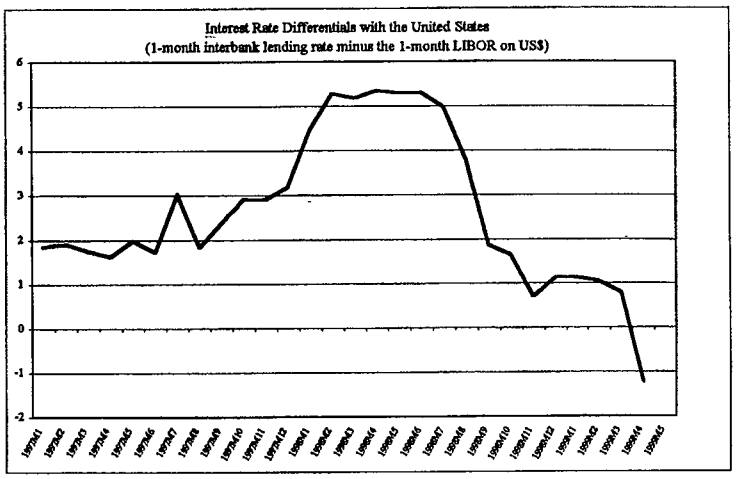
Concerning the next steps:

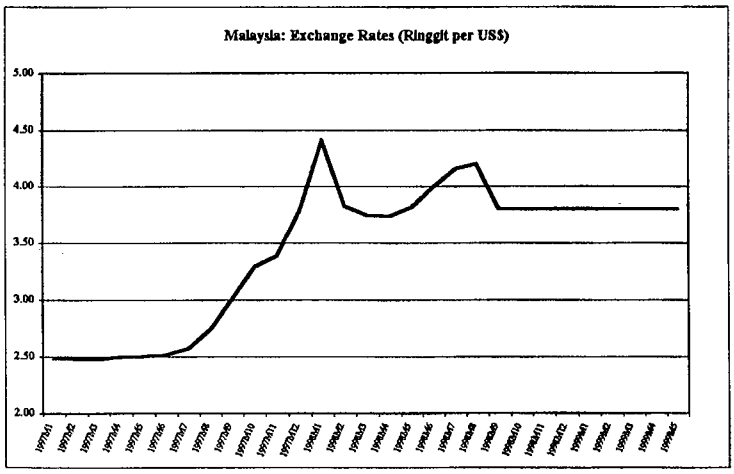
- The elimination of the exit levy on profits would send an important signal that the capital controls have been temporary. The elimination of this exit levy would not appear to pose significant risks in the present regulatory environment.

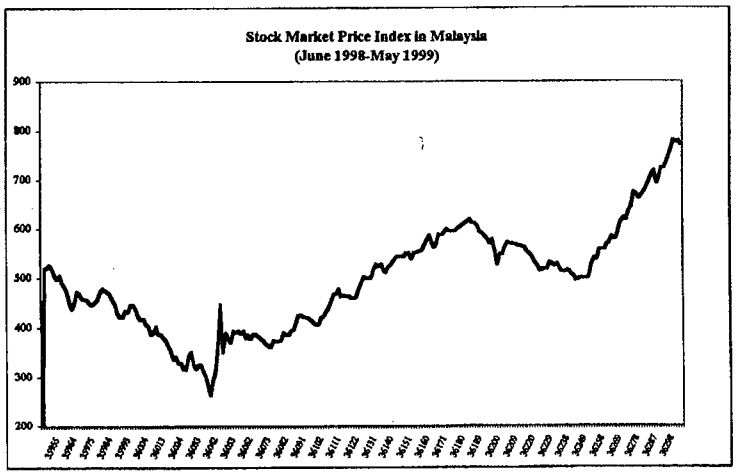
- It will be critically important that Malaysia adopt a consistent monetary and exchange rate policy framework, and complete the implementation of its risk-based prudential regulatory framework as it implements broader capital account liberalizations of all remaining controls in the system.

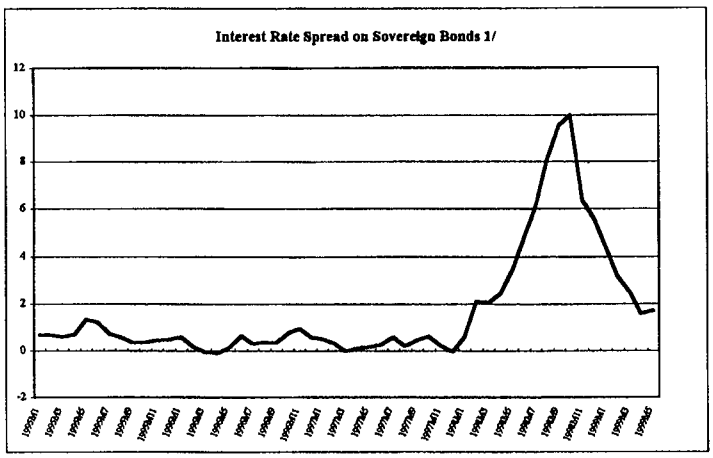
Chart I.1. Malaysia: Various Indicators of Market Reaction to Exchange Capital Controls





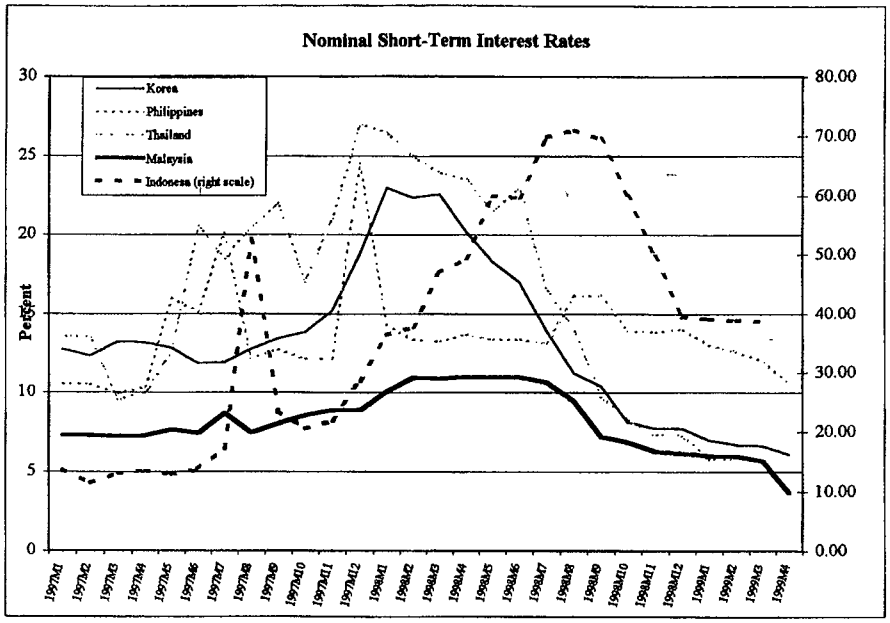


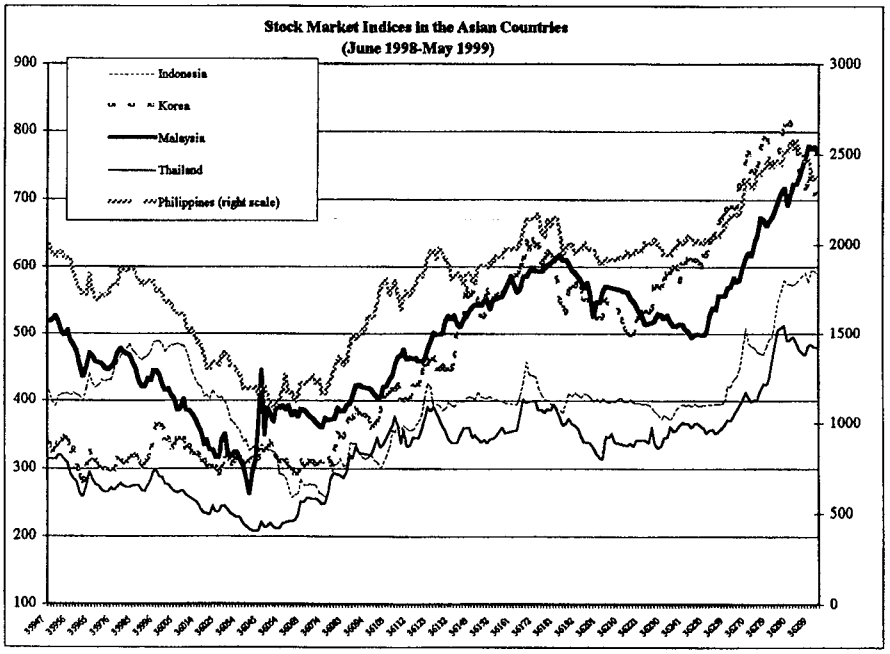


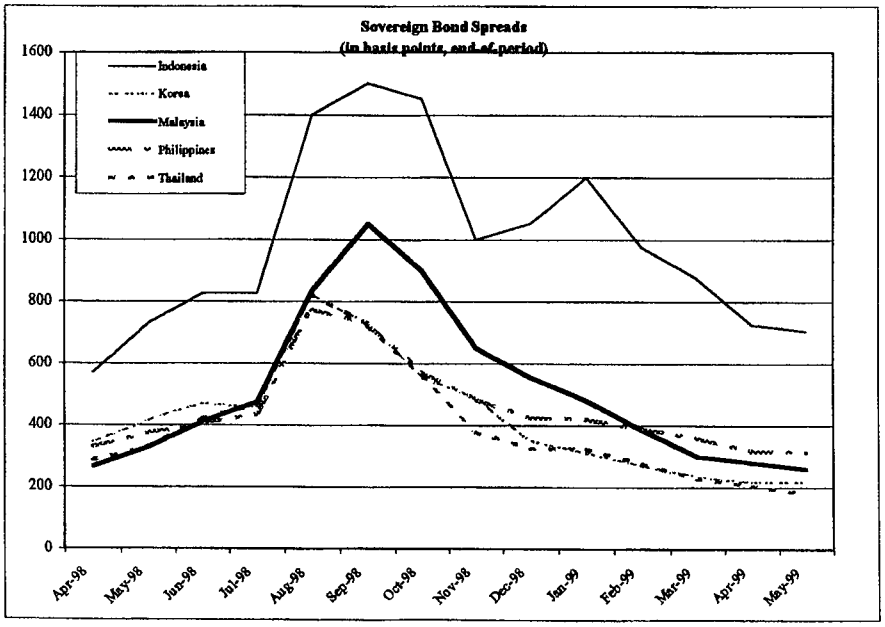


Source: Data provided by the Malaysian authorities; Fund staff estimates; and Bloomberg.
1/ Interpolated yield on Malaysian Yankee bonds with maturity date 9/27/2000 minus the yield on U.S. treasury bonds with maturity date 8/15/2000.

Chart I.2. Selected Comparative Financial Indicators in the Asian Countries







Source: APD Database.

Table I.1. Malaysia: Changes in Capital Account Regulations in 1994–99

Date	Type of Transaction	Measure
1/17/94	Bank transactions	A ceiling was placed on the net external liability position of domestic banks (excluding trade-related and direct investment inflows) (removed on January 20, 1995).
1/24/94	Portfolio investment	Residents were prohibited to sell the following Malaysian securities to nonresidents: banker's acceptances; negotiable instruments of deposit; Bank Negara bills; treasury bills; government securities (including Islamic securities) with a remaining maturity of up to one year; and Cagamas bonds and notes (whether or not sold or traded on a discount basis) with a remaining maturity of up to one year (removed on August 12, 1994).
2/7/94	Portfolio investment	• Residents were prohibited to sell to nonresidents all forms of private debt securities (including commercial papers, but excluding securities convertible into ordinary shares) with a remaining maturity of one year or less. • The restriction on the sale of Malaysian securities to nonresidents was extended to both the initial issue of the relevant security and the subsequent secondary market trade.
2/23/94	Banking system transactions	Prohibition of forward transactions (on bid side) and nontrade-related swaps by commercial banks with foreign customers to curtail the speculative activities of offshore agents seeking long positions in ringgit (lifted on August 16, 1994).
8/12/94	Portfolio investment	• Restrictions on the sale of Malaysian securities were lifted. • Residents were permitted to sell to nonresidents any Malaysian securities.
12/1/94	Borrowing and lending in domestic and foreign currency	• Nonresident-controlled companies were allowed to obtain credit facilities, including immovable property loans, up to RM 10 million without specific approval, provided that at least 60 percent of their total credit facilities from banking institutions were obtained from Malaysian-owned banking institutions. Short-term trade facility, guarantee, and forward foreign exchange facility were excluded from the computation of the RM 10 million limit in December 1994, while 60:40 rule continued to apply to total short-term trade facilities. • Nonresidents with valid work permits may obtain domestic borrowing to finance up to 60 percent of the purchase price of residential property for their own accommodation; • Residents may borrow in foreign currency up to a total of the equivalent of RM 5 million from nonresidents and from commercial and merchant banks in Malaysia.
6/27/95	Portfolio investment	Corporate residents with a domestic credit facility were allowed to remit funds up to the equivalent of RM 10 million for overseas investment purposes each calendar year.
2/1/96	Payments for invisible transactions	The threshold for the completion of the statistical forms for each remittance to or receipt of funds from, nonresidents was raised from amounts exceeding RM 50,000 to 100,000 or its equivalent in foreign currency.
8/4/97	Banking system transactions	Controls were imposed on banks to limit outstanding noncommercial-related ringgit offer-side swap transactions (i.e., forward order/spot purchases of ringgit by foreign customers) to US$2 million per foreign customer (hedging requirements of foreigners for trade-related and genuine portfolio and foreign direct investments were excluded).
8/28/97	Stock market transactions	A ban on short-selling of the listed securities on the Kuala Lumpur Stock Exchange was introduced to limit speculative pressures on stock prices and exchange rates.
10/97	Real estate transactions	The quota on sales to foreigners of high-end condominiums was raised from 30 percent to 50 percent and foreigners were allowed to acquire two units of condominiums (compared with one earlier) to reduce some of the impending supply in the high-end of the property market.

Table I.1. Malaysia: Changes in Capital Account Regulations in 1994–99

Date	Type of Transaction	Measure
9/1/98	Offshore ringgit market Transactions	A number of selective exchange control measures were introduced aimed specifically at eliminating the offshore ringgit market and restricting the supply of ringgit to speculators: • A requirement was introduced to repatriate all ringgit held offshore (including ringgit deposits in overseas banks) by October 1, 1998 (BNM approval thereafter); approval requirement was imposed to transfer funds between external accounts (freely allowed previously); and licensed offshore banks were prohibited to trade in ringgit assets (allowed up to permitted limits previously). • A limit was introduced on exports and imports of ringgit by resident and nonresident travelers, effective 10/1/99 (no limits existed before); • Residents were prohibited from granting ringgit credit facilities to nonresident corresponding banks and stockbroking companies (subject to a limit previously); • Residents were prohibited from obtaining ringgit credit facilities from nonresidents (subject to limits previously); • All imports and exports were required to be settled in foreign currency. • All purchases and sales of ringgit financial assets can only be transacted through authorized depository institutions; trading in Malaysian shares on Singapore's Central Limit Order Book (CLOB) over-the-counter market became de facto prohibited as a result of strict enforcement of the existing law requiring Malaysian shares to be registered in KLSE and other authorized trades prior to trade.
9/1/98	Portfolio investment	A number of additional measures were introduced aimed at preventing heavy capital outflows by residents and nonresidents: • Approval requirement for nonresidents to convert the ringgit held in external accounts into foreign currency, except for purchases of ringgit assets, conversion of profits, dividends, interest, and other permitted purposes (no such restrictions previously); there is also no restriction on conversions of ringgit funds in external accounts of nonresidents with work permits, embassies, high commissions, central banks, international organizations, and missions of foreign countries in Malaysia. • A 12-month waiting period for nonresidents to convert ringgit proceeds from the sale of Malaysian securities held in external accounts (excluding: FDI flows, repatriation of interest, dividends, fees, commissions, and rental income from portfolio investment) (no such restrictions previously). • A prior approval requirement beyond a certain limit for all residents to invest abroad in any form (previously applied only to corporate residents with domestic borrowing). • A specific limit on exports of foreign currency by residents and up to the amount brought into Malaysia for nonresidents (previously, no restriction on export of foreign currency on person or in baggage of a traveler; export by other means required approval regardless of the amount).
2/15/99	Portfolio investment	The 12-month holding period rule for repatriation of portfolio capital was replaced with: • A graduated system of exit levy on repatriation of the principal of capital investments (in shares, bonds, and other financial instruments, except property investments) made prior to February 15, 1999, with the levy decreasing in the duration of investment, and thus penalizing earlier repatriations (the levy is 30 percent if repatriated less than seven months after entry, 20 percent if in 7–9 months, and 10 percent if nine to twelve months); no levy on principal if repatriated after 12 months, and no exit levy is imposed on profits arising from dividends and interest earned. • A graduated exit levy on the repatriation of the profits from investments made after February 15, 1999 in shares, bonds, and other financial instruments, except property investments, with the levy decreasing in the duration of investment; no levy on principal and profits arising from dividends and interest earned (the levy is 30 percent if repatriated in less than 12 months after the investment was made and 10 percent if repatriated after 12 months).
3/1/99	Ringgit transactions	The ceiling on the import and export of ringgit for border trade with Thailand was raised.
2/18/99	Portfolio investment	Repatriation of funds relating to investments in immovable property is exempted from the exit levy regulations.
4/5/99	Portfolio investment	Investors in MESDAQ (where growth and technology shares are listed) were exempted from the exit levy introduced on February 15, 1999.

Table I.2. Malaysia: Stock Position With Respect to the Main Elements of a Prudential Risk-Based Framework and Recommendations

Elements of a Prudential Risk-Based Regime	Situation in Malaysia and Implications for Feasibility of the Risk-Based Regime	Observations/Recommendations
I. Consistency of Exchange and Monetary Policy Framework	Malaysia maintains a fixed exchange rate system with a relatively inflexible interest rate policy. Domestic interest rates are in general not permitted to adjust flexibly to prevailing foreign exchange market conditions on concerns about the adverse potential impact of high interest rates on domestic economic recovery and financial condition of the banking and corporate sectors.	**Ensure consistency between monetary and exchange rate policy under greater capital mobility:** Adopt either (1) greater flexibility in the exchange if monetary independence is to be pursued; or (2) allow for a more flexible interest rate policy if the peg is to be maintained.
II. The soundness of the financial system	Asset quality of the financial institutions deteriorated sharply during 1998, with NPLs reaching 18.9 percent in end-1998 (excluding loans sold to Danaharta and with no adjustment for interest-in-suspense and specific provisions) from 6 percent in end-1997 and, while the RWCR remained above 8 percent for the system as a whole, a number of institutions required capitalization. Bank restructuring efforts started in March 1998 and has continued to date, involving a finance company merger program, Danaharta to clean up banks' NPLs, Danamodal to inject capital to the institutions identified as undercapitalized, and a corporate restructuring agency (CDRC).	**Bank and corporate restructuring efforts must proceed speedily.**
III. Regulatory and Supervisory System and Financial Sector Development		
A. Prudential regulations and risk management framework		
1. Development of techniques to assess and manage risks	A limited number of banks use **value-at-risk (VAR) models** to control foreign exchange risk internally and for monitoring market risks. BNM has started moving toward a system where banks manage their own risks through internal control mechanisms. In March 1998, BNM required that **individual institutions conduct monthly stress tests** based on parameters established by BNM (involving projections of capital adequacy adjusted for various scenarios of nonperforming loans, specific provisions, value of collateral, other measures of balance sheet risks, etc). This practice continues to date, and banks report the results of their stress tests to BNM on a quarterly basis. **Banks' use of derivative products** is governed by BNM's "Minimum Standards on Risk Management Practices for Derivatives:" appropriate oversight by the board of directors and management; existence of an appropriate infrastructure for integrated risk management; and existence of comprehensive internal controls and audit procedures. In 1997, BNM issued "Guidelines on Minimum Audit Standards for Internal Auditors of Financial Institutions" and, as part of the effort to strengthen the credit risk management of the banking institutions, announced in April 1999 that "Minimum Standards in Credit Risk Management" will be issued.	**The move toward more supervision away from regulation is a favorable development. However, a minimum necessary set of prudential regulations for banks' risk management must be maintained as restructuring efforts and strengthening of the banking institutions continue.** Most importantly, banks should have adequate risk-adjusted capital.

Table I.2. Malaysia: Stock Position With Respect to the Main Elements of a Prudential Risk-Based Framework and Recommendations

Elements of a Prudential Risk-Based Regime	Situation in Malaysia and Implications for Feasibility of the Risk-Based Regime	Observations/Recommendations
2. Existence of limits against various sources of risk		
a. Foreign exchange risk		
Open position limits	All commercial banks are required to observe a specific limit on their net overnight open position in foreign currencies: long, short, spot, or forward. There are bank-by-bank open position limits with maximum limits of 50 percent of equity capital. The criteria for determining banks' net overnight foreign currency open position limits are based on a matrix that takes into account their shareholders' funds and dealing capacity. Banks' foreign borrowing abroad are restricted by these limits and foreign exchange exposure of banks are closely monitored by BNM. The 50-percent maximum permissible limit is apparently not binding, and commercial banks in general maintain low open positions in foreign currencies. For derivative transactions, authorized dealers are required to ensure that their dealings with nonbank residents do not exceed their approved overnight net open foreign exchange positions.	**Present procedures appear adequate. However, the existing maximum limit of 50 percent of capital is large and should be reduced to no more than, for example, 25 percent of regulatory capital.**
b. Management of the liquidity risk	The liquid asset requirement is 15 percent for commercial banks and 10 percent for finance companies and merchant banks (12.5 percent for those finance companies and merchant banks that may issue NIDs). It includes, among the eligible liabilities subject to the requirement, foreign liabilities of the institutions. A new liquidity framework to be phased in by January 2000 is based on a maturity ladder approach and will apply separate liquidity requirements in domestic and foreign currency. The main thrust is the projection up to one year of the maturity profile of a banking institution's assets and liabilities and off-balance sheet commitments. Attention is paid on the ability of an institution to match its short-term liquidity requirements arising from maturing obligations with maturing assets followed by a medium-term assessment of liquidity up to one year. Some indicative ratios on the institutions' funding structure also serve to monitor whether an institution is becoming over reliant on a particular funding source. So far, 17 institutions migrated into the new liquidity framework. The liquidity framework applies both to ringgit and foreign exchange positions, but since foreign exchange positions are currently very small, liquidity is assessed on an aggregate, rather than on individual currency, basis. BNM, however, reserves the right to ask the bank to provide a breakdown into individual currencies if its position is large.	The phasing in of the new liquidity framework is very positive and is consistent with best practices. **Under a more open capital account, regulation of liquidity should also take into account the need to separate on a regular basis management of liquidity risk within each currency component of a bank's balance sheet.**
c. Credit risk		
Single borrower limits	Single customer credit limit was reduced from 30 percent to 25 percent of capital funds, effective April 1, 1998. The new limit is applied on a consolidated basis. Banks also have country exposure limits, determined on a bank-by-bank basis in BNM's examinations.	**Present procedures appear adequate.**
Large borrower limits	An aggregate limit of 50 percent of total credit facilities is being set for total large loans granted. Large loans are to be redefined as those credit facilities that exceed 10 percent of total capital.	**Present procedures appear adequate.**

Table I.2. Malaysia: Stock Position With Respect to the Main Elements of a Prudential Risk-Based Framework and Recommendations

Elements of a Prudential Risk-Based Regime	Situation in Malaysia and Implications for Feasibility of the Risk-Based Regime	Observations/Recommendations
Limits for connected lending	Lending to directors, officers, and employees is prohibited (though not owners), as well as to firms in which these persons have an interest of greater than 5 percent (as a partner, manager, agent, or guarantor). Recent measures taken in April 1999 also included a prohibition of controlling shareholders of banking institutions (those that control at least 20 percent of an institution's shares) from taking loans from the institution.	**Present procedures appear adequate.**
3. Incorporation of cross border risks in loan classification, provisioning, capital adequacy, and disclosure requirements		
a. Loan classification and provisioning rules	On March 25, 1998, the authorities introduced a requirement to incorporate **off-balance sheet items** in loan classification and provisioning requirements. Potential losses arising from off-balance sheet items are assessed, taking into account anticipated credit risks, adverse movements in interest rates and, prior to September 1, 1998, foreign exchange risks (**interest rate and price risks** are also taken into account in assessing investment, and interest rate sensitivity analysis is applied to projections of interest income). Direct credit substitutes are reviewed on a case- by-case basis and provisions are made for those that may be called upon. Potential losses from default of **foreign exchange contracts** are assessed on a case-by-case basis for top customers or covering at least 80 percent of the portfolio. Bank balance sheets do not consolidate their operations on Labuan subsidiaries.	While banks' activities in derivatives are apparently very limited currently, **it should be ensured that off-balance sheet activities that are incorporated in loan classification and provisioning requirements cover derivative activities** in view of a likely increase in such activities under greater capital mobility. **Banks' offshore activities in Labuan should also be subjected to these requirements.**
b. Capital adequacy requirements	On March 25, 1998, the authorities introduced a requirement to expand the capital adequacy framework to incorporate market risks. The guidelines are currently being finalized and has yet to be issued to banking institutions. It was announced in April 1999 that BNM would impose different minimum RWCR on each individual banking institution according to its overall risk profile, taking into account loan concentration, sectoral exposure, and internal controls (based on a case-by-case review of banks). Individual banking institutions would still have to comply with the minimum 8 percent RWCR on a consolidated basis.	**Extension of capital adequacy requirements to incorporate market risks should be implemented as soon as possible.** The imposition on individual banking institutions, different minimum RWCRs, according to their overall risk profile, seems to be consistent with good prudential practices that higher capital adequacy requirements should be imposed on banks with large international business.
c. Disclosure requirements	On March 25, 1998, it was announced that the BNM would publish monthly aggregate statistics on NPLs, provisions, and capital positions for all financial institutions, and introduced a requirement that all financial institutions report and publish key indicators of soundness on a quarterly basis both at bank level and on a consolidated basis. The latter was relaxed in September 1998 to a semi-annual frequency so as to ease the burden faced by the banking institutions under the conditions prevailing in the market. For full-year financial results, institutions are required to publish their balance sheets, and profit and loss accounts, with notes to the accounts including off-balance sheet and derivative activities. No information is provided on cross-border transactions. Banks continue to report derivative transactions and balance sheets to BNM on a monthly basis and their profit and loss statements on a quarterly basis; public banking institutions (with about 70 percent of banking sector assets) are required to publish their financial positions quarterly	**More frequent data should be disclosed on derivative activities, including those broken down by the type of underlying market risk and type of derivative instruments**, as derivatives can be based on many underlying instruments. BNM should also tighten the disclosure requirements to quarterly frequency as these requirements help market participants to be informed about their credit risk in their interbank lending and enhance confidence among market participants.

Table I.2. Malaysia: Stock Position With Respect to the Main Elements of a Prudential Risk-Based Framework and Recommendations

Elements of a Prudential Risk-Based Regime	Situation in Malaysia and Implications for Feasibility of the Risk-Based Regime	Observations/Recommendations
	under the KLSE requirements.	
B. Supervisory framework	Malaysia has a well-developed supervisory and regulatory framework, with significant improvements made in the quality of prudential regulations and supervisory practices, staffing, and procedures. Before the crisis, it had one of the best financial regulatory frameworks in the region. The relaxation in September 1998 of loan classification and provisioning and disclosure requirements were viewed as a step back. Nevertheless, the move does not seem to have impeded the effectiveness of supervision as the regulatory requirements were not relaxed and more stringent criteria continued to apply to BNM stress-testing and the ongoing restructuring operations. Some institutions (21 out of 78 or 50:50 in terms of market share) also still use the 3-month rule. The move apparently aims at giving borrowers breathing space to restructure their loans under the deteriorated economic conditions, with banks delaying legal action against them until after six months. As a further step to strengthen supervision, the frequency of on-site inspections was increased from a 3-year cycle to at least once a year to be conducted on a consolidated basis.	**Perceptions of regulatory forbearance following the relaxation of prudential regulations for classification of NPLs drew criticism from the analyst community and have had an adverse effect on market views of disclosure practices. BNM should consider a return to a more conservative standard when feasible.** In addition, **adequate attention should be given to derivative activities and the offshore market in inspections** in order to limit risky exposures outside normal regulatory channels under greater capital mobility.
C. Accounting framework	The Malaysian Institute of Accountants issues the Malaysian Accounting Standards (MAS) to augment the International Accounting Standards (IAS). The former covers those not dealt within IAS or topics where particular features of the Malaysian environment warrant a domestic standard.	**Present procedures appear adequate.** In the context of a more open capital account, particular attention could be given to measuring the volumes and risks involved in off-balance sheet activities.
D. Payments systems	BNM made exemplary progress in implementing a master plan for the national payments system developed in 1994. The plan is far-reaching and flexible. A Real Time Gross Settlement (RTGS) system will replace in June 1999 the existing SPEEDS system for large value payments, including settlement of scripless securities with end-of-day settlement. This system will introduce risk management discipline for participating financial institutions in contrast to the present system where settlement risk is potentially carried by BNM.	**No action needed.** Existence of an effective retail and wholesale payment system, where BNM does not carry the risks in settlements, strengthens the resilience of the financial system.
E. Legal systems	The legal system is generally comprehensive, though some weaknesses remain, including the prevalence of wide-ranging exemption powers in some of the key prudential standards in BAFIA.	**Exemption powers should be reviewed with the aim of their removal; a clear and limited criteria for their use should be developed when retained.**

Table I.2. Malaysia: Stock Position With Respect to the Main Elements of a Prudential Risk-Based Framework and Recommendations

Elements of a Prudential Risk-Based Regime	Situation in Malaysia and Implications for Feasibility of the Risk-Based Regime	Observations/Recommendations
F. Financial market development		
1. Spot and forward foreign exchange market	The **spot foreign exchange market** is small and thin which, following the imposition of exchange and capital controls in September, has been mainly dominated by trade-related transactions. The average daily volume of interbank foreign exchange transactions (spot and swap) declined by 31.2 percent in 1998, attributed to the moderation in the volatility of the currency market following the exchange controls and the fixing of the ringgit. The **offshore ringgit market** has been effectively eliminated with the controls. A **forward foreign exchange market** exists where contracts may be effected for both commercial and financial transactions (the latter with approval). Lack of counterparty apparently reduced market activity and liquidity.	**Conditions conducive to market development should be created**, including: removal of restrictions that may hinder efficient functioning of the foreign exchange market and a more flexible exchange rate policy that may increase incentives for more prudent risk management and for hedging against potentially greater exchange rate risks. A deep and liquid foreign exchange market is needed to facilitate risk management and hedging against liquidity, credit, and foreign exchange risks.
3. Securities market	**The stock market** has developed significantly and has emerged as a major source of funds, supported by a number of measures taken to deepen and broaden the market, including the establishment of the Securities and Exchange Commission in 1993, improvement in trading and settlement systems, establishment of credit-rating agencies, and liberalization of the guidelines for selected institutional investors. Further measures were taken in 1998 to strengthen the regulatory framework of the capital market, including enhancement of disclosure and transparency, investor protection, enforcement capabilities of the regulatory authorities and improving corporate governance. **Secondary markets** for government debt are not well developed, owing to the limited supply of government securities and captive demand. **Private debt markets** are developing slowly and are being helped by the announcement of a government benchmark bond yield.	**Imposition of capital controls has limited foreign interest in these markets and may slow their development.**

II. Malaysia: Exports and Competitiveness[1]

Abstract

This chapter reviews recent developments in Malaysia's external competitiveness and examines the outlook for its exports. An equilibrium real effective exchange rate is estimated to assess the degree of misalignment of the ringgit. The results point to the possibility that the ringgit was substantially undervalued in 1998, implying a potentially robust response of exports as long as this undervaluation persists. The estimated degree of undervaluation is roughly equal to the real effective appreciation of the currencies of the other Asian crisis countries since September 1998, suggesting that the peg of the ringgit to the U.S. dollar has prevented Malaysia's exchange rate from correcting much of the overshooting that has taken place since July 1997.

A. Introduction

1. **In the years leading to the Asian crisis, the ringgit faced sustained upward pressure, gradually strengthening by about 15 percent in real effective terms between 1990 and mid-1997** (Chart II.1). Since the onset of the Asian financial crisis in July 1997, the ringgit has depreciated by about 23 percent in real effective terms, exceeding the rate of depreciation of most of the other currencies in the region (Chart II.2). More recently, following the imposition of selective exchange and capital controls in September 1998 and the peg to the U.S. dollar, the ringgit has remained broadly unchanged in real effective terms, while the other regional currencies have continued to strengthen. Against the background of a rapid—albeit tentative and still not broad based—recovery in selected export sectors in Malaysia (primarily in electronics and transport equipment), the result has been a growing perception by market participants that the ringgit has become "undervalued." Questions of over- or undervaluation of currencies are customarily addressed in the broad context of price competitiveness of exports.

2. **This chapter addresses the following question: Have currency movements since July 1997 had an impact on Malaysia's competitiveness and on the outlook for Malaysia's exports?** In particular, the chapter attempts to quantify the extent to which the sharp depreciation of the real effective rate of the ringgit since mid-1997 represents a gain in competitiveness, and the extent to which it reflects a decline in the underlying equilibrium real effective exchange rate (REER). The chapter also covers the period prior to the recent crisis by examining the factors behind the real effective appreciation of the ringgit between 1990 and mid-1997, and by assessing the implications for competitiveness.

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[1]This chapter was prepared by Dimitri Tzanninis (ext. 34114) who is available to answer questions.

3. **Assessment of developments in competitiveness is better made when it relies on a broad range of indicators.** Recognizing that no single indicator offers a complete and satisfactory assessment of competitiveness, and that, in examining export competitiveness, price-based competitiveness indicators should not be the exclusive focus of the analysis, this chapter assesses international competitiveness in the context of a broader range of considerations from both a technical and econometric point of view. To put recent movements of the ringgit in perspective, Section B provides a historical overview of developments in selected external indicators as well as in Malaysia's trade and exchange regimes. Section C reviews alternative measures of competitiveness. Section D assesses recent levels of the ringgit by estimating an equilibrium REER, and by deriving the REER consistent with "appropriate" current account positions for Malaysia. Section E examines the likely impact on Malaysia's exports of recent exchange rate developments. Finally, Section F contains concluding remarks and discusses policy issues.

4. **The main results can be summarized as follows**:

- Two-thirds of the decline in the ringgit in real effective terms since July 1997 appears to represent gains in price competitiveness, with the remaining third appearing to reflect a shift in the equilibrium REER.

- The ringgit appears to have been undervalued by about 16 percent in 1998. The results, however, should be interpreted with considerable caution given that they are based on backward-looking econometric assessment, which may not fully capture more recent developments in competitiveness.

- Malaysia's equilibrium REER appears to be responsive to external influences (especially the country's terms of trade), reflecting the great degree of openness of the Malaysian economy.

- Movements in the REER of the ringgit in the years preceding the crisis reflected to a significant extent the impact of the growing integration of Malaysia with the rest of the world. This integration was manifested in surging capital inflows and fast-rising productivity gains as a result of exposure to external competition (the Balassa-Samuelson effect), which have allowed Malaysia to exploit its competitive advantages.[2]

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[2]The Balassa-Samuelson effect describes the process by which higher productivity growth in the tradable- than in the nontradable-goods sector (relative to partner countries) eventually leads to wage and price increases in the nontradable goods sector, and to a real appreciation of the currency. Thus, a seemingly paradoxical situation could arise, in which a real appreciation of the currency may in fact reflect gains in a country's competitive position. This situation points directly to the limitations of REERs based on price indices that include nontradables, such as the consumer price index (CPI) or the producer price index (PPI). The issues are explored more extensively in Section C.

- The REER of the ringgit will likely need to appreciate substantially over the medium term to bring the current account balance in line with its medium-run fundamentals.

B. Historical Perspective

Influences on the REER

5. **Movements in the REER in the first half of the 1980s reflected primarily the effects of an expansionary fiscal stance** in response to a substantial deterioration in the country's terms of trade. Malaysia was hit by a combination of external shocks in the early 1980s: a drastic deterioration in its terms of trade, primarily in commodity prices, as well as a decline in external demand reflecting a recession in industrialized countries. In response, the Malaysian authorities sought by adopting expansionary fiscal policies to insulate the domestic economy from what was perceived as temporary adverse developments in the external environment. The growing fiscal deficits were financed to a significant extent from external sources to avoid inflationary bank financing. The ensuing inflows of external capital exerted an upward pressure on the ringgit and led to a substantial buildup of external liabilities.[3] During the early 1980s, the ringgit was kept stable vis-à-vis the U.S. dollar, which was appreciating against most other currencies. At the same time, government expenditure in the infrastructure sector and a boom in construction activity contributed to an expansion in the nontradables sector that led to price increases, which also contributed to the real appreciation of the ringgit.

6. The authorities embarked on a stabilization program in 1984, when it became evident that the deterioration in the terms of trade was permanent and that the domestic and external imbalances were becoming unsustainable.[4] A program of fiscal consolidation was implemented. The exchange rate of the ringgit was allowed to depreciate, and, coupled with the depreciation of the U.S. dollar following the Plaza Accord in 1985, the ringgit fell sharply in nominal effective terms over the ensuing period. With inflation moderating in response to the stabilization effort, the REER also declined sharply. In 1985, the economy was hit by a recession, reflecting a new terms-of-trade shock, and, to a lesser extent, the fiscal contraction.

7. **External sector policies also played a role—albeit a relatively small one—in maintaining a strong ringgit in real effective terms in the early 1980s.** In the 1970s, and to a lesser extend in the early 1980s, external sector policies were used to promote the objective of

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[3]The federal government's foreign liabilities increased sharply from RM 4.9 billion (US$2.2 billion) in 1980 to RM 20.8 billion (US$8.6 billion) in 1984.

[4]The devaluation of the currencies of Thailand, the Philippines, and Indonesia in 1983–84 prompted bouts of speculative attacks on the ringgit. With the attacks intensifying in October 1984, Bank Negara Malaysia (BNM) abandoned the policy of maintaining relative stability of the ringgit against the U.S. dollar (and the Singapore dollar) and allowed a greater role for market forces in the determination of the exchange rate.

industrialization through import substitution. With the resulting subsidization of imports, quantitative restrictions on imports and high import tariffs were maintained to prevent substantial balance of payments deficits. Import restrictions were accompanied by selective price and capital controls. The lack of a more realistic alignment of the exchange rate contributed to distortions in the relationship between domestic and foreign prices that penalized exports.

Exchange and trade regime

8. In the early 1980s, the exchange rate of the ringgit was determined on the basis of a composite basket of the currencies of countries that were significant trading partners with Malaysia. The ringgit was nonetheless not rigidly pegged to the basket. The BNM allowed limited fluctuations relative to the basket, and intervened only to prevent disorderly fluctuations in the exchange rate. BNM intervention intensified in the early 1980s in an effort to mitigate the destabilizing effects of foreign capital inflows, which were partly used to finance the fiscal deficit.

9. **In the mid-1980s, a gradual liberalization of the trade and exchange regimes began**—largely in an effort to boost the export-oriented sector which was dealing with the effects of the recession in 1985—and Malaysia eventually shifted its emphasis of industrialization strategy from import substitution to export orientation.[5] By the late 1980s, Malaysia had adopted a trade policy intended to provide a strong base for improving the competitiveness of its exports, with an emphasis on the liberalization of essential imports of capital goods and intermediate inputs. To support this objective, the ringgit was allowed to depreciate sharply (in nominal and real terms) beginning in September 1984 (Chart II.3).[6] With conservative macroeconomic policies in place since 1984, the driving force behind movements in the REER has been the nominal depreciation of the ringgit rather than higher domestic price increases relative to partner countries. The policy of bringing the ringgit to lower levels contributed to rapid export growth (see Chart II.3), which in turn helped expand the tradable-goods sector.[7]

10. Malaysia's outward orientation expanded during the 1990s. Trade policy focused on across-the-board cuts of import tariffs in a phased manner, and on the gradual elimination of nontariff barriers, in line with Malaysia's commitment under the WTO.[8] A surge in private capital

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[5]In fact, the export-orientation of Malaysia's manufacturing sector had begun in the 1970s, responding to incentives—gradually put in place since 1968 —designed to promote export-led industrialization.

[6]The rate of depreciation peaked in 1986, when the ringgit was allowed to depreciate by about 14 percent against its composite basket.

[7]However, it is difficult to detect any Balassa-Samuelson effects during the 1980s due to the overvaluation of the currency and the prevailing price and trade controls.

[8]The effective import-weighted tariff rate was lowered from 11.2 percent in 1992 to 9.4 percent in 1997.

inflows—particularly portfolio and foreign direct investment—that took place in the early part of the 1990s led to pressure on the ringgit to appreciate and to a substantial buildup in reserves. Reflecting the adjustment in the exchange rate that took place in the 1980s and the more open trade and exchange regimes, Malaysia's share in world merchandise exports rose from ¾ percent in 1990 to over 2 percent in 1997.

C. Alternative Measures of Competitiveness

11. The IMF's Information Notice System (INS) calculations of Malaysia's REER point in the direction of a likely gain in competitiveness since the onset of the financial crisis in Asia in July 1997. Despite the significant depreciation of other Asian currencies, the depreciation of the ringgit vis-à-vis the dollar over the same period has brought the REER of the ringgit to a much lower level than prior to the crisis.

12. However, the INS calculations of Malaysia's effective exchange rates are not without shortcomings.[9] Although they account for third-market competition, they rely on a weighting scheme that takes into account trade statistics over the period 1988–90, which may not accurately reflect Malaysia's current trade patterns.[10] In particular, the outdated weights may not fully account for those changes in competitiveness that manifest themselves primarily in intensifying third-market competition and reallocation of market shares. In fact, during periods of rapid structural changes and reallocation of market shares—such as the one experienced since July 1997—INS calculations may not fully capture recent developments in competitiveness. Indeed, gains in third markets may have played a role in the recent pickup in Malaysia's exports, but they may not be captured adequately in the INS weights.[11] Despite this shortcoming, the INS REER is used throughout this chapter mainly because of the absence of recent information on competition in third markets. Motivated by this shortcoming, this section looks at alternative measures of competitiveness.

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[9]For a description of the methodology and the data used to compute the effective exchange rate indices in the INS, see Desruelle and Zanello (1997).

[10]There has been a gradual increase in the share of Asian countries in Malaysia's exports during the 1990s. The IMF's Direction of Trade Statistics point to an increase of the share of all Asian countries in Malaysia's exports from an average of 40 percent in 1985–89 to 47 percent in 1996, with the trend abruptly interrupted in 1997 reflecting falling exports to the countries primarily affected by the financial crisis. In 1997, exports to the rest of Asia declined sharply to 26 percent of Malaysia's exports, while the share of imports from those countries remained broadly unchanged from previous years at around 35 percent of total imports.

[11]Malaysia's exports rebounded strongly in volume terms in the last quarter of 1998, rising by about 15 percent over the same quarter of the previous year. Such strong growth is likely to reflect mainly gains in marker shares rather than increased partner demand, as evidenced by the more sluggish performance of exports from the rest of the Asian crisis countries (see Chart II.2).

REER indices based on CPI, PPI, and export unit values

13. In order to assess competitiveness based on a broader set of indicators and to detect any Balassa-Samuelson effects, the following REER measures (which are based on different price indices) are compared: the CPI-based REER computed by INS; a PPI-based REER; and an REER based on relative export unit values. The rationale for using producer prices in the computation of REERs is that they contain a larger traded goods component than consumer prices, and are not as much influenced by price controls and indirect taxes.[12] Similarly, export unit values capture a large component of trade in goods.[13]

14. It appears that the real appreciation of the ringgit between 1990 and mid-1997 (based on INS calculations) may understate the loss of export competitiveness. The divergent trends in the CPI-based REER, on the one hand, and the PPI-based REER and the REER based on relative export unit values, on the other (Chart II.4), point to the direction of relatively slower productivity growth in Malaysia's tradable goods sector than in other countries during the 1990s (an inverse Balassa-Samuelson effect).[14] As a result, relative export prices have risen more rapidly relative to broader price indices in Malaysia than elsewhere, but the trend was reversed in 1998.

D. The Level of the Ringgit

15. The depreciation of the ringgit in real effective terms since mid-1997 and the lack of an upward adjustment in recent months—in contrast to the exchange rates of the other Asian crisis countries—have been cited as factors behind the recent pickup in Malaysia's exports in volume terms. The task of isolating the effect of the REER from all other influences on exports becomes particularly difficult in an environment of abrupt realignments of exchange rates and market shares. The task can be further complicated when the performance of exports reflects nonprice factors. Looking back, this task is also complicated by the gradual liberalization of the trade and exchange regimes that has taken place during the last two decades.

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[12]Administered and supervised prices account for about 15 percent of the weights in Malaysia's CPI basket.

[13]Halpern (1996), and Marsh and Tokarick (1994) discuss the advantages and limitations of various price and cost indices in calculating REERs.

[14]Nevertheless, Chart II.4 suggests that the effect might have been present in the second half of the 1980s, when more drastic changes in Malaysia's trade and exchange regimes took place. Such an effect is more likely to be important when examining countries at different levels of development, such as Malaysia and its major trading partners (the G-7 countries, which account for close to 60 percent of the INS weights). The existence of the Balassa-Samuelson effect **over the entire sample period** is directly tested in Section D.

Long-run equilibrium REER derived from its fundamental determinants

16. Against this background, this section examines whether the ringgit was undervalued in 1998 by measuring the extent of its misalignment in real effective terms in relation to an estimated equilibrium REER.[15] **The long-run cointegrating relationship between the REER and its determinants** was estimated to assess the extent to which the depreciation of the ringgit since mid-1997 has been an equilibrium phenomenon, and to measure the extent of misalignment (if any) of the ringgit in 1998. Regressions using annual data for 1979–98 found an empirical long-run link between Malaysia's REER and the following fundamental variables:[16] (i) trade policy (proxied by the sum of exports and imports over GDP), capturing the impact on Malaysia's REER of the shifts in the trade regime as well as the growing openness of the economy;[17] (ii) the external demand environment (proxied by Malaysia's terms of trade); (iii) capital inflows; and (iv) domestic supply factors (productivity differential between the tradable and nontradable goods sectors compared to partner countries). **The statistical evidence suggests that: (i) two-thirds of the depreciation of the ringgit since 1997 appears to have resulted in a gain in competitiveness, with the remaining third being an equilibrium phenomenon reflecting movements in economic fundamentals; and (ii) the ringgit was undervalued by about 16 percent in 1998** (Chart II.5).

17. The patterns of misalignment capture reasonably well the two episodes of turbulence in the foreign exchange market over the last two decades: the sharp depreciation of the ringgit in 1986, and again from mid-1997 to September 1998. Moreover, in most instances the misalignment of the ringgit has been confined within 6 percentage points around its equilibrium value.[18]

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[15]The measurement of the extent of misalignment is complicated by the fact that the "equilibrium" REER is an unobservable variable. In this chapter, misalignment is defined as the deviation (in percent) of the actual REER from its estimated equilibrium level. In interpreting the results, it is worthwhile noting that the notion of equilibrium used refers to a statistical estimate of a macroeconomic relationship rather than a description of an unobservable macroeconomic balance as defined by economic theory.

[16]Lack of higher frequency data for a number of explanatory variables for Malaysia's REER prevented the empirical analysis from assessing short-run movements of the REER. See Annex I for a detailed discussion of the statistical tests and the estimation results.

[17]Malaysia's merchandise exports rose from 49 percent of GDP in 1985 to 101 percent of GDP in 1998; merchandise imports rose from 37 percent of GDP to 76 percent of GDP over the same period. Part of the rise in imports has reflected an increase in the import intensity of exports.

[18]The estimated undervaluation in 1998 is large relative to past deviations of the REER from its equilibrium (with the exception of 1986, when the ringgit was allowed to depreciate sharply to

(continued...)

18. With the REER of the ringgit being currently broadly at the level of September 1998 (see Chart II.2), and with the equilibrium REER typically showing a smaller variation than the actual REER, the implication is that currently the ringgit could be undervalued by a similar order of magnitude.[19] Against the background of a rebound in the REER of other Asian currencies since mid-1998, **the pegging of the ringgit in September 1998 has prevented the exchange rate from correcting the overshooting that has taken place since the beginning of the crisis**.

Medium-run REER derived from macroeconomic balances

19. Deviations of exchange rates from their long-run equilibrium levels do not always reflect exchange rate misalignments; they could also reflect cyclical factors or inappropriate policies. As a complement to the methodology of assessing the exchange rate of the ringgit based on an equilibrium REER derived from its fundamental determinants, the macroeconomic balance methodology is used in this section to increase the degree of confidence in the findings. The macroeconomic balance methodology allows quantitative assessments of exchange rates when viewed against benchmark current account positions.[20]

20. Assessments based on this methodology involve four steps. First, the calculation of an "underlying current account position," which is the current account balance that would arise when domestic and foreign output gaps fall to zero and the lagged effects of past REER movements have been fully realized. Second, the calculation of an "equilibrium current account" (the saving-investment norm), defined as the current account balance that in the medium run would be consistent with the fundamental determinants of saving and investment. Third, the use of elasticity estimates to calculate how much the REER would have to change (other things equal) to close the gap between the underlying current account position, and the equilibrium current account from the saving-investment norm. Finally, assessment of the degree of currency misalignment based on the required change in the REER derived in step three.[21]

21. **The results suggest that the Malaysian economy was in significant disequilibrium in 1998, with a large current account surplus and a possibly undervalued exchange rate. The**

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help correct external imbalances). Historically, misalignments of the ringgit have tended to correct themselves within two to three years.

[19]Estimates of the degree of misalignment need to be interpreted cautiously, given the inherent imprecision of (backward-looking) econometric estimates, and the limitations of price-based indicators, which cannot capture the impact on competitiveness of nonprice factors.

[20]For a description of the macroeconomic balance methodology see Isard and Mussa (1998). The methodology is often called the CGER methodology after the Coordinating Group on Exchange Rates.

[21]Annex II presents a detailed discussion of the statistical tests and the estimation results using the macroeconomic balance approach.

estimated degree of undervaluation of the ringgit was about 19 percent (Chart II.6), implying that either other variables (including policies) will have to change or, other things constant, the REER of the ringgit will have to appreciate by this amount over the medium term, to bring the current account balance in line with its medium-run fundamentals. The estimated pattern of misalignment of the ringgit is broadly similar to the one estimated using the long-run cointegrating relationship between the REER and its fundamental determinants.

22. **These results should be interpreted with considerable caution** given that the margin of error is substantially higher than in the previous methodology, owing to a large degree of uncertainty about output gaps, equation specifications and estimated parameters that underlie the saving-investment norms, as well as assumptions on model specifications and lag structures that may not be fully supported by the data. With these limitations in mind, the results nonetheless offer support to the earlier finding that the ringgit was likely significantly undervalued in 1998, thus allowing a higher degree of confidence in the judgement about the level of the ringgit in 1998.

23. Looking ahead, Malaysia's equilibrium current account will likely remain in modest deficit over the medium term. Such a medium term path for the current account is typical for a country at Malaysia's level of development. Under the assumption that output gaps (both domestic and foreign) gradually close over the medium term, the appreciation of the REER required to restore macroeconomic balances over the period may be substantial.

E. Impact on Export Performance

24. **The likely impact on Malaysia's exports of the undervaluation of the ringgit appears to be significant over the long run**. Using available estimates of exchange-rate export elasticities,[22] if the undervaluation of the ringgit persists at the estimated level of just over 16 percent, it would imply a small immediate pickup in export volumes (by only 1 percent), but a more substantial increase (by 9 percent) over the longer run, relative to where the export volumes would otherwise have been.[23] When put in the proper context of a relatively high ratio of exports to GDP for Malaysia, the overall impact on activity of such a pickup in export volumes (even after accounting for the high import content of exports), could be very substantial, other things constant.

25. Third-market effects of currency depreciations are notoriously difficult to quantify. An attempt was made to identify countries in the region that Malaysia could challenge with increased competition in third markets. To this end, the composition of Malaysia's exports was compared

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[22]Using an error-correction model on annual data, Bayoumi (1996) estimated the following elasticities of Malaysia's exports with respect to the REER: -0.06 in the short run and -0.53 in the long run.

[23]Standard trade models assume that it takes, on average, three years for export volumes to respond fully to changes in the REER.

against the composition of exports of a number of competitor countries in the region, including Indonesia, Korea, the Philippines, and Thailand. In particular, detailed trade data (based on 3-digit Standard International Trade Classification data) were used to compute the correlation between the commodity shares of the total exports of Malaysia and those of each of these countries. The magnitude of the estimated correlation coefficient—which in effect measures similarities in the structure of exports—was then used as an indication of the degree of competition for exports between Malaysia and these countries. The analysis suggests that Malaysia competes in the same commodities primarily with Singapore, Taiwan Province of China, Thailand, the Philippines, and Korea. In view of regional currency movements since mid-1997, and assuming no major regional currency realignments in the near term, it appears that **Malaysia could gain market shares at the expense of mainly Thailand, the Philippines, and Korea**.

F. Concluding Remarks and Policy Implications

26. This chapter examined the impact of recent currency movements in the region on Malaysia's competitiveness and the outlook for exports. A number of alternative indicators of competitiveness as well as methodologies were used to gain a better understanding of developments and to increase confidence in the findings.

27. The results suggest that the ringgit was undervalued by about 16 percent in 1998. Based on available empirical estimates of export elasticities, the undervaluation of the ringgit in real effective terms in 1998 could potentially have a substantial impact on export performance if the undervaluation persists over a long period. However, the results, based on a backward-looking assessment, should be interpreted with caution given the inherent imprecision of econometric estimates, the reliance on a single indicator of competitiveness (namely a CPI-based REER), and the fact that more recent events that could have affected competitiveness—most prominently developments in third-market competition—are not yet fully captured in the data.

28. The empirical evidence confirms that the modest appreciation of the ringgit in real effective terms between 1990 and 1997 was to a great extent an equilibrium phenomenon reflecting movements in economic fundamentals, namely trade policy (the degree of external openness), the external environment (the country's terms of trade), capital inflows, and domestic supply factors.

29. External sector variables are by the far the most important determinants of Malaysia's REER: in decreasing order of importance, the external environment, capital inflows, and trade policy are the three most important determinants of movements in Malaysia's equilibrium REER. Fiscal policy was not found to belong in the long-run cointegrating relationship between the REER and its determinants. While this result may seem to downplay the role fiscal expansion played in the appreciation of the ringgit in the early 1980s, it is nonetheless consistent with the

more prudent use of fiscal policy since then. As a result, the estimation was not able to establish a statistically significant influence of fiscal policy on the REER over the entire period examined.[24]

30. The econometric results provide sufficient support to the hypothesis of Balassa-Samuelson effects over the entire sample period.[25] However, the limited degrees of freedom in the estimated equation did not allow direct testing only of the 1990s, where there are indications of the effect dissipating (as mentioned in Section C; see also Annex I). The results suggest that productivity gains in the tradable goods sector stemming from the structural reforms implemented over the past decades exerted an upward influence on Malaysia's REER, and may have played a role in the appreciation of the REER in the 1990s.

31. **The likely response of Malaysian exports to the estimated undervaluation of the ringgit could be significant over the long run**. Maintaining the peg to the U.S. dollar at the current rate—and in the absence of major realignments in the exchange rate of the U.S. dollar against other currencies—could generate a robust response of exports in the long run, other things constant. While an export-led recovery (or an export recovery complementing the effects of the fiscal stimulus planned for 1999) would be desirable in the current circumstances, there are significant risks to allowing the undervaluation to persist past the point of providing an initial boost to exports.[26] Indeed, a surge of demand for Malaysia's exports could quickly lead to economy-wide price pressures given the great degree of openness of the country.

32. **The results have important implications for exchange rate policy**. Competitiveness gains stemming from undervalued currencies tend to be short-lived and, in the absence of adjustment in the exchange rate, are followed by domestic price pressures. Thus, failure to adjust the peg at the first signs of a strong and broad-based recovery in the export sector could potentially lead to an erosion of competitiveness through adjustments in domestic prices. While the current undervaluation of the ringgit may provide a welcome boost to exports, the large exposure of the economy to the external sector would necessitate, sooner rather than later, an adjustment of the peg or a move to a more flexible exchange rate. The adjustment of the exchange rate could prevent either an upward spiral in domestic prices or the need for tighter fiscal and

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[24]In contrast, Montiel (1997) found that fiscal policy (proxied by the ratio of government investment to GDP) had a statistically significant influence on Malaysia's long-run equilibrium REER. However, the direction of influence was counterintuitive as increases in government investment were associated with equilibrium appreciation.

[25]Chinn (1997) provides statistical evidence in support of the Balassa-Samuelson hypothesis for Malaysia. Montiel (1997) tested the same hypothesis with a time trend and argued that the observed path of Malaysia's REER could be consistent with the Balassa-Samuelson effect.

[26]Admittedly, the peg of the ringgit to the U.S. dollar in September 1998 was not intended to provide a competitive advantage for Malaysian exports. Nonetheless, since the establishment of the peg, the ringgit has become more competitive compared to the currencies of the countries in the region.

monetary policies to rein in inflationary pressures, thus putting at risk prospects for sustained robust growth. Persistent undervaluation of the ringgit could also invite complacent behavior with adverse long-term implications, as incentives to improve competitiveness through productivity-enhancing measures remain weak.

33. Given that the competitive edge from an undervalued exchange rate cannot be sustained for long, a policy of promoting productivity-enhancing measures should lead efforts to improve the competitiveness of Malaysia's exports. Such measures could include programs for investments and training in new technologies, and incentives to shift the composition of Malaysia's exports in favor of higher value-added products. These measures would allow innovation in product design and production methods that would help enhance competitiveness. Acknowledging the importance of such measures, the Malaysian authorities have provided, among other things, incentives to improve skills and to promote research and development and the use of advanced technologies. Improvements in competitiveness could also be achieved through other nonprice factors, including by addressing any short-term structural factors affecting export performance, such as problems in credit availability to viable export activities. Indeed, during the crisis, small- and medium-scale export industries found it particularly difficult to access credit—or had their credit lines cut—as banks were reassessing risks in their portfolios.

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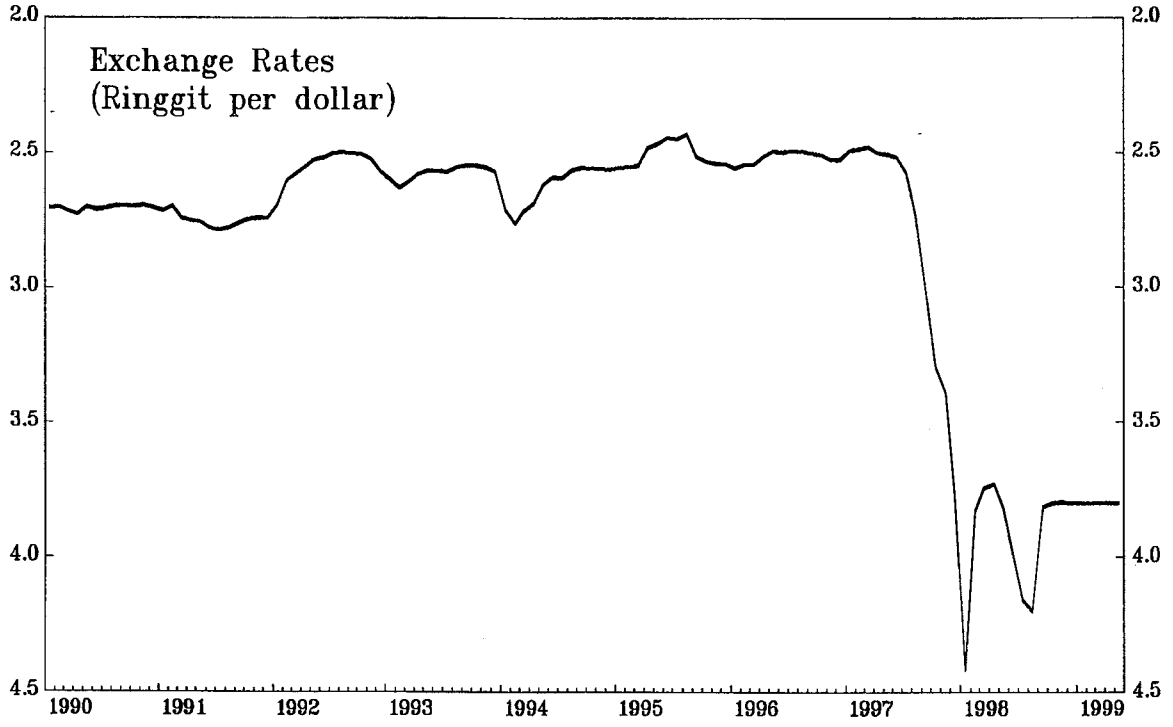
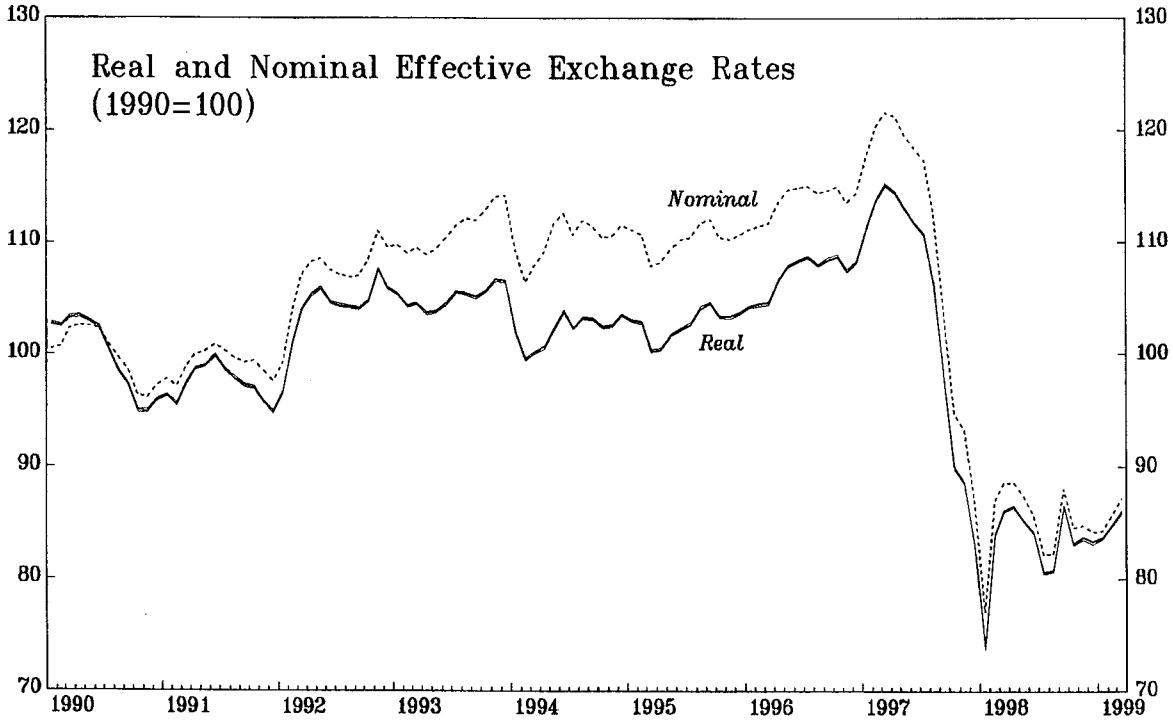
CHART II.1

MALAYSIA

EXCHANGE RATE DEVELOPMENTS, 1990-99



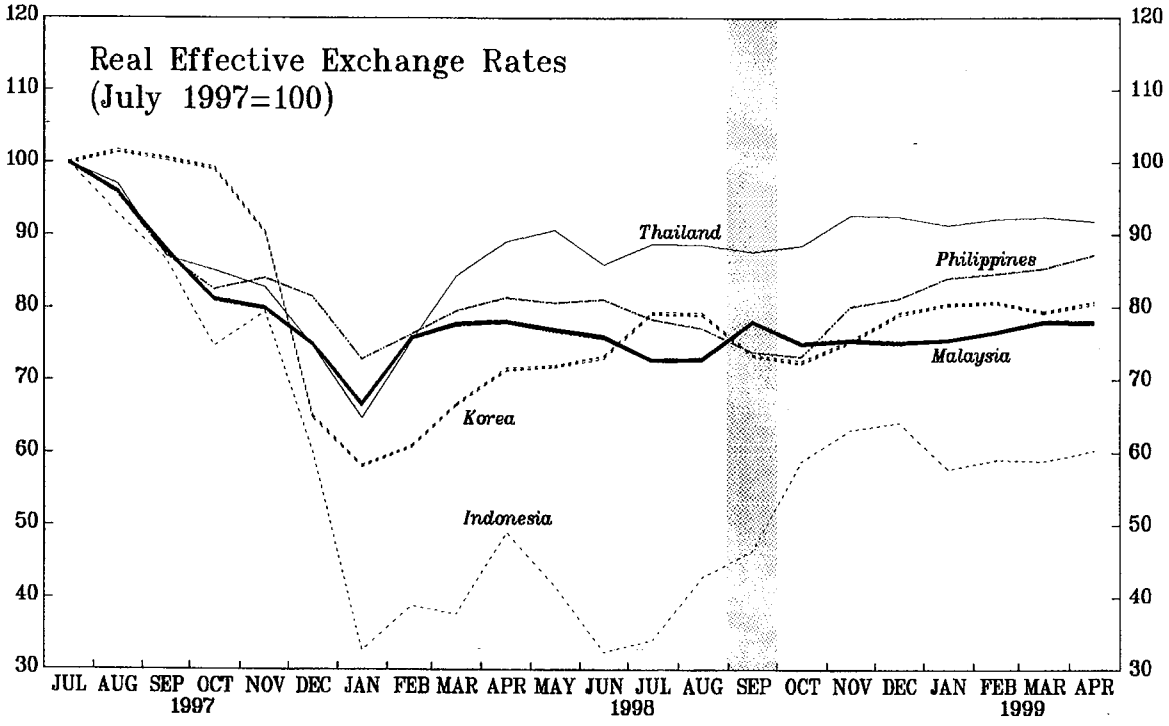


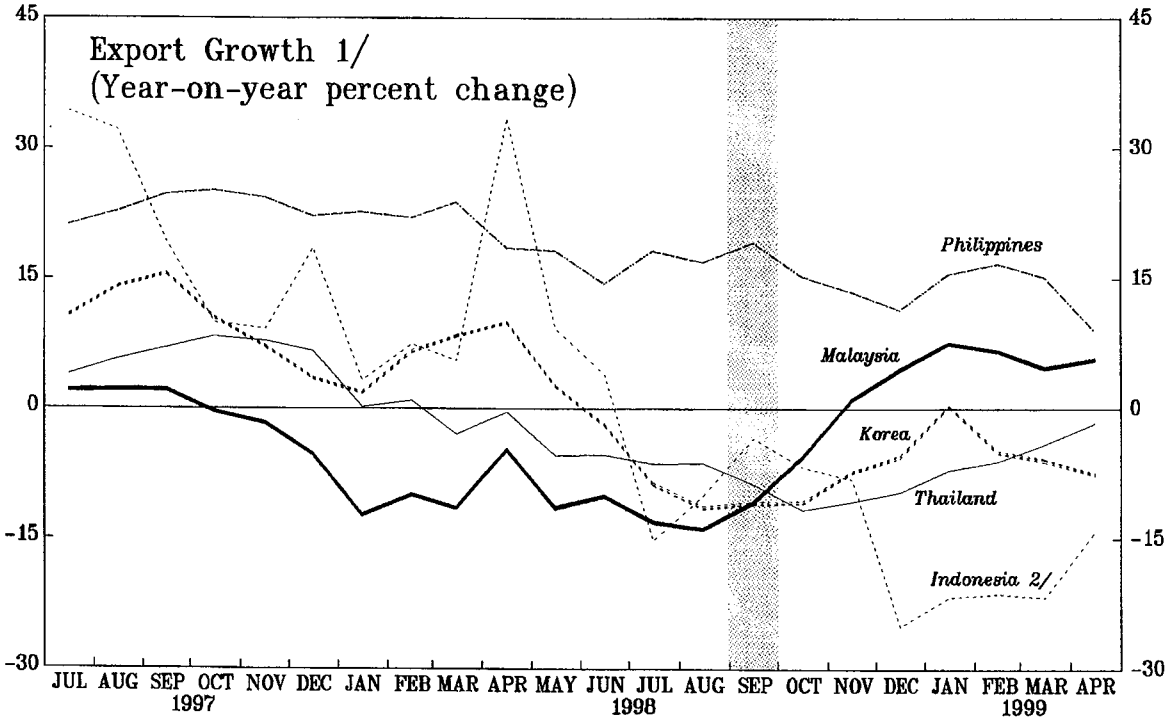
Sources: Information Notice System; IFS.

CHART II.2

ASIA CRISIS COUNTRIES

EXCHANGE RATE DELOPMENTS AND EXPORT PERFORMANCE SINCE JULY 1997



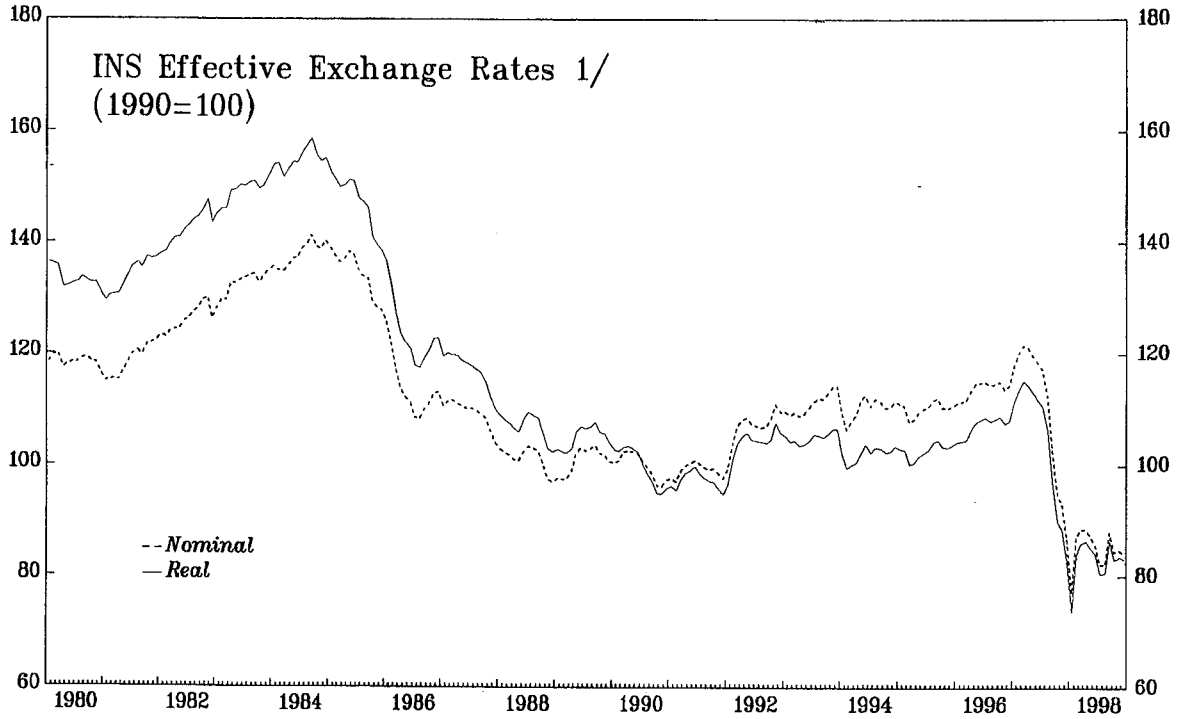


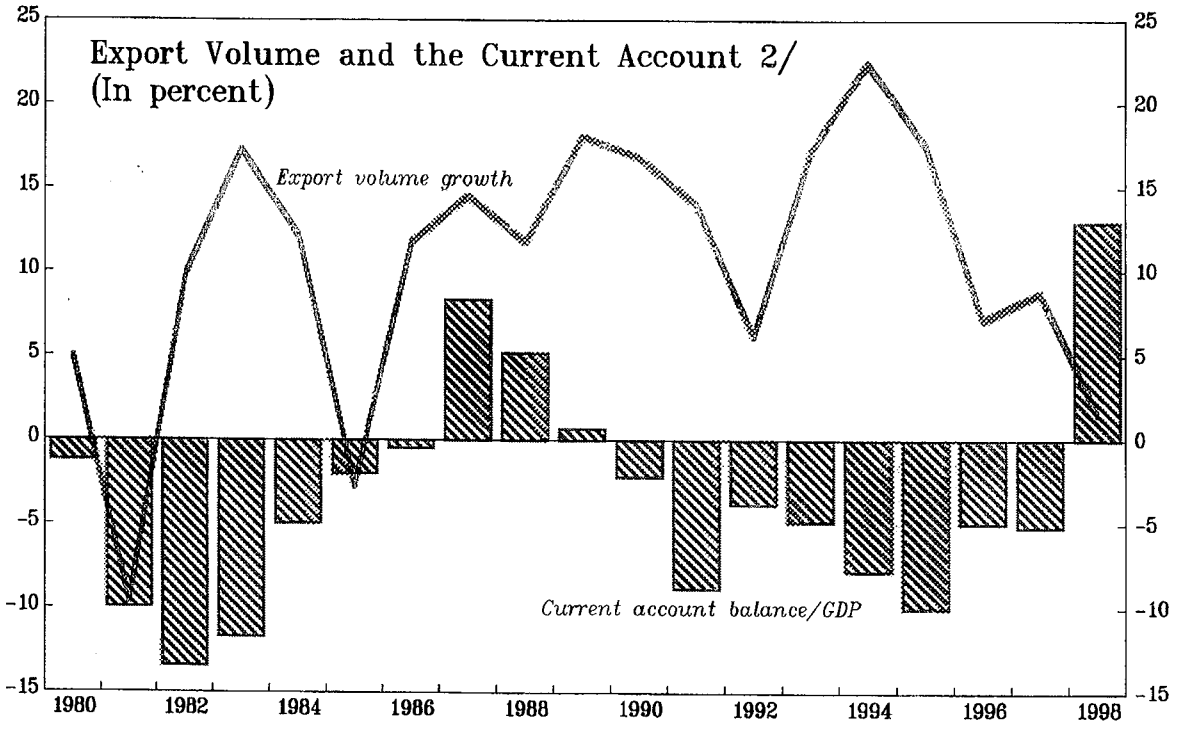
Sources: Information Notice System; APD database.

1/ Three-month moving average based on US$ values.
2/ Indonesia data exclude oil/gas trade.

CHART II.3
MALAYSIA

EFFECTIVE EXCHANGE RATES, EXPORTS AND THE CURRENT ACCOUNT, 1980-98





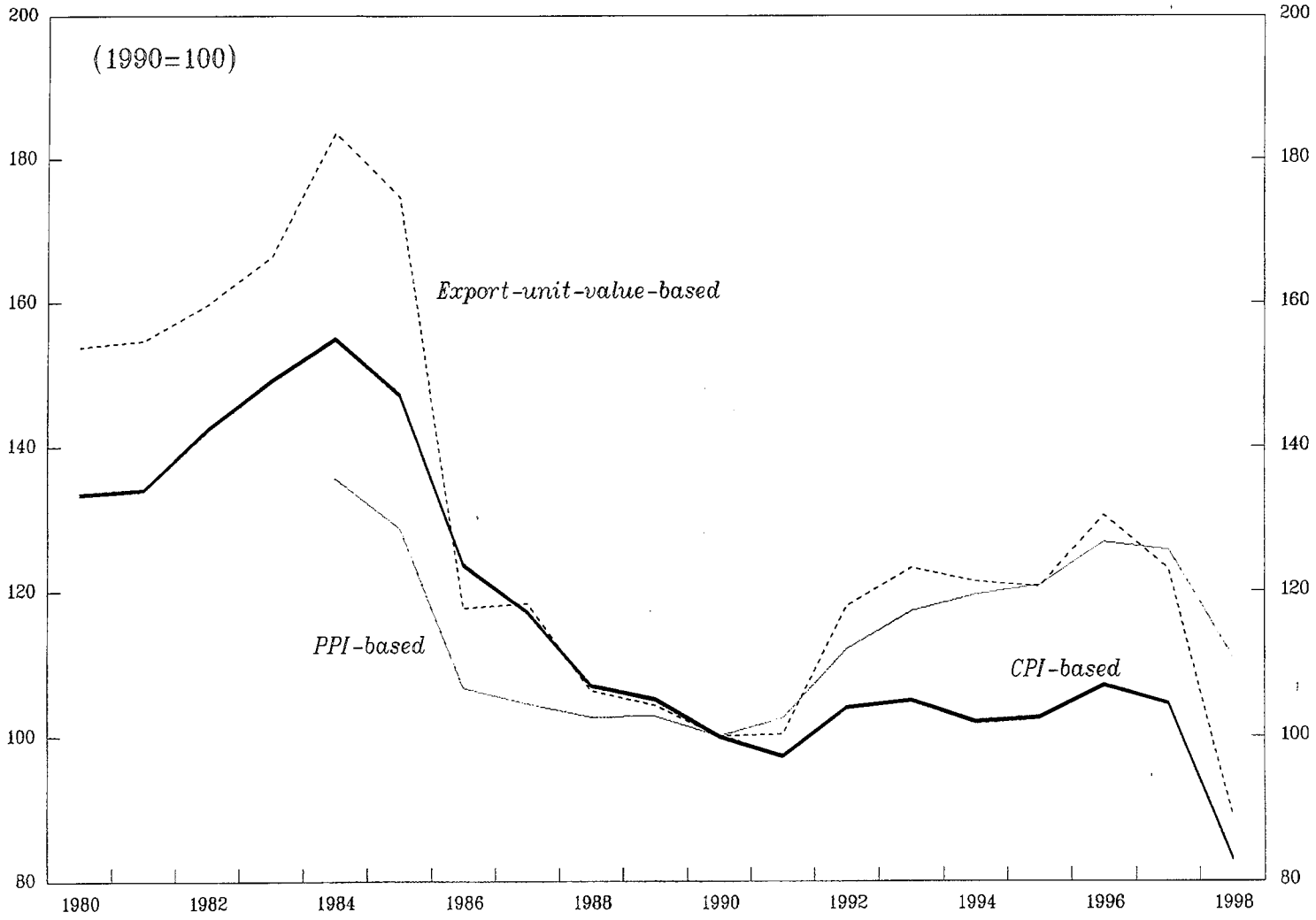
Sources: IMF, Information Notice System; WEO; and staff estimates.

1/ Effective exchange rates from the IMF's Information Notice System.
2/ Derived from WEO partner-country import prices.

CHART II.4

MALAYSIA

REAL EFFECTIVE EXCHANGE RATES INDICES, 1980-98

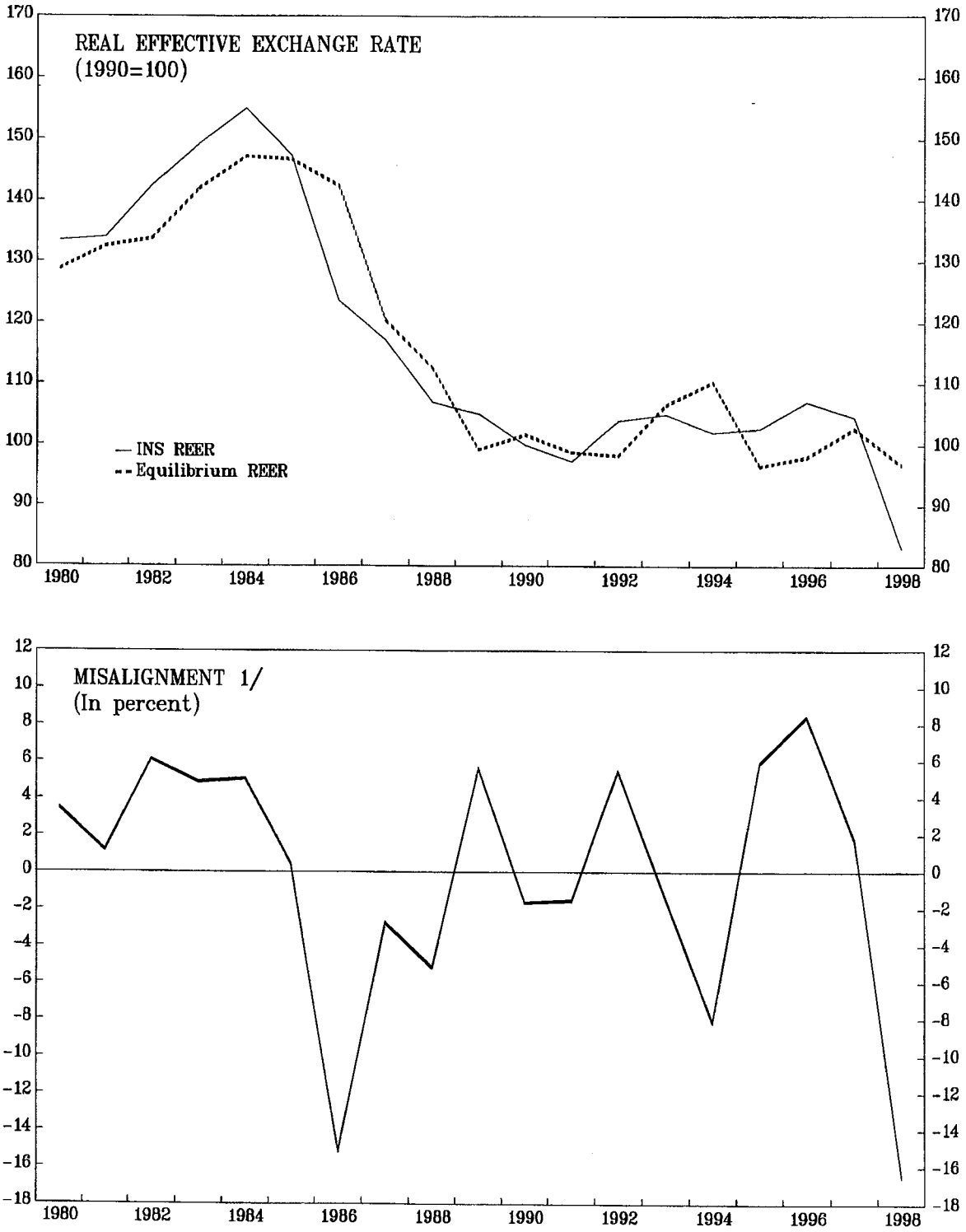


Sources: International Financial Statistics and Information Notice System.

CHART II.5

MALAYSIA

EQUILIBRIUM REAL EFFECTIVE EXCHANGE RATE AND DEGREE OF MISALIGNMENT, 1980-98



Sources: IMF, Information Notice System; and Fund staff estimates.

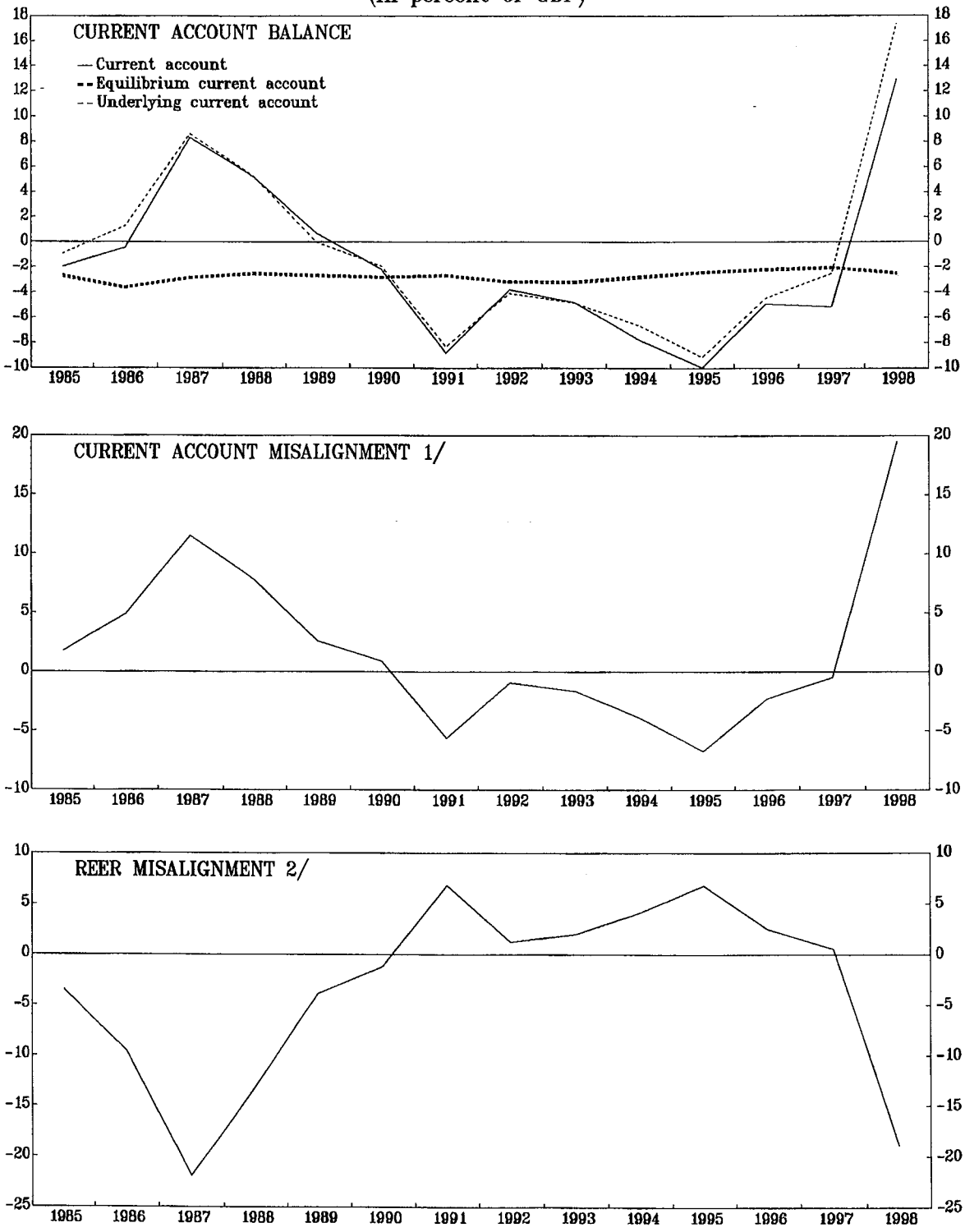
1/ Defined as the deviation of the actual REER from its estimated equilibrium level.

CHART II.6

MALAYSIA

CURRENT ACCOUNT BALANCE AND MISALIGNMENT, AND DEGREE OF REER MISALIGNMENT, 1985-98

(In percent of GDP)



Sources: Information provided by the Malaysian authorities; and Fund staff estimates and projections.

1/ Defined as the difference (in percent of GDP) between the underlying current account and the equilibrium current account derived from savings-investment norms.
2/ Defined as the (negative of the) change in the REER required to equate the underlying current account position with the equilibrium current account.

Determinants of Malaysia's Long-Run Equilibrium Real Effective Exchange Rate

1. This annex describes a model of Malaysia's long-run equilibrium REER based on annual data for 1979–98, and examines the issue of misalignment of the ringgit from an econometric point of view.

Conceptual issues

2. A number of factors are expected to affect the REER in the long run. Taking into account data availability, the treatment of these factors in this chapter is discussed below:

- **Trade policy** is proxied by the sum of exports and imports over GDP (the degree of openness). Import controls and high tariff barriers can support an overvalued exchange rate.[1] Downward adjustments of the REER to more realistic levels have been accompanied by relaxation of controls over imports (especially of imports of essential capital goods and intermediate inputs). The relaxation of controls promotes export competitiveness and leads to a rise in both imports and exports.

- **The external environment** is proxied by Malaysia's terms of trade (defined as the ratio of Malaysia's export unit values to import unit values derived from the WEO database). An improvement in the terms of trade (shown as a rise in the ratio) would have a positive impact on the current account and would lead to an appreciation of the REER.

- **Domestic supply factors** are defined as the productivity differential between the tradable and nontradable goods sectors for Malaysia and its major trading partners proxied by per capita real growth in manufacturing less per capita real growth in services. This term measures the Balassa-Samuelson effect: that is, higher productivity growth in the tradable- than in the nontradable-goods sector (relative to partner countries) eventually leads to rises in wages and prices in the nontradable goods sector, and to a real appreciation of the REER.

- **Fiscal policy** is defined as the ratio of government consumption to GDP. Higher government consumption relative to GDP would put upward pressure on the price of nontraded goods, leading to an appreciation of the REER. Implicit in this argument is the assumption that government spending is concentrated on nontraded goods.

- **Capital inflows** are defined as the ratio to GDP of the sum of the following: net direct investment in Malaysia; net inflows of portfolio investment; net increase in

[1]Reliable data on the extent of quantitative restrictions on imports, as well as on other nontariff barriers, are not available for the full sample period.

other investment; and errors and omissions.[2] Higher capital inflows would exert an upward pressure on the REER.

Estimation issues

3. Estimation of the long-run cointegrating relationship between Malaysia's REER and its fundamental determinants is complicated by a number of factors: (i) the low frequency of data for some of the explanatory variables prescribed by theory complicates analysis of policy variables and short-term factors and reduces the precision of econometric estimates due to the smaller number of degrees of freedom; (ii) the existence of nonprice controls for the early part of the sample period lowers the information content of the data; (iii) there are no available data on sectoral productivity that could potentially help explain a significant part of the appreciation of the ringgit in real terms between 1990 and mid-1997; and (iv) the gradual change in the exchange and trade regimes over the last two decades complicates the identification of structural breaks in the data and weakens the relation between policy variables and the exchange rate.

Model

4. The long-run determinants of Malaysia's REER were estimated using annual data over 1979–98 for: trade policy (proxied by the sum of exports and imports over GDP; all expressed in U.S. dollars); a proxy for the external environment (Malaysia's terms of trade obtained from the WEO database); net capital inflows as a share of GDP (from IFS, expressed in U.S. dollars); and domestic supply factors (productivity differential between the tradable and nontradable goods sectors for Malaysia and the U.S.—representing its trading partners—proxied by per capita real growth in manufacturing less per capita real growth in services).[3] All data were expressed in natural logarithms, except for the variables for net capital inflows and the domestic supply factors, which included negative values.

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[2]Capital inflows rather than a real interest rate differential was chosen as a fundamental determinant of Malaysia's REER. This choice was dictated by the fact that in the case of a relatively closed capital account, as was the case in the early part of the period under examination but most critically since September 1998, prevailing high interest rate differentials cannot manifest themselves in large-scale capital flows.

[3]Preliminary regressions did not find evidence of fiscal variables (federal government operating expenditure as a share of GDP) belonging to the long-run relationship. This result may be consistent with fiscal policy having only a short-run effect on the REER. Moreover, fiscal policy in Malaysia has traditionally been exercised prudently, thus not exerting significant pressure on the exchange rate through its impact on demand.

Integration

5. To determine the appropriate estimation procedure, tests for nonstationarity of the above variables were carried out using the Augmented Dickey-Fuller (ADF) method, which looks for the presence of unit roots in the series. Table 1 lists the up-to-third-order ADF statistics for the REER, trade policy (EXIM), terms of trade (TOT), net capital inflows (CAP), and domestic supply factors (B-S). According to the tests, the null hypothesis of nonstationarity—that is, each variable has a unit root, or equivalently, is integrated of order one: I(1)—cannot be rejected for any of the variables. All variables are thus stationary in first differences, and cointegration analysis among the level variables is required.

Table II.1. ADF Statistics Testing for a Unit Root

	Variable				
	REER	EXIM	TOT	CAP	B-S
	ADF(1)	ADF(2)	ADF(2)	ADF(3)	ADF(1)
Ho: I(1)	-2.25	0.17	-1.57	-2.05	-1.17

Note: Critical values are -3.1 (5 percent level), and -4.0 (1 percent level). Lag length was determined by the choice of the lag with the highest ADF statistic in absolute value; see Hendry and Doornik (1996), page 42.

Cointegration

6. The Johansen procedure is used for the cointegration analysis.[4] The Johansen procedure is a full information maximum likelihood estimate for vector autoregressive systems, and, as such, it is not concerned about the endogeneity of the explanatory variables. Nonetheless, the procedure imposes a heavy toll on the degrees of freedom and on the precision of the econometric estimates in small samples because it uses a lag structure. The procedure searches for the existence of one or more long-run cointegrating relationships between the selected variables. Table 2 reports the statistics from the Johansen procedure. Only the final specification is reported. The procedure found evidence of the following long-run relationship between the fundamental variables:[5]

[4]See Johansen (1988 and 1995).

[5]Estimation and testing were carried out in PcFiml. The small sample size (19 annual observations) was sufficient for the Johansen procedure to be conclusive despite the loss of

(continued...)

REER = -0.4436(EXIM) +2.0678(TOT) +0.0846(CAP) +0.2706(B-S)

Table II.2. Johansen Test of Existence of Long-run Relationships

	λ–max 1/	Trace 1/
Ho: rank=0	44.11**	84.96**
<=1	16.57	40.85
<=2	14.81	24.29
<=3	9.40	9.47

Variable				
REER	EXIM	TOT	CAP	B-S
Standardized feedback coefficients				
0.1009	0.0310	0.0104	0.0173	-0.0006

1/ Double asterisks denote significant test statistics at the 1 percent level.

Note: The lag length in the vector autoregression was set to one year.

7. The estimation found evidence of a long-run cointegrating relationship between Malaysia's REER and its fundamental determinants. All estimated coefficients have the anticipated signs. The coefficient for the terms of trade is relatively large, reflecting the large degree of openness of the Malaysian economy.[6] The feedback coefficients suggest a relatively slow adjustment from disequilibrium (indeed, Chart II.5 reveals that it takes on average two to three years for a misalignment to correct itself).

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degrees of freedom owing to the lag structure of the estimated system. Given that the fewer the degrees of freedom there are, the harder it is to reject the null hypothesis of no cointegrating relationship, the reported results are thus relatively powerful.

[6]Given that REER, EXIM, and TOT entered the equilibrium relationship in logarithmic form, the coefficients for EXIM and TOT represent the elasticities of the REER with respect to these variables. For comparison, the elasticities (estimated at the sample means) of REER with respect to CAP and B-S were 0.6702 and 0.2164, respectively.

8. The estimated equation is used to derive the equilibrium REER. Misalignment is then defined as the difference between the actual REER and the anti-logarithm of the fitted value of the REER (that is, the equilibrium REER) derived from the equation above, expressed in percent of the equilibrium REER. Chart II.5 reveals that only one-third of the depreciation of the ringgit in real terms since mid-1997 has been an equilibrium phenomenon. The estimated misalignment of the ringgit in 1998 was just over 16 percent.[7]

[7]It is unclear to what extent the large misalignment of the ringgit in 1986 (also around 16 percent) reflects actual misalignment or a statistical error in the standard econometric sense (that is, the combined effect of temporary and random factors). This period coincides with a sharp depreciation of the ringgit in nominal terms that might have overshot the long-run equilibrium rate.

Medium-run Equilibrium REER Derived from Macroeconomic Balances

1. This section describes the first three steps involved in the macroeconomic balance approach; namely, calculation of: (i) the underlying current account; (ii) the equilibrium current account from saving-investment norms; and (iii) the change in Malaysia's REER required to equilibrate over the medium term the underlying current account and the equilibrium current account.

Underlying current account

2. A reduced-form equation for the current account (based on a standard trade model) was estimated and subsequently used to derive the underlying current account for Malaysia and the elasticities required in step (iii) above. Using annual data for 1979–98, the following equation was estimated:[1]

$$CA/Y = -0.0557 - [0.1886(M/Y) - 0.1896(X/Y)](E) - 0.1547(M/Y)YG + 0.5289(X/Y)YGF$$
$$\quad (7.13)^{**} \quad (25.08)^{**} \quad (26.50)^{**} \quad (2.07)^{*} \quad (2.84)^{**}$$

$$R\text{-}BAR^2 = 0.993, \; DW = 1.58$$

where: M, X, and Y are the nominal domestic-currency values of imports, exports, and GDP, respectively; E is the weighted average of past and present REERs ($0.6R_t+0.25R_{t-1}+0.15R_{t-2}$), and R is the logarithm of the REER defined so that an increase is an appreciation; YG is the logarithm of the ratio of real output to potential output for Malaysia, with potential output estimated using a Hodrick-Prescott filter; and YGF is a trade-weighted average of output gaps for Malaysia's largest trading partners accounting for two-thirds of Malaysia's trade (namely, Singapore, the U.S., Japan, Germany, and the U.K.), with output gaps for partner countries obtained from the IMF's WEO database.[2]

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[1]Estimation and testing were carried out in PcGive. Absolute values of the resulting t-statistics are in parentheses. Single asterisks denote significant statistics at the 10 percent level; double asterisks denote significant statistics at the 5 percent level.

[2]Model specification follows closely Bayoumi and Faruqee (1998), with the following exceptions. First, instead of imposing the various elasticities exogenously, data for Malaysia were used to derive the required elasticities. Second, the ratios of imports-to-GDP and exports-to-GDP were introduced separately in the regression, rather than in a single trade-to-GDP term, to derive an estimate of the underlying import and export elasticities for Malaysia. Finally, the term (M/Y)(R) used in Bayoumi and Faruqee (1998) was not introduced in the regression to avoid the multicollinearity problem arising from the correlation of this term with the term (M/Y)(E). However, following Bayoumi and Faruqee (1998), a unit elasticity

(continued...)

3. The results suggest that Malaysia's underlying current account balance was substantially larger (by 4½ percent of GDP) than the actual current account balance in 1998, indicating the possibility of serious misalignment of the exchange rate (see Chart II.6). The results also suggest that Malaysia's current account is more responsive to foreign rather then domestic output gaps. This may reflect the large import intensity of exports, which may tend to reduce the sensitivity of imports to domestic output gaps.

Equilibrium current account

4. This section describes the calculation of an equilibrium current account balance, defined to be the balance that in the medium-run would be consistent with fundamental determinants of saving and investment. Estimates of the equilibrium current account were based on parameter estimates presented in Debelle and Faruqee (1996), with the constant adjusted to set the average error over the sample period to zero. Annual data for 1985–98 were used, obtained from the IMF's WEO and World Bank databases. The equilibrium current account balance for Malaysia was defined as:

$$CA_{EQM} = 3.567 + 0.150(GGB) - 0.040(DEP) - 0.55(YPC) + 0.015(YPCSQ)$$

where CA_{EQM} is the equilibrium current account (expressed in percent of GDP); GGB is the general government balance; DEP is the age-dependency ratio; and YPC and YPCSQ are income per capita relative to the U.S., and its squared value, respectively.

Estimated degree of REER misalignment

5. Following Bayoumi and Faruqee (1998), the term $-[0.1886(M/Y) - 0.1896(X/Y)]$ governs the long-run volume effects of REER changes, and the separate term (M/Y)—after having imposed a long-run elasticity of one for import volumes—expresses the price effect of an exchange rate change in the first year. After substituting the values of (M/Y) and (X/Y) in the chosen base year 1998, the resulting elasticity (in absolute value) of the current account with respect to REER changes is $\varepsilon = 1.05$, implying that a 10 percent appreciation of the REER would lower the underlying current account by 10.5 percent of GDP over the medium term, relative to the base year current account.

6. The change in the REER required to equilibrate the underlying current account and the equilibrium current account is then derived from the expression $(CA_{UND} - CA_{EQM})/\varepsilon$, where ε is the elasticity described above. After substituting the values for $CA_{UND} = 17.3$, $CA_{EQM} = -2.5$, and $\varepsilon = 1.05$ in the base year, the appreciation of the REER over the medium-term required to equilibrate the underlying current account and the equilibrium current account is 18.8 percent, other things constant.

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was imposed on the term (M/Y)(R), which was subsequently used in the calculations of the underlying current account.

III. Malaysia: Financial Sector Issues[1]

A. Introduction

1. **Beginning early in 1998, Malaysia's economic growth slowed and then turned sharply negative.** The deterioration, accompanied by high interest rates, quickly showed up in the nation's financial institutions in the form of rising nonperforming loans (NPLs), strained earnings, and declining capital. This chapter reviews financial sector issues in Malaysia. The sections that follow include background on recent events affecting the sector (Section B), discussions on the structure of the banking system and current banking conditions (Section C), measures introduced to restore financial sector soundness and to strengthen the supervisory and regulatory infrastructure (Sections D and E), and identification of vulnerabilities and conclusion (Section F).

B. Background

2. **Though sharing many characteristics with its regional neighbors, Malaysia has avoided the effects of full-scale financial sector crisis that have wreaked havoc on Indonesia, South Korea, and Thailand.** Characteristics that Malaysia had in common with these other countries were its rapid loan growth in past years (over 26 percent in 1996 and 1997), high level of credit in relation to GDP (160 percent), and significant credit exposures by financial institutions to vulnerable economic sectors (namely property and securities). However, early on in the regional crisis of East Asia (late 1997–early 1998), the general sentiment within the banking community, especially the central bank (Bank Negara Malaysia (BNM)), was that Malaysia would weather the crisis without experiencing significant deterioration in its own situation. This is because its financial institutions had lower NPLs and higher capital, and there was a stronger banking culture, with a better control environment and superior prudential supervision.

3. **These strengths, however, proved to be only relative, as the reality of a sharp downturn in Malaysia's economy took hold, significantly affecting the credit quality, profitability, and capital adequacy among all financial institutions.** In an effort to address the most vulnerable part of the financial system, the authorities embarked early on a strategy to consolidate the finance company sector (with government assistance as needed). This initial effort proved insufficient in the face of the rapidly deteriorating economic environment. Extraordinary action would be needed.

4. **By mid-1998, the authorities augmented the narrowly focused finance company effort, with a strategy to restructure and revitalize the banking system, creating (i) Danaharta to acquire NPLs; (ii) Danamodal to provide fresh capital; and (iii) the**

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[1]This chapter was prepared by Michael K. Moore (ext. 38631) who is available to answer questions.

Corporate Debt Restructuring Committee (CDRC) to help negotiate the restructuring of large corporate loans. The strategy imposes measured market discipline, looking first to the banks and their owners to absorb the costs of restructuring. Loans must be discounted before being sold to Danaharta and new Danamodal capital will come only after shareholders absorb the first loss and experience dilution to their ownership. To establish Danaharta and Danamodal, the government provided the initial capitalization and stood behind the issuance of approximately RM 30 billion in debt funding. The government expects to be repaid when the assets are sold.

5. **On a parallel front, BNM sharpened its supervision over the financial sector by first tightening loan classification requirements and, later, by pushing banks to sell NPLs to Danaharta.** Banks have the incentive to sell NPLs because a nonearning asset is replaced with a negotiable government bond and BNM allows that the discount from each loan sale to Danaharta be written off over an extended time period of up to five years. BNM hired new examiners and increased the frequency of on-site examinations, scrutinizing closer the banks and bank managers. Other strengthening measures at BNM included upgraded supervision over affiliates of banking institutions, including the parent holding company. The parent company and shareholders are now subject to new reporting and to prior approval requirements for borrowings to reduce over-leveraging. BNM is considering making mandatory the establishment of a dedicated financial services holding company that will exclude entities that it does not directly supervise.

6. The rest of this chapter addresses the structure, trend in financial condition, roles of Danaharta, Danamodal, and CDRC, and issues regarding the supervisory and regulatory framework.

C. Structure and Performance of the Banking Sector

Structure

7. **Malaysia has three categories of financial institutions authorized to take deposits. These include commercial banks, finance companies, and merchant banks.**[2] (See Table III.1 for relative market share information for assets, loans, and deposits by institution categories.)

- **Commercial banks engage in retail and corporate banking and are the only institution type able to take demand deposits.** Banks provide other financial services through subsidiaries; these include merchant banking, stock-brokering,

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[2]Malaysia has one pure Islamic bank—Bank Islam (assets RM 5.7 billion)—and financial institutions are able to offer Islamic bank products of interest-free leasing, hire purchase, profit-sharing, and joint-venture financing. At end-1998, Islamic banking represented less than 4 percent of the banking system assets.

insurance, and finance company activities. Foreign banks have operated in Malaysia since before independence in 1959. Current regulation limits new entry of foreign banks to minority equity stakes up to 30 percent and restricts existing banks from opening new branches. Despite the restrictions, foreign banks have maintained an important market share in wholesale and retail banking. At March 31, 1999, Malaysia's 13 foreign banks held 25 percent of loans and 22 percent of deposits in the commercial bank segment (18 percent of loans and 16 percent of deposits for the financial system as a whole).[3]

Table III.1 Malaysia: Banking System (Depository Financial Institutions (DFIs)

(In billions of ringgit, as of March 31, 1999)

Type of Depository Financial Institution	Number of DFIs	Percent of Total	Assets	Percent of Total	Loans 1/	Percent of Total	Deposits	Percent of Total
Commercial banks	35	45	455.8	74	293.6	73	312.8	72
Domestic-owned banks	22	28	349.5	57	221.0	55	243.3	56
Foreign-owned banks	13	17	106.3	17	72.6	18	69.5	16
Finance companies	31	40	120.8	20	87.6	22	95.5	22
Merchant banks	12	15	40.5	7	21.1	5	27.8	6
All DFIs	78	100	617.1	100	402.3	100	436.1	100

Source: Bank Negara Malaysia.

1/ Includes loans sold with recourse to Cagamas.

- **Finance companies are able to offer hire-purchase lending and other types of installment credit to consumers and small businesses, with funding provided primarily from time and savings deposits.** Facing diminishing returns from traditional business lines, finance companies went into riskier real estate and share purchase lending, making them more vulnerable to an economic downturn. Because of the vulnerability, BNM has long pursued the consolidation of the finance company sector. In 1998 five finance companies were absorbed by their affiliated parent banks and two others merged, while in January 1999 BNM assumed control of two other finance companies because of contravention of the Banking and Financial Institutions Act, 1989 (BAFIA), primarily for failure to meet capital requirements.[4] Among undercapitalized finance companies, Danamodal resources will be used only for the

[3]Foreign banks also have minority interests in 12 other domestically owned banks.

[4]These included MBf Finance (assets RM 16.9 billion) and the smaller Kewangan Bersatu (assets RM 2.3 billion).

recapitalization of three, as they meet eligibility criteria.[5] For the others, which are small, sources of new capital must come from owners or other investors.

- **Merchant banks are involved primarily in fee-based activities such as syndication of loans, corporate advisory services, securities underwriting, and portfolio management.** Although they do take commercial deposits and make loans, they can only accept time deposits greater than RM 200,000. In past years lending by merchant banks grew to be a key—and at the time profitable—activity, but with a souring economy the diversion proved very costly. BNM is redirecting merchant banks back to the traditional investment banking and other fee-based activities by introducing restrictions on lending activities.

Performance

8. **The results for the banking system for 1998 were marked by a dramatic rise in NPLs that, because of higher bad debt provisions, adversely affected earnings and capital.** Liquidity improved owing to a more favorable interest rate environment and reductions to reserve requirements.

9. **Signs of asset quality deterioration first appeared in the second half of 1997, then accelerated through 1998 as economic growth turned negative.** NPLs moved from RM 25 billion at the end of 1997 to RM 103 billion at end-March, 1999 (using the 3-month criteria and adding back RM 23 billion in NPLs sold to Danaharta). (See Table III.2 for trend in NPLs both with and without consideration of Danaharta NPL purchases.) Concerned by the growing pace, BNM ordered banks in October 1998 to begin selling those NPLs over RM 5 million to Danaharta so as to reduce the aggregate level to below 10 percent of loans. Without considering the Danaharta loan purchases, the level of NPLs continues to show an increase, but the rate of increase is declining. For the quarters ended September, December, and March, the quarter-on-quarter change was 41 percent, 22 percent, and 13 percent, respectively.

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[5]Eligibility criteria consider an individual institution's systemic importance and the authorities' goal to achieve further consolidation and rationalization of the banking system. Danamodal will recapitalize MBf Finance, Arab-Malaysian Finance (assets RM 16.5 billion) and United Merchant Finance (assets RM 7 billion), as each alone has a size that represents a significant share of the finance company segment.

Table III.2. Malaysia: Trends in Nonperforming Loans 1/

(December 1997-March 1999)

	Dec.	1998				Mar.
	1997	Mar.	June	Sept.	Dec.	1999
			(In billions of ringgit)			
Commercial banks	14.2	22.3	32.4	46.6	44.9	48.1
Finance companies	10.0	14.3	17.5	22.6	25.9	23.7
Merchant banks	1.1	1.8	3.0	5.2	7.2	7.7
Total	25.2	38.4	52.9	74.5	78.0	79.5
Total including loans sold to Danaharta 2/				74.5	91.0	102.6
			(In percent of total loans)			
Commercial banks	4.9	7.6	10.9	15.5	15.0	16.4
Finance companies	9.2	13.6	17.3	23.6	27.1	27.1
Merchant banks	4.8	8.0	13.3	23.1	32.4	36.5
Total	6.0	9.1	12.6	17.8	18.9	19.8
Total including loans sold to Danaharta 2/				17.8	21.3	24.1

Source: Bank Negara Malaysia.

1/ Loans are classified as nonperforming if payments are overdue for three months or more; prior to January 1, 1998, this period was six months. Total loans include housing loans sold to Cagamas.

2/ Loans were first sold to Danaharta beginning Q3 1998.

10. **At end-March 1999, after loan sales to Danaharta, NPLs stood at RM 80 billion or 20 percent of total loans.**[6] Protection from bad debts provided by provisions represented 43 percent of NPLs. The shortfall in protection is covered collateral, which on an individual loan basis represented 82 percent of NPLs based on current appraisals.[7] Table III.3 shows the effect of the September 1998 change in public disclosure requirements by banks, which gave them an option of disclosing NPLs using either a three-month or six-month classification criteria. BNM continues to publish the aggregate NPLs based on both the three- and six-month classification criteria.

[6]The high NPL ratio is not unique in Malaysia's recent history. NPLs grew dramatically as a result of the recession in the mid-1980s, with NPLs reaching as high as 30 percent of loans in 1988, before declining to below 4 percent in 1997.

[7]By regulation, collateral securing an NPL must be valued annually by an independent appraiser. In addition, Danaharta will value collateral for individual loans over RM 5 million as part of its negotiations to acquire NPLs. Malaysia's legal environment is stable and provides good protection to secured lenders.

Table III.3. Malaysia: Asset Quality Indicators

(As of March 31, 1999, except where noted)

Type of Depository Financial Institution	NPLs (In billions of ringgit 1/)		NPLs to Loans 2/ (In percent)		Total Bad-Debt Provision to NPLs 3/ (In percent)		Collateral to NPLs 4/ (In percent as of Feb. 28, 1999)	
	3-Month	6-Month	3-Month	6-Month	3-Month	6-Month	3-Month	6-Month
Commercial banks	48.1	32.1	16.4	10.9	50.0	60.7	85.7	74.0
Finance companies	23.7	15.8	27.1	18.0	31.2	45.5	73.3	110.8
Merchant banks	7.7	4.1	36.5	19.7	36.1	58.1	89.9	72.0
Banking system	79.5	52.1	19.8	12.9	43.1	55.9	82.4	84.2

Source: Bank Negara Malaysia.

1/ NPLS are shown gross of interest in suspense ("IIS"). Malaysian accounting calls for the continued accrual of interest on nonperforming loans with an offsetting provision to the IIS account.The IIS balance is a provision equal to the amount of interest accrued but not collected from nonperforming loans.

2/ Loans = total loans plus loans sold to Cagamas (sold with full recourse).

3/ Total bad-debt provision = aggregate of provisions for general, specific, and interest-in-suspense.

4/ Collateral amount = the sum of the value of collateral held against individual nonperforming loans.

11. **NPLs of finance companies remain especially high, averaging 27 percent at end-March (3-month criteria).** Unlike commercial banks, the NPLs of finance companies will not easily be sold to Danaharta, as generally the individual loan size is smaller than the RM 5 million cutoff that Danaharta requires. For the finance company segment as a whole, there will be some relief in NPL levels as more finance companies are absorbed by their parent banks and three finance companies are recapitalized by Danamodal.[8]

12. **The large movement in the exchange rate in the second half of 1997 had little effect on credit quality, because of a long-standing BNM regulation that requires prior approval of loans in foreign currency.**[9] Borrowers had to show that they had foreign currency revenues with which to repay the loan, thereby restricting most foreign currency borrowing to trade finance. Much of the loan growth prior to 1998 was for the financing of the broad property sector. At end-1998, lending to the broad property sector represented 35 percent of total loans, with lending for construction making up over one-third of this exposure.

13. **The banking system reported a RM 2.2 billion pre-tax loss for 1998, down sharply from a RM 7.6 billion profit for 1997.** Despite the loss, the capital base for the banking system increased in 1998 by RM 1.2 billion, reflecting primarily the RM 4.6 billion in new capital provided by Danamodal. The commercial banking segment was marginally

[8]For example, the level of NPLs at MBf Finance and Arab-Finance alone account for 44 percent of the aggregate level of NPLs among finance companies.

[9]The exchange rate depreciated from RM 2.5 per U.S. dollar in June 1997 to RM 4.4 per U.S. dollar in January 1998.

profitable, reporting income of RM 531 million, while the finance company and merchant bank segments each reported losses of RM 2.2 billion and RM 641 million, respectively. The 1998 results reflected the needed bad-debt provisions and reduced net interest income due to higher interest expense. In 1998 Malaysia's banks made RM 12.8 billion in provisions, which was more than twice the level of the previous year.[10] At year-end, nine financial institutions did not meet regulatory capital requirements. Five of these are affiliated with the Sime and Bumiputra bank groups, and MBf Finance, which are in the process of resolution with government assistance. The remaining four are small finance companies that are under close BNM supervision (Table III.4).

Table III.4. Malaysia: Income and Capital Adequacy Indicators

(For the period ended December 31, 1998)

		Capital Adequacy			Profitability		
Type of Depository Financial Institution	Number of DFIs	Number of DFIs Under-capitalized	Tier 1 to RWA 1/ (In percent)	Capital Base to RWA 1/ (In percent)	Number of DFIs Reporting Losses	Profit Before Tax (In millions of ringgit)	ROA 2/ 3/ (In percent)
Commercial banks	35	1	9.9	11.7	13	530.9	0.1
Finance companies	31	7	8.7	11.1	23	(2,149.6)	-1.6
Merchant banks	12	1	12.9	15.2	10	(641.2)	-1.5
All DFIs	78	9	9.9	11.8	46	(2,259.9)	-0.3

Source: Bank Negara Malaysia.

1/ RWA = risk-weighted assets.
2/ ROA = return on assets.
3/ Return is profit before tax to average 1998 assets.

14. **Prior to the crisis period (before 1998) most financial institutions enjoyed relatively stable liquidity provided primarily through domestic deposit funding in ringgit.** Although the banking system experienced dramatic loan growth through 1997 (annual loan growth for 1996 and 1997 was 28 percent and 27 percent, respectively), that growth was largely funded by increases in deposits (annual deposit growth for 1996 and 1997 was 26 percent and 21 percent, respectively). Hence, for the system as a whole, the loan growth was matched by increases in deposits, which generally are a more stable funding source.

15. **The liquidity picture changed in the second half of 1997, as there was a flight to quality phenomenon that adversely affected several of the weaker banks and finance companies.** BNM stepped in with liquidity support, providing as much as RM 34 billion in 1998 to weakened financial institutions. Liquidity needs dissipated after BNM lowered the statutory reserve and the liquid asset requirements; the statutory reserve requirement (SRR)

[10]Total bad-debt provision is the aggregate of provisions for general, specific, and interest-in-suspense.

was reduced from 13.5 percent to 4 percent in four moves from February to September 1998 and the liquid asset reserve (LAR) was reduced from 17 percent to 15 percent in September 1998. To further calm depositors, BNM issued a statement in January 1998 that the government would fully protect deposits.[11] The implementation of the restructuring program has been a factor in the restoration of depositor confidence.

16. **Besides loan sales to Danaharta, the moderating NPLs are linked to lower interest rates.** The Base Lending Rate (BLR), which is set by BNM and serves as the primary index rate, is now at 7.5 percent and projected to move lower in coming quarters. BNM enforces a ceiling of 2.5 percent over the BLR as the maximum that banks can charge borrowers for most types of loans. The ceiling imposes some discipline on banks, as it prevents pricing commensurate with higher risk lending; consequently, banks are forced to seek out higher quality borrowers. As well, BNM is pushing financial institutions to maintain their lines and identify new lending opportunities. The lowering of interest rates has facilitated the restructuring of NPLs, lessening the likelihood that weak borrowers will become delinquent and encouraging creditworthy borrowers to take out new loans.

D. Restoration of Financial Sector Soundness— Role of Danaharta, Danamodal, and CDRC

17. **The multiprong strategy involving Danaharta and Danamodal to acquire NPLs and recapitalize banks, as well as the CDRC to facilitate debt workout by large borrowers, represents a credible plan to restructure Malaysia's financial sector.** The implementation reflects the strong efforts to preempt extreme financial sector distress by pushing banks and borrowers to restructure early. Danaharta will purchase at market value the NPLs that cannot be restructured. To the extent that losses from loan restructuring or sales to Danaharta cause undercapitalization in banks, the government will provide new capital, taking a stake proportionate to its interest. The multiprong program is coordinated through a steering committee chaired by BNM's Governor, which meets every two weeks.

18. **The primary funding for both Danaharta and Danamodal is through the issuance of zero-coupon bonds.** Danaharta bonds carry an explicit government guarantee and are issued to banks as needed in exchange for the purchase of NPLs. Danaharta is authorized to issue up to RM 15 billion (face value) in zero-coupon bonds and has RM 1.5 billion in capital provided by the ministry of finance. The Danamodal bonds have an implied government guarantee as Danamodal is owned by BNM. The Danamodal bonds were issued in conjunction with the lowering of the BNM's statutory reserve requirement. Pricing and liquidity for bonds issued by Danaharta and Danamodal are a function of the market for Malaysian government securities, which trade readily in the secondary market.

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[11]Replacing the guarantee with a deposit insurance system funded by the industry will be considered in the context of a study on deposit insurance.

The bonds are frequently retained by banks, as they count toward BNM's LAR, are fully eligible for discount, and carry a zero risk-weight for regulatory capital purposes.

Danaharta

19. **The life cycle for Danaharta is comprised of four phases: (i) establishment; (ii) acquisition; (iii) asset management; and (iv) exit.** During the establishment phase, the government resolved to push through legislation that gave Danaharta special powers over borrowers. Key aspects of the Danaharta legislation are: (i) special vesting powers insulate Danaharta and subsequent purchasers from undisclosed claims made after Danaharta acquires the NPL from the selling bank; (ii) Danaharta is able to appoint special administrators without having to go to court; and (iii) when Danaharta forecloses on collateral, it can abrogate underlying contracts.

20. **Danaharta will have a limited life, intended to be less than ten years.** Its board, which is appointed by the government, is comprised of a chairman (former senior government official retiring in 1988), Danaharta's managing director, two directors from the government (finance ministry and BNM), and five other directors from the private sector, of whom two represent the international community. Danaharta's staff has been sourced from the private sector and compensation includes performance incentives tied to the success in selling loans and collecting on assets. Decisions on asset sales only require the approval of the board and for smaller transactions certain managers have decision authority.[12]

21. **Through March 1999, Danaharta had acquired RM 23 billion in NPLs from 37 financial institutions, with loans purchased representing a quarter of total system NPLs.** The average price has been about 60 percent below book value. Excluding one large loan, however, the discount has been 37 percent. Danaharta will complete the first phase of loan purchases by midyear, focusing next on asset management and restructuring. After midyear, Danaharta will only purchase new NPLs arising after September 30, 1998.

22. **Danaharta's financing needs were based on the principle that it would only purchase NPLs over RM 5 million.** Further, Danaharta will only manage the assets of Sime and Bumiputra on behalf of the government.[13] For the Sime and Bumiputra loans, while there is no associated funding requirement, there is a cost paid in terms of time on Danaharta's staff.

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[12]Certain regulatory approvals will be required for certain asset purchases, e.g., the purchase of a stock-brokering company requires the approval of the Securities Commission.

[13]The special management arrangement stems from the government-assisted merger of Sime and Bumiputra with stronger banks, RHB and Bank of Commerce, respectively. BNM will retain ownership of the NPLs that are to be managed by Danaharta. At year-end 1998, Danaharta was managing RM 11.6 billion in NPLs on behalf of Sime. Arrangements for Bumiputra have not been finalized.

The Sime and Bumiputra loans under management range in size down to RM 1 million, compared to the RM 5 million minimum for loans that Danaharta purchases for its own account.

23. **To speed up loan restructuring and achieve meaningful reduction in overall NPL levels, Danaharta and BNM created incentives for banks to participate.** In October 1998, BNM forced banks to sell NPLs, requiring that they consider offers from Danaharta on individual NPLs over RM 5 million. There are four important incentives to sell NPLs to Danaharta:

- Banks selling NPLs to Danaharta retain a right to receive at least 80 percent of any profits realized when Danaharta subsequently sells the loan or liquidates the underlying collateral.

- Banks avoid the immediate recognition of any loss that would normally result when an asset is sold below its book value as they are allowed as much as five years to amortize the difference between the book value and the sale price (see discussion of forbearance below).

- Banks will exchange a nonearning, illiquid NPL for a bond that generates income and is readily marketable. Moreover the bonds have zero-risk weight for regulatory capital purposes.

- A bank that declines an offer from Danaharta for the purchase of an NPL must make a provision that brings the value of the NPL down to 80 percent of the offer price.

24. **As the banks are able to avoid the immediate recognition of any losses, there is an element of accounting and regulatory forbearance from those loan sales to Danaharta.** However, because the Danaharta design encourages banks to sell NPLs at reduced prices with the expectation that they will realize some recovery when the loan/asset is sold, the extent of forbearance is more limited in practice. The amount that is deemed recoverable from Danaharta is reported as a deferred asset that in all cases is written down by at least 20 percent each year. The bank's external auditor (and BNM) checks the value of the deferred asset at least annually. If the review determines that there is additional impairment, the amount of the write-down would be more than 20 percent in a given year. In any event, when Danaharta sells the loan or otherwise collects on the collateral and the true extent of losses, if any, can be determined, the selling bank must recognize this immediately. One must recognize that this feature may lead to Danaharta being pressured not to sell loans.

25. **While the strong push to show reduction in NPLs could result in pressure on Danaharta to overpay, the occurrence has not been observed.** An indication that appropriate valuations are taking place is that selling banks have rejected offers on RM 4.2 billion in book value of NPLs because the offers from Danaharta were believed to be too low. In these cases the selling banks believed that they are in a better position to resolve certain NPLs.

26. **While on schedule in purchasing NPLs, loan or asset sales will only just begin in the second half of 1999.** Close monitoring is warranted to ensure that Danaharta does not become a warehouse for NPLs.

Danamodal

27. **Given the nature of government support, Danamodal's design has built-in safeguards to reduce moral hazard and protect against downside risk.**

- Before investing, existing **shareholder equity must absorb the first losses.**

- **Independent valuations of each investment by Goldman Sachs or Salomon Smith Barney are required** in advance of Danamodal recapitalization followed by a review by BNM's supervision and regulation departments.[14]

- **Danamodal's injection needs to restore capital to an adequate level** (recapitalized banks have an initial capital adequacy ratio above 14 percent) and NPLs need to be reduced to less than 10 percent within one year.

- **Danamodal participates in directing bank management through its representation on the boards of directors.** Danamodal will appoint at least two board members. At least one of the directors is to be either an executive director (a full-time director's position) or the chairman of the board. Additional board members will be appointed commensurate with the injection of Danamodal capital. Participating banks must submit a monitorable business plan that looks at management structure, strategy for NPLs, profitability, and cash flow.

- **Danamodal will have the opportunity to participate in any upside to the valuation of the institution, when it sells its interest.**

28. **Danamodal with funding of RM 11 billion has injected RM 6.2 billion as fresh capital into 11 banking institutions that represent approximately one-fifth of the banking system by assets.**[15] Initially, the Danamodal investment was Tier 2 subordinated debt that will be converted into equity, debt, or a hybrid capital instrument. Table III.5 lists those financial institutions participating in the recapitalization program and provides information on the type of capital and the percentage stake to be taken by Danamodal.

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[14]Salomon Smith Barney is also working closely with Danamodal to complete a blueprint for the banking system. The blueprint helps to guide Danamodal in determining which institutions to assist and under what terms.

[15]Funding comprised of RM 8 billion in zero-coupon bonds and RM 3 billion in capital provided by BNM.

Though Danamodal had projected a total funding requirement of up to RM 16 billion, improving market conditions and recapitalization by current shareholders now indicate that the RM 11 billion in funding raised to date will be sufficient. A second group of 11 financial institutions, originally slated for capital injections, now appear not to need assistance.[16] There is RM 4.7 billion in funding still available for additional capital injections as needed.

Table III.5. Malaysia: Danamodal Investments-to-Date
(Investments as of May 1999)

Institution	Assets as of March 31, 1999	Interim ESCL Funding 1/	Final Investment Structure (As per definitive agreement) Ordinary Shares	INCPS Shares 2/	Subordinated Debt	Total	Danamodal Share of Tier 1 Capital (In percent)
Arab-Malaysian Bank	12,615	800		200	600	800	63
Arab-Malaysian Merchant Bank	14,823	200			200	200	0
Arab-Malaysian Finance	16,453	500		300	200	500	31
BSN Commercial Bank	6,943	420		420		420	67
MBf Finance	16,982	1,600	362	1,238		1,600	78
Oriental Bank	8,888	700	250	300	150	700	64
Perdana Merchant Bankers	657	50		(Not finalized yet)			
RHB-Sime Bank 3/	51,482	1,500		1,000	500	1,500	34
Sabah Bank	2,745	140	24	72	26	122	35
United Merchant Finance	6,964	317		317		317	57
Totals	138,552	494	636	3,847	1,676	6,159	

Source: Danamodal.

1/ Exchangeable subordinated capital loan.
2/ Irredeemable noncumulative convertible preference shares.
3/ Counts as two institutions to reach a total of 11 receiving Danamodal capital.

29. **Foreign banks have an interest in purchasing distressed banks and finance companies.** Opening the market to new foreign bank entry would help Danamodal sell the stakes it owns in several banking groups.[17] The authorities are considering proposals by foreign banks already in Malaysia to bid on distressed finance companies.[18] Malaysia

[16]Four institutions will receive official support outside of the Danamodal process. Bank Bumiputra and Bank of Commerce will be merged with government assistance, Perwira Affin is to be merged with BSN Commercial and will not receive separate recapitalization, and Utama Merchant will be recapitalized by its existing shareholders. Bumiputra and Perwira Affin have substantial government ownership.

[17]Under the current framework, foreigners can buy up to 30 percent of the equity of an individual banking institution.

[18]The 13 foreign banks operating in Malaysia are ABN Amro Bank, Bangkok Bank, Bank of America, Bank of Nova Scotia, Bank of Tokyo-Mitsubishi, Chase Manhattan Bank, Citibank,

(continued...)

imposed limits on foreign banks to favor development of the domestic banking sector. As there is consolidation in the years ahead—the government-assisted mergers of Bumiputra/Bank of Commerce and Sime Bank/RHB are examples of this consolidation—domestic banks will be better positioned to compete and current arguments limiting foreign bank entry will be less relevant. In the years ahead, the authorities will have to look closely at foreign banks as they endeavor to sell the stakes of banks that they hold through Danamodal. Keeping the market closed to new entry could well affect the success of the restructuring effort.

CDRC[19]

30. **The CDRC was created with BNM's sponsorship to facilitate debt restructuring by large borrowers.** The CDRC employs the London Approach for informal debt workout and is presently reviewing 57 applications totaling RM 31 billion. Through May, nine companies with debt outstanding of RM 2½ billion have been restructured. Since creation, 13 cases have been rejected and turned over to Danaharta for resolution. The CDRC reviews only the largest loans (those over RM 50 million), where the underlying business remains viable. In conjunction with the acceptance to negotiate under CDRC, rights to collateral continue and creditors consent to a sixty-day standstill and agree to maintain credit lines.

31. **While the CDRC is still very new and experiencing some growing pains, the perception among many lenders is that the CDRC process unduly favors the borrowers.** Important to the credibility of the CDRC is that the process ensures equitable treatment for creditors and borrowers. The issue of equitable treatment will be important to the Danaharta process as well, as it will be important that the outcome of debt restructuring under CDRC not be perceived as more generous than that obtainable under Danaharta. To the extent that there is favoritism—either real or perceived—toward borrowers, some degradation in overall effectiveness will result. The CDRC effort must be observed as one that balances the pain of restructuring between lender and borrower so as to avoid systemic problems and contain moral hazard.

E. Strengthening Supervision and Regulation of the Financial Sector

32. **BNM exercises tight control over the banking system.** Financial institutions are carefully monitored and submit detailed financial statements on a quarterly, semi-annual, and yearly basis, with supplemental balance sheet information provided weekly and monthly. BNM uses a CAMEL-based approach to supervision for both its on-site examinations and

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Deutsche Bank, Hongkong and Shanghai Banking Corporation, Overseas Chinese Banking Corporation, Overseas Union Bank, Standard Chartered Bank, and United Overseas Bank.

[19] More details are provided in Chapter IV: "Issues in Corporate Sector Restructuring."

off-site monitoring, placing special emphasis on capital adequacy, asset quality, and management.[20]

33. **After having been made more rigorous in March 1998, public disclosure requirements by banking institutions were relaxed from quarterly to semi-annual in September 1998 and banking institutions were given an option of reporting publicly the NPLs using either a default measure of three months or six months.** The relaxing of the frequency for public disclosures and changes to the default period for NPLs was broadly perceived to be forbearance. As a result, banks were able to report their results less frequently and in the case of NPLs, they could elect to disclose results in a more favorable way.[21] The relaxation does impede the effectiveness of market participants in providing discipline over the behavior of bank managers.

34. **As for provisioning and loan classification requirements, in September 1998, BNM relaxed the classification and provisioning requirements, which had been made more stringent effective January 1998.** The September change called for classification according to number of months in default as follows: substandard was six to nine months, doubtful was nine to twelve months and bad was after twelve months. Banking institutions were not automatically required to provide a 20-percent specific provision on substandard loans, instead provisioning for the substandard would be assessed for each banking institution by BNM during the approval of half-year and annual accounts. In March 1999, the guidelines were changed again. The loan grades correspond to the likelihood that the loans will be repaid, and, at a minimum, consider the number of months that a loan has been in default. As well, the loan classification designations set out the minimum provisioning requirements (Table III.6). Once a loan is classified nonperforming, interest accrual shall be credited to "interest-in-suspense," with any interest recognized up to the date the loan is classified as nonperforming to be reversed.

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[20]CAMEL is a rating methodology used by many supervisors to evaluate a bank's condition along five key measures: Capital adequacy, Asset quality, Management, Earnings, and Liquidity.

[21]Of the 78 banking institutions, 21 have retained the three-month NPL classification criteria, and they account for 46 percent of the total system loans.

Table III.6. Malaysia: Loan Classification and Provisioning Requirements

(Effective March 24, 1999)

Classification	Specific Provision on the Shortfall in Collateral Value	Period of Default	
		Repayment Schedule on Intervals of Three Months or Longer	Bankers Acceptances, Trust Receipts, Bills of Exchange
Substandard, unless there is evidence to support a worse-off classification	20 percent provisioning unless overall loan loss provisions are adequate	Three months from the first day of default but less than six months	One month from the first day of default but less than two months
Doubtful, unless there is evidence to support a worse-off classification	50 percent	Six months from the first day of default but less than nine months	Two months from the first day of default but less than three months
Bad	100 percent	Nine months and above from the first day of default	Three months and above from the first day of default

Source: Bank Negara Malaysia.

35. **In other areas, Malaysia continues to make progress in strengthening its supervisory and regulatory framework.** Measures taken toward this objective have included:

- **The frequency of on-site examinations for all banking institutions will be increased to at least once a year and the examinations will be conducted on a consolidated basis.**[22]

- **Supervision over affiliates of banking institutions, including the parent holding company, has been tightened.** Twice each year, financial institutions must obtain BNM's approval of their financial statements. The approval is required before the results can be published and dividends declared. The approval process entails a detailed review of asset quality that considers the adequacy of provisions and value of collateral.

- To complement the on-site examination process and annual review of accounts, **BNM is putting in place a system of prompt corrective measures that mandate certain actions by bank managers and owners, depending on breaches of capital or other prudential limits.** The measures should enable BNM to work with management and owners to resolve potential problems in a more timely manner.

[22]Annual examinations were already required for financial institutions on BNM's watch list.

- **BNM has adopted the BIS risk-based capital framework and requires that all banking institution categories maintain a total capital ratio of at least 8 percent.** Since March 1998, the minimum capital requirement has been applied on a consolidated basis against the financial institution and its subsidiaries. Revisions to the capital framework are under way that would impose a higher minimum capital ratio depending on loan concentrations and exposures to different economic sectors. Work is also under way to amend the capital guideline to consider market risk.

- **In April 1999, BNM abolished its two-tier regulatory system (TTRS) for financial institutions.** The design of TTRS prompted banks to raise capital as it gave preferential treatment to the so-called Tier 1 banks, whose capital exceeded RM 1 billion. Privileges for Tier 1 banks included freedom to offer foreign currency accounts and open new branches. The goal of TTRS was for domestic banks to merge in order to build their capital base and achieve the Tier 1 status. Instead, TTRS led to overleveraging by holding companies and controlling shareholders that borrowed to inject new equity into banks. In turn, banks engaged in riskier activities because they needed to generate higher earnings in order to pay dividends to the parent company and shareholders so that they could service their debt.

- **Difficulties with TTRS point to weaknesses in the area of consolidated supervision.** Within the existing BAFIA, there is scope for an expanded supervisory role by BNM over the affairs of those holding companies that own banking institutions. BNM is moving to remedy the TTRS incentive problem by forcing bank owners (shareholders or holding companies) to create a dedicated financial holding company to hold banking institutions. Financial entities that fall outside of BNM's jurisdiction are to be disassociated from the holding company. These companies would be required to consolidate their financial reporting at the dedicated holding company level, and BNM would be able to impose risk-based capital requirements, as the entities would be of a similar nature. As a preliminary step, BNM has imposed new regulatory reporting and prior approval requirements for borrowings at the holding company and shareholder levels so as to reduce overleveraging in the banking system.

- **BNM announced to bank managers that they and their directors would be subject to regular reviews for their fitness as bankers.** The measure was intended as a process to ensure that executives remain accountable. The primary criteria for assessing performance are the fit-and-proper standards found in the BAFIA. Other criteria will be the performance by executives toward achieving an 8-percent loan growth target. The target growth rate is for the system as a whole and applies to all banks that have capacity, including foreign banks. While prompting more loans, BNM continues to emphasize that banks must appropriately consider the risks when authorizing credit, as they remain responsible for any loan losses.

- **Following an earlier change to the single customer limit, which reduced from 30 percent to 25 percent the maximum that a bank can lend to a single customer**

as a percent of capital, BNM will revise its policy on loans to related parties. The revised policy will add controlling shareholders to the list of parties that are to be considered related. Controlling shareholders are those that control 20 percent or more of a financial institution's shares. Previously, the definition of related parties included only directors, employees, and their immediate family members.

- **Beginning in January 2000, the new liquidity framework will replace the current LAR requirement.** Under the LAR framework, banking institutions had to hold liquid assets equivalent to an inflexible fixed percentage (15 percent at end-1998) of liabilities. **The new liquidity framework gives both the financial institution and the supervisor a good tool to monitor individual bank liquidity.**

F. Vulnerabilities and Conclusion

36. **Starting from a position of several strengths, Malaysia has made progress in alleviating problems affecting its financial system.** Early strengths were the high capital and low level of NPLs of its financial institutions, and a well-developed banking and credit culture based on an effective accounting, legal, supervisory, and regulatory framework. The relative strength of the supervisory and regulatory environment imposed important discipline that contributed toward the system's resilience.

37. **These strengths did not prevent significant financial sector distress but slowed down the impact, providing valuable time to assess and react.** While there are still many risks, the strategy for the financial sector appears to be effective, but more time will have to pass to determine the strategy's ultimate success. Malaysia will have several difficult quarters ahead, during which the banking system will remain vulnerable. Vulnerabilities include the following:

- Despite early success, the initial recapitalizations and purchases of NPLs could prove insufficient to the extent that the economy does not return to stable growth. **The trend in NPLs could reverse course and pick up again.** That is, if the "hole" is underidentified or grows substantially larger, the programs may have to be reopened and/or transactions restructured. This could raise the cost of the support program and, depending upon the circumstances, undermine confidence in the banking system or the government's ability to manage the problem.

- **Though Danaharta is very much on schedule in relieving NPLs from the system, there is reason for concern that it could become an NPL warehouse.** Transaction volume to date has been largely loan acquisition followed by some success with debt restructuring. However, there needs to be progress with asset sales and foreclosures, which are not expected until the second half of 1999. Danaharta may come under pressure not to sell assets because, to the extent that Danaharta does not recognize a gain on the sale, the original selling bank will need to recognize a loss from the further write-down of its deferred asset. Close monitoring is warranted to ensure that Danaharta remains effective as an asset management company.

- **Notwithstanding the best efforts of Danamodal to replace directors and install better qualified chief executives in financial institutions, it could happen that inadequate, ineffective, or otherwise deficient management teams remain.** In such a scenario, after substantial recapitalization costs borne by the industry, the restructurings do not prevent recurrence of a similar problem in the years ahead.

- **It could turn out that loan growth does not materialize, or worse, there is growth but the new loans subsequently deteriorate.** Prompting by BNM that banks grow their loan portfolios to relieve the "credit crunch" appears to be taking hold as loan officers are finding customers. Early indications are that loan originations are up since the start of 1999. Nevertheless, the new loans are too unseasoned to tell if they are of sufficient quality to generate stable interest income and repay at maturity. Banks still reeling from the difficult business climate of 1998 have been cautious and have directed most new lending to homebuyers. In order for the desired kick-start to the economy from renewed lending to materialize, there will need to be some pickup in loans to manufacturing sectors.

IV. Malaysia: Issues in Corporate Sector Restructuring[1]

A. Introduction and Summary

1. **Issues relating to the corporate sector, especially those related to its financial and governance structures, have recently risen again to the limelight**, largely because of the role they have played in the currency and banking crises in Asia during the past two years. In particular, researchers and policymakers have become interested in the sources of corporate sector distress, the links between vulnerabilities in the corporate capital structure and broader financial sector distress, and methods of resolution of corporate sector problems. In this paper, the focus is on the corporate sector in Malaysia which, like in the other crisis countries, has been badly hit by the financial and economic crisis of the past two years. In particular, the paper attempts to provide the context for the current situation in the corporate sector in Malaysia, assess the causes and the extent of distress, describe the authorities' efforts to address problems in the corporate sector, and provide recommendations for how this process may be improved as well as for measures to safeguard against the recurrence of widespread problems in the future.

2. **The rest of the paper is organized as follows**: Section B provides a brief historical background sketch of the development of the private sector in Malaysia; Section C describes key financial characteristics of the corporate sector; Section D outlines the impact of the crisis on the corporate sector; Section E describes the strategy that the authorities have adopted to deal with financial restructuring and strengthening corporate governance, and makes recommendations for improvements; and Section F contains some concluding remarks.

3. **The main findings** are that Malaysia's corporate sector vulnerabilities are partly a result of the ownership structure, particularly the large number of diversified holding companies, and the capital structure, which was characterized by a substantial degree of leveraging.[2] The impact of the crisis has been significant, and was transmitted to economic activity both through the impact on consumption and investment of the negative wealth shock, and on cash flows of the change in the exchange rate and interest rates. Several measures have been taken to address the immediate priorities of financial restructuring of the corporate sector. In addition, the authorities have also begun to design and implement reforms to strengthen corporate governance, and regulatory reforms to prevent the reemergence of the fragilities in the corporate capital structure. In addition to completing the reform agenda that has been launched, the key priorities for the future are to ensure that the

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[1]This chapter was prepared by Kalpana Kochhar (ext. 38770) who is available to answer questions.

[2]This paper does not, however, undertake a comparative review of Malaysia's corporate capital structure relative to other countries.

process of debt restructuring is transparent and balances the interests of debtors and creditors, and that sufficient operational restructuring accompanies the debt restructuring.

B. A Historical Perspective on the Development of the Corporate Sector in Malaysia

4. **The development of the corporate sector in Malaysia is closely related to the government's policy of developing the private sector to promote industrialization while restructuring society in terms of ownership and participation.** In response to the race-based social tensions in the late 1960s, the government launched in 1971 the New Economic Policy (NEP), which equated national unity with greater equity among the ethnic Malays or bumiputras, and the Chinese and Indian populations. The primary thrust of the NEP was "accelerating the process of restructuring Malaysian society to correct economic imbalance so as to...eliminate the identification of race with economic function...and the creation of a Malay commercial and industrial community..." The measures designed to empower the bumiputra population focused on developing Malay entrepreneurship and providing Malay businessmen with the finance and facilities necessary for success. The NEP set specific quantifiable goals for ownership distribution as follows: "Within two decades, at least 30 percent of the total commercial and industrial activities...should have participation by Malays...in terms of ownership and management."

5. **To accelerate the increase in bumiputra ownership, the government introduced the Industrial Coordination Act (ICA) in the mid-1970s with the key provision being that the granting of industrial licenses would be conditional on compliance with NEP ownership guidelines.** The primary instrument for promoting the position of bumiputras was the requirement that at least 30 percent of initial public offerings (IPOs) of companies being listed on the Kuala Lumpur Stock Exchange (KLSE) be allocated to bumiputra investors. However, given the relatively small group of qualified bumiputras at the time, the fulfillment of the ownership requirement was proving difficult. Initially, a small select group of bumiputras was allocated shares at a substantial discount. To widen bumiputra ownership significantly, discounted corporate shares were given to unit trusts set up by Permodalan Nasional Berhad (the National Equity Corporation or PNB). Also, large state-owned corporations—PERNAS, a state investment holding company, MARA, a trust for ethnic Malays, and State Economic Development Corporations (SEDC)—were set up to promote bumiputra participation. Bank Bumiputra was set up, primarily to extend credit to bumiputra businesses at concessionary rates. Amongst the early investments of PNB and PERNAS were the purchase of the large British firms such as Sime Darby, London Tin, etc.

6. To minimize the disincentive effects on investment of the ownership restrictions, the authorities remained pragmatic and amended the rules and guidelines, over time, to grant exemptions to firms that were export- and high-technology oriented. Annex I summarizes the ownership restrictions in Malaysia as they currently stand. Most recently, in an attempt to accelerate the recovery and induce foreign investment inflows, the authorities have announced that, for new manufacturing projects commencing between July 31, 1998

Table IV.1. Malaysia: Ownership of Share Capital (At Par Value) of Listed Companies[1]
(In percent, unless otherwise specified)

Ownership Group	1985	1990	1992	1995	1998
Bumiputra	18.5	19.2	18.2	20.6	19.4
Individuals and institutions	11.3	14.1	15.9	18.6	17.7
Trust funds[2]	7.2	5.1	2.3	2.0	1.7
Nonbumiputra	49.5	46.8	40.0	43.4	41.1
Chinese	48.2	45.5	37.8	40.9	38.5
Indians	0.9	1.0	1.1	1.5	1.5
Other	0.4	0.3	1.1	1.0	1.0
Foreigners	24.0	25.4	32.4	27.7	31.8
Nominee companies	8.0	8.5	9.5	8.3	7.7
Memorandum item: Total value of share capital (RM billion)	83.1	108.4	130.9	179.8	294.6

Source: Data provided by the Malaysian authorities.

1/ Excludes shares held by federal, state, and local governments.
2/ Shares held through trust agencies, such as PNB, and the SEDCs.

and end-2000, all restrictions on equity ownership and export content will be waived.[3] Table IV.1 summarizes the change in the ownership structure between the 1970s and the 1990s.

7. **The second factor underlying the development of the private sector in Malaysia is the state-led process of industrialization.** The aim was to move Malaysia from a commodity-based economy producing tin, palm oil, and rubber to a manufactured goods producer. The authorities saw the development of heavy industries as the key part of this process as it would have important spillover effects to other sectors of the economy. A company—HICOM—was set up to be responsible for the development of heavy industry in Malaysia and the flagship company was the automobile manufacturing plant Proton. This and other companies (e.g., Perwaja Steel) were developed with the aid of large subsidies from the government.

[3]Under the new guidelines, foreign investors can hold 100 percent of equity irrespective of the level of exports. This will apply to all manufacturing projects, except those where domestic small- and medium-scale enterprises have the expertise. As long as the project retains its original features, there will be no need to restructure its equity after 2000.

8. **After a brief period of import substituting industrialization, the focus shifted to one of export orientation in the early 1970s.** To promote exports and investment in export-oriented activity, the government set up several incentive schemes. Important amongst these were Pioneer Status (offering tariff and tax exemptions for 5–10 years) and Investment Tax Credit which offered tax exemptions equivalent to the amount of investment incurred in the incentive period. Free trade zones were established in 1972. These incentives generated a steady influx of export-oriented firms in the 1970s, but it was not until the late 1980s that investment surged, as in the rest of the region. Investment rates averaged 30 percent in the 1980s and 35 percent in the 1990s. Between 1989–95, foreign direct investment (FDI) averaged nearly 7 percent of GDP compared to an average of 3 percent between 1975 and 1988. Much of this FDI was concentrated in export-oriented manufacturing industries. Consequently, exports rose from about 43 percent of GDP in the mid-1970s to nearly 80 percent of GDP in the mid-1990s.

9. **A final aspect that helps to understand the evolution of the corporate sector in Malaysia is the process of privatization that has been pursued since the late 1980s/early 1990s.** By that time, it had become clear that purely state-owned enterprises were not the best vehicles for achieving both rapid growth and social goals. By some estimates, the number of firms with substantial state involvement in 1991 was close to 1400, with some 900 being nonfinancial public enterprises (NFPEs). Of the latter, the number of large NFPEs was 46.[4] As of the end of 1998, this number stands at 28. The first steps involved "corporatization" of public enterprises such as Telekom, Tenaga, etc., by listing them on the KLSE and selling part of the government's shares, while retaining majority ownership.[5] These were large companies and contributed to the rapid expansion of total market capitalization and to making the KLSE one of the largest stock markets in the region. For example, by 1995, 18 privatized corporations were listed on the KLSE and added nearly 25 percent to total market capitalization at that time. The next steps took the form of increasing private sector participation by privatizing new infrastructure projects. In the initial phases, the award of privatization contracts was done to directly promote the objectives of increasing bumiputra participation in productive activity. Over time, the procedures used to award these contracts have been criticized for being nontransparent, favoring well-connected firms, using government guarantees for loans from the banking system or from the Employees Provident Fund (EPF) without adequate studies of the efficiency of the project and its returns, and creating governance problems and unsound relationships between banks and the private sector. In recent years, the procedures governing privatizations have been reformed; awards of projects are no longer based on exclusivity and have increasingly been subject to more open-bidding practices.

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[4]Perkins (1998).

[5]Some important earlier privatizations were that of Malaysian Airlines System and Malaysian International Shipping Corporation in the late 1980s.

10. **The effects of the government's efforts to diversify the economy and alter the ownership structure are illustrated in the tables below.** The diversification away from agriculture and resource-based sectors is evident from Tables IV.2 and IV.3 which show the rapid growth in the share of the secondary and tertiary sectors and the share of manufactured exports in total exports.

Table IV.2. Malaysia: GDP by Sector of Origin, 1960–95
(In percent of GDP)

	1960	1965	1970	1980	1990	1995
Primary	44	40	39	31	28	21
Secondary	12	15	18	25	30	36
Tertiary	44	45	43	44	42	43

Source: Data provided by the Malaysian authorities.

Table IV.3. Malaysia: Composition of Exports, 1960–97
(In percent of the value of total exports)

	1960	1970	1980	1990	1997
Rubber	55.2	33.4	16.4	3.8	2.2
Tin	14.0	19.6	8.9	1.1	0.3
Crude Petroleum	--	3.1	23.8	13.4	3.6
Palm Oil	1.7	5.1	8.9	5.5	5.6
Manufactured goods	16.3	11.0	22.3	58.8	80.0

Source: Data provided by the Malaysian authorities

C. Key Characteristics of the Corporate Sector and the Buildup of Vulnerabilities

11. **The corporate sector in Malaysia in the 1990s is characterized by very rapid growth.** Between 1991 and 1996, the number of listed companies grew by an annual average of 14 percent, and total market capitalization of the companies listed on the main and second boards of the KLSE grew at an annual average rate of 40 percent. This section outlines some of the characteristics of the corporate sector and the reasons for the rapid growth in the sector in an attempt to identify the key sources of vulnerabilities to the effects of the financial crisis.

Ownership patterns

12. **The corporate sector in Malaysia is characterized by a high degree of ownership concentration.**

- In a study of 100 largest corporations in Malaysia, Lim (1981) found a high degree of concentration at various levels: (i) a major proportion of the financial assets and productive capacity of the corporate economy was concentrated in a few large corporations; (ii) the second level of concentration occurs at the level of stock ownership. Notwithstanding the relatively large market capitalization of the stock market in Malaysia, stocks are not widely distributed and are concentrated in the hands of a few institutional and corporate investors; and (iii) a third level of concentration is of control over the large corporations. A complex system of interlocking or pyramiding stock ownership has developed which enables a few individuals and entities to control an amount of capital many times more than what they actually own.[6] In practice, the main form of "pyramiding" or cross-holdings in Malaysia took place through holding companies which own a minor but significant proportion of shares in a large number of corporations.

- More recently, La Porta et al. (1998) and Claessens et al. (1999) have conducted studies of the ownership of corporations across East Asia using data from a large number of financial and nonfinancial corporations. The following are the key findings:

  On ownership concentration, Claessens et al. find that: (i) using a cut-off line of 20 percent of voting rights, it was found that about ⅔ of all Malaysian corporations are family-controlled, about 28 percent of market capitalization being controlled by 15 families;[7] (ii) when the firms are weighted by size measured by market capitalization, the proportion of family-controlled firms falls from 67 percent to 43 percent and the proportion of state-owned or controlled firms rises from 13 percent to 35 percent.[8] Likewise, La Porta et al. (1998) also find a high degree of ownership

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[6]Pyramiding is defined by Berle and Means (1932) as "owning a majority of the stock of one company which in turn holds a majority of the stock of another—a process that can be repeated a number of times."

[7]Only Indonesia had a higher proportion of family-controlled firms than Malaysia when the calculations were done without weighting for size.

[8]When adjusted for size, the proportion of family-controlled firms is the highest in Hong Kong and Indonesia, while Malaysia falls close to the Philippines, Singapore, and Taiwan Province of China. However, state ownership is the highest in Singapore (40 percent) and Malaysia (35 percent).

concentration in Malaysia. For example, the average share of common stock owned by the largest three shareholders in the largest companies is 54 percent in Malaysia, compared to 46 percent in Thailand, 20 percent in Korea, 18 percent in Japan, and under 15 percent in the United Kingdom and the United States.

On the structure of assets and means of enhancing control, Claessens et al. (1999) find that: (i) some 40 percent of Malaysian corporations use pyramid structures, including through holding companies; (ii) cross-holdings, defined as when a company has shares in other companies in the chain of controls, are also relatively high in Malaysia (and Singapore) where some 15 percent of corporations have some cross-ownership; and (iii) over 40 percent of the sample firms are affiliated with business groups.[9]

13. **For the purposes of tracing the sources of vulnerabilities in the corporate sector, there are three implications of the corporate sector development strategy:**

- The large private sector companies which were created as part of the industrialization and growth strategy tended also to have close ties to the government and, through loans made at the behest of the government to finance the development strategy, to the financial sector.

- The cross-holding structures may have created additional incentives for "double leveraging" whereby holding companies borrow to inject equity capital into subsidiaries, some of which were financial institutions. As the degree of leverage of the holding company rises, growth in the profits generated by the subsidiaries became necessary to generate the returns to enable the parent to service its debt. In addition, often the shares in the subsidiary company were pledged by the holding company to increase its borrowing. An implication of this leveraging process is that a fall in the equity market has a "multiplier-type" effect in its impact on corporate wealth and cash flows and therefore for the extent of financial distress.

- The existence of significant or controlling shareholders opens up the possibility of poor governance because of the control that a small group can exercise over the firm, effectively acting as insiders. Claessens, Djankov, Fan, and Lang (1999b) find significant evidence of expropriation of minority shareholders by controlling shareholders; in particular, they find that family control (as defined above) is an important factor in this regard.

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[9]See Claessens, Djankov, Fan, and Lang (1999a).

Macroeconomic factors

14. **Key reasons underlying the rapid growth in the corporate sector were the macroeconomic environment and the conduct of monetary and exchange rate policy in the 1990s.** Rapid growth was fueled by capital inflows, the latter driven by the growing global interest in emerging markets. In turn, asset (property and equity) price inflation provided the incentive and the mechanism to fuel continued rapid growth (Chart IV.1). The conduct of monetary policy was complicated by these inflows; credit expanded rapidly and although interest rates were allowed to rise to tighten monetary conditions, liquidity in the banking system remained high. Moreover, greater flexibility was needed in the management of the exchange rate, so as to reduce the risk that changes in monetary conditions would lead to destabilizing capital flows.

15. **In general, the two key sources of vulnerability in the corporate sector during the Asian crisis have been through high leveraging and heavy reliance on unhedged short-term foreign debt.** In Malaysia, as will be discussed below, exposure to external debt was not a major source of the problem. The impact of exchange rate management has been primarily to encourage large capital inflows and a consequent runup in equity markets. In an environment with a high prevalence of collateral-based bank lending, this rapid asset and equity price inflation set the stage for higher debt, especially through the domestic banking system. Several years of high growth led to an underestimation of the risks associated with the capital structure.

Financial structure[10]

16. **How has corporate sector growth in Malaysia been funded?** Two features stand out with respect to the financial structure during the 1990s: first, the rapid growth in equities measured both by the growth in market capitalization and by the runup in stock prices; and second, the increase in dependence on short-term debt fueled by rapid banking system credit growth. What factors explain these observed features of the corporate capital structure? The theory of corporate finance suggests that three factors determine the choice of financing through debt or equity issuance.[11] The first is the cost associated with each of the different modes of external financing; the second is the implications of the capital structure for the riskiness of earnings; and the third concerns the control aspects of financing decisions, mainly the fact that the issuance of equity tends to dilute control over the firm.

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[10]The following discussion draws heavily on Abendroth (1997).

[11]It is, however, difficult to provide benchmarks or international norms for an acceptable or desirable capital structure. Existing theories of firms' financing decisions do not fully explain observed capital structures and, indeed, an extreme version of the theory, put forward by Modigliani and Muller, is that the capital structure is irrelevant and the value of the firm depends only on the cash flows that it generates.

- From a cost point of view, financing through debt tends to have a tax advantage over equity because interest is deductible from corporate income. Thus, ceteris paribus, by increasing the amount of debt issues, a firm would increase the rate of return on shareholders' investments. Within debt financing, the greater dependence on short-term debt was in part attributable to the relatively underdeveloped market for long-term private debt securities until the early 1990s. The establishment of the National Mortgage Corporation (Cagamas) in 1986, and a credit rating agency (the Rating Agency of Malaysia (RAM)) in 1990 have been important factors in promoting the development of the bond market. Starting in 1992, tax exemption of bond interest was also an incentive. The main impediments to the further development of the bond market are the absence of a benchmark interest rate, investment restrictions on the EPF and other provident and pension funds, the relative underdevelopment of efficient trading and settlement systems, and generally weak professional portfolio management skills.[12] The recent attempts to set a benchmark interest rate through the issuance of Khazanah (the government's investment arm) bonds is aimed at developing the domestic bond market.

- From the point of view of riskiness of capital structure, as firms incur more debt, their ability to meet interest payments out of current earnings diminishes, thus increasing the probability of insolvency. To correct the problem of too much debt, firms needed to issue more equity. Another reason for the rapid growth in equity is the fact that capital gains are not taxed, while dividends are; investors therefore have come to expect the major part of their return to be paid in the form of capital appreciation and share price increases.

- From the point of view of the dilution of control through equity issuance, the role played by the PNB and the various trust funds in purchasing shares and the cross-holding and family-control structure (discussed above), made concerns about dilution of ownership and control less important in the decision to issue equities than in other countries. This is because when choosing the distribution of ownership at the time of the IPO, typically, initial owners recognize the possible emergence of a potential future buyer of the company. In Malaysia's case, the various ownership and equity restrictions would tend to limit this concern.

17. **Key features of Malaysia's corporate capital structure are highlighted in Tables IV.4 and IV.5.** Abendroth (1997) examines the capital structure of the companies listed on the KLSE between 1992 and 1996 and finds:

- **For financial enterprises (commercial banks, finance companies, merchant banks, insurance companies, and stock brokerages):**

[12]See Lin (1994) and Callen and Reynolds (1997) for a more detailed analysis.

Table IV.4. Malaysia: Asset Growth and Sources of Funds, 1992–96
(Period average, in percent)

	Rate of Growth of Assets (in percent)	Internally Generated Funds (percent of total assets)	Debt/ Equity Ratio	Short-Term Debt (percent of total debt)
Financial enterprises	39.3	10.0	239	90.6
Commercial banks	34.2	6.6	154	98.8
Finance companies and Merchant banks	26.8	6.8	202	94.6
Insurance companies	29.8	7.1	592	62.2
Stock brokerages	63.4	19.2	452	95.9
Nonfinancial enterprises	31.0	28.1	163	59.7
Construction	43.6	23.1	245	38.3
Consumer	18.7	48.6	406	66.3
Diversified holdings	40.3	14.5	519	65.7
Industrial	27.5	30.7	218	73.1
Mining	12.0	21.2	35	20.0
Plantation	26.8	33.7	95	70.4
Property	38.8	18.4	123	57.1
Trading and services	40.5	34.8	202	68.9

Source: Abendroth (1997).

Table IV.5. Malaysia: Private Sector Credit Growth, 1992–96
(In percent)

	Private Sector Credit (growth, end of period)	Private Sector Credit Outstanding/GDP	Loans to the Broad Property Sector (growth, end of period)	Loans for Consumption Credit (growth, end of period)
1992	10.7	113.0	...	...
1993	12.9	114.7	...	...
1994	16.7	116.2	1.5	16.2
1995	28.9	130.2	26.4	33.2
1996	25.4	143.0	26.3	32.7
1997	25.2	161.5	26.6	25.2
1998	1.2	152.9	4.0	...

Sources: Data provided by the Malaysian authorities; and Fund staff estimates.

Asset growth averaged nearly 40 percent per annum between 1992 and 1996, with stock brokerages leading the pack with an annual average growth rate of 63 percent.

Notwithstanding the growth in equity markets, funds sourced from debt far exceeded those raised from equity. The ratio of debt-equity for financial enterprises averaged 240 percent for financial enterprises on average, with stock brokerages and insurance companies having much higher debt-equity ratios than finance companies and commercial banks. One explanation for the rapid asset growth was the introduction of the tiering system in 1995 under which a minimum level of Tier 1 capital was set at RM 500 million to rise to RM 1 billion by 1998. The measure was intended to encourage mergers and consolidation within the industry. Instead, it had the effect of generating rapid asset growth financed both by short-term borrowing and equity expansion.

- **For nonfinancial enterprises:**

Asset growth averaged 31 percent between 1992 and 1996, with enterprises classified as being involved in construction, diversified holdings, trading and services, and property growing at an average rate of over 40 percent annually. Unlike financial enterprises where net retained profits (profits after taxes and dividends) account for only 10 percent of asset growth, for nonfinancial enterprises, such internally generated funds accounted for 28 percent.

Asset growth was financed more through borrowing than the issuance of equity, as indicated by the debt-equity ratios averaging 163 percent for all nonfinancial enterprises. There are also wide variations between different categories of enterprises with diversified holdings having an average debt-equity ratio of over 500 percent and industrial and construction enterprises with debt-equity ratio of between 200 percent and 300 percent and, at the low end, mining and plantation enterprises with ratios of below 100 percent.

On average for all nonfinancial enterprises, short-term debt accounted for more than 50 percent of total debt. Clearly, for some sectors, where the nature of the business is more short term, such as trading and services, or consumption-related enterprises, this may not necessarily signal "vulnerability." However, for property companies and diversified holdings, where there is not a clear case, ratios of short-term debt to total debt of 60–70 percent could suggest weaknesses in the capital structure that would make them vulnerable to the kind of crisis that Malaysia has been in the midst of since mid-1997.

Most of the short-term debt was from the domestic banking system creating a close link between corporate sector distress and financial sector problems. Table IV.5 illustrates the rapid buildup in private sector credit in the early 1990s and the sectoral concentration of this credit.

18. **As for vulnerability to exchange rate movements, Malaysia has been better placed than its neighbors to withstand shocks to its exchange rate.** Following the difficulties experienced with the rapid build-up of external debt in the mid- to late1980s, BNM implemented changes to its policies on permitting external borrowing as follows:

- Residents borrowing from abroad in foreign currency exceeding the equivalent of RM 5 million require central bank permission. Generally, approval is granted for loans for activities that generate export receipts (naturally hedged), if the terms and conditions are considered reasonable. No restrictions apply to credit granted by nonbank residents in foreign currency to nonresidents for amounts not more than RM 10,000 or its equivalent. Larger loans are permitted if payment will be made in foreign currency, and the resident has no domestic borrowing. Nonbank residents will require prior approval to grant loans in foreign currency exceeding the RM 10,000 limit, irrespective of whether the nonresidents have any domestic borrowing. Authorized dealers in foreign currency are allowed to grant foreign currency loans to nonresidents, subject to compliance with net open position limits.

- Residents requiring foreign funding are encouraged to source their loans from the Labuan International Offshore Financial Center.

19. **These restrictions on external borrowing resulted in reducing Malaysia's vulnerability to the sharp exchange rate depreciations experienced during the past two years, as total external debt has been contained and the share of short-term debt has also remained manageable.** The foreign exchange exposure of Malaysia's banks is well hedged and nonfinancial private sector debt is relatively small. The only corporates that have faced significant capital losses due to the exchange rate depreciation and the increase in the risk premium and bond spreads are those that borrowed for infrastructure and utilities projects (e.g., Tenaga and Telekom).[13]

20. **Overall, the discussion above suggests that, prior to the crisis, the corporate sector in Malaysia was characterized by a buildup in leverage, although the extent of the buildup varied significantly across sectors.** In large part, this was due to the long period of high growth and interest rate and exchange rate policies which encouraged rapid growth in assets and sales. The construction and diversified holding companies were the most highly leveraged. Moreover, through the process of double leveraging, financial institutions

became vulnerably linked with their nonfinancial holding company. At the same time, there was a decline in the return on assets, primarily in the construction sector, and an increase in

[13]See SM/98/79, Malaysia: Staff Report for the 1998 Article IV Consultation, Annex II for a detailed analysis of Malaysia's external liabilities.

the share of firms with interest obligations exceeding profits,[14] both suggesting an increase in the riskiness of the corporate financing strategy.

Governance structures

21. **Malaysia stands out in the region as having had relatively strong regulatory structures and legal framework for corporate sector problem resolution even before the crisis.** The main laws governing the Malaysian corporate sector include the Companies Act of 1965, the Companies Regulations of 1966, the Securities Industry Act of 1983, the Securities Commission Act of 1993, the Futures Industry Act of 1993, the Banking and Financial Institutions Act (BAFIA) of 1989, the Malaysian Code on Takeovers and Mergers of 1987, KLSE Guidelines on Stock Exchange Listing, and the Foreign Investment Committee (FIC) guidelines. Malaysia's accounting standards are also good and are generally much stronger than those in the region with many international accounting standards having been adopted by the Malaysian Accounting Standards Board. On balance, Malaysia does well in terms of legal protection of external financiers of corporations (Table IV.6).

22. **Prior to the crisis, the two main avenues for dealing with corporate distress were:**

- Winding up under the Companies Act of 1965, under which creditors can petition the high courts to wind up a company which fails to pay its debts. The Act provides for the appointment of a liquidator or a receiver, establishes the priority and ranking of debt within different creditor classes, and generally provides a comprehensive basis for winding up.[15]

- Restructuring of companies as going concerns under Section 176 of the Companies Act. The debtor can petition for court protection under Section 176 until a group of creditors, representing three-fourths of the outstanding debt, agree to a reorganization plan. Once approved, the agreement is binding on all creditors. Pending the approval of the arrangement, the court may restrain any winding-up proceedings against the debtor company.

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[14]See World Bank (1998).

[15]More details can be found in SM/98/81, Malaysia: Selected Issues (4/5/98).

Table IV.6. Malaysia: Selected Countries: Legal Protection of External Financiers

Country	Shareholder Protection 1/	Creditor Protection 1/	Degree of Judicial Enforcement 2/	Accounting Standards 3/
Malaysia	3	4	7.7	76
Japan	3	2	9.4	65
Korea	2	3	6.7	76
Thailand	3	3	5.9	64
Latin America 4/	2.5	1	6.2	53
United States	5	1	9.5	71
United Kingdom	4	4	9.4	78
Germany	1	4	9.4	62

Source: La Porta et al (1998).

1/ Scale of 1 to 5, with 5 being the strongest and 1 being the weakest.
2/ Scale of 1 to 10, with 10 being the highest and 1 the lowest.
3/ A higher number represents higher standards.
4/ Average of Argentina, Brazil, Chile, and Mexico.

23. **However, many problems existed with the enforcement of the laws, including the autonomy of regulators, transparency in exercising regulation and confusion over jurisdictional boundaries, which may have contributed to the buildup in vulnerabilities, although it is difficult to establish this link precisely.** For example, while the general legal framework governing takeovers and mergers in Malaysia is comprehensive, a potential weakness in its implementation arises from the role of the FIC, a regulatory body set up to guard against unregulated takeovers resulting in concentration of wealth in minority hands and increased imbalances in ownership. In practice, the FIC has broad powers to approve or disapprove mergers and takeovers depending on whether it deems the proposal to be in the national interest. Thus far, there has neither been a clear definition of the criteria that would define being in the national interest nor has there been much scope for appeal or review of the decisions of the FIC. The weaknesses in the Section 176 avenue of corporate distress resolution is that there are no detailed provisions for the rehabilitation of troubled companies through judicial management such as the appointment of independent managers to design a rehabilitation plan and the suspension of claims against a company pending rehabilitation. In addition, there have been recent instances of misuse of protection under Section 176 in which debtors have sought protection without presenting a reorganization plan. Recently, the authorities have made good progress in strengthening corporate governance and the debt-resolution frameworks (see Section E).

D. Impact of Crisis on the Corporate Sector

24. **The effects of the financial crisis on the corporate sector can be seen in the following interrelated indicators (Chart IV. 2):**

- The sharp decline in the exchange rate which, at the lowest point in January 1998, had fallen by some 49 percent since July 1997.

- The very rapid decline in the stock market, which had already begun in early 1997, but accelerated after the regional crisis broke; in the first six months of 1997, the stock price index fell by 13 percent, but by August 1998, the lowest point since the crisis, the stock market had fallen by close to 80 percent since the beginning of 1997.

- Massive short-term and portfolio capital outflows: from a net inflow of $2 billion in 1996, net short-term outflows amounted to a total of $13 billion in 1997 and 1998, and another $7 billion expected to flow out in 1999.

- An increase in sovereign bond spreads from about 200 basis points in 1997 to a peak of 1,000 basis points before declining to around 300 basis points at present.

- An increase in domestic interest rates from 7½ percent in June 1997 to a peak of about 11 percent during the period February to July 1998.

- A collapse in demand, both from external and domestic sources: export volume growth fell from almost 11 percent in 1997 to below 3 percent in 1998 and real domestic demand, which grew by 7 percent in 1997 declined by a massive 26 percent in 1998.

- A decline in the total value of property transactions of 48 percent and in the value per transaction of 23 percent.

- Domestic credit, which had grown by close to 30 percent on average between 1995 and 1997, declined by 1½ percent in 1998.

- A sharp increase in nonperforming loans (NPLs) of the financial system from below 4 percent at end-1996 to 21 percent at end-1998 with an expected peak of 25 percent in 1999. The increase in NPLs is concentrated in the broad property sectors, financial services and manufacturing sectors.

- Growing corporate sector distress measured by the very sharp decline in earnings before interest and taxes (EBIT) and by the number of corporations that have filed for court protection under Section 176, applied for debt workouts under the Corporate Debt Restructuring Committee (CDRC) or have been taken over by Danaharta.

- For the 40 largest listed companies, the growth of average EBIT fell to 5 percent in 1997 from 35 percent in 1996. In 1998, average EBIT of the 23 companies for which data are available declined by nearly 100 percent. Of these, some 40 percent generated negative EBIT.

- By mid-1998, close to 1,000 winding-up petitions had been filed by creditors under the Companies Act.

- Following the imposition of the requirement by the KLSE for listed companies to immediately report defaults on debt-service obligations, some 28 listed companies had filed such reports by end-1998.

- The number of corporations that have been downgraded by RAM rose sharply from 40 in early 1998 to 52 in the third quarter before subsiding sharply in the fourth quarter of 1998 and the first quarter of 1999.

- As of end-March 1999, 40 public-listed companies had applied for protection under Section 176, of which more than one-half are involved in the property, construction, and finance sectors.

- As of May 25, 1999, some 57 companies with debts totaling RM 31.2 billion had applied for debt workouts under the CDRC. Of these, more than 60 percent were diversified holding companies and construction and property development companies.

- As of end-March 1999, Danaharta had appointed special administrators in ten companies, of which seven were stock-broking firms.

25. **How were the proximate effects of the crisis transmitted to the corporate sector, and then to the economy at large, and how large is the potential distress?** There are no simple summary measures of the impact of the financial crisis on the cash flows or the stock of wealth in the economy. Three different ways of measuring the impact of the shock are discussed below.

- Table IV.7 presents some economy-wide measures of the impact of the exchange rate depreciation, interest rate increases, and stock market declines on total wealth or net worth and on cash flows. Note that this measure does not account for the collapse in external demand and other transmission channels of the effects of the crisis.

Table IV.7. Malaysia: Assessing the Damage of the Financial Crisis

A. Wealth shock due to stock market decline	
Market capitalization at end-1996	RM 807 billion or 323 percent of GDP
Market capitalization at end-1998	RM 375 billion or 135 percent of GDP
Loss in wealth approximated by loss In market capitalization	RM 432 billion or 155 percent of GDP
B. Total effect on borrowers' cash flow of interest Rate increases and exchange rate depreciations	
Outstanding variable rate loans to the private sector And NFPEs at end-1997	RM 370 billion or 134 percent of GDP
Impact of 1 percentage point increase in interest rates on Interest payments	RM 3.7 billion
Peak increase in average lending rates from end-1997	3.5 percent
Total impact on cash flows of increases in interest rates	RM 13 billion or 5 percent of GDP
Outstanding external debt at end-1997	
Impact of a 10 percentage point depreciation of the ringgit 1/	
• On net wealth	2.8 percent of GDP
• On cash flows	1 percent of GDP
Peak depreciation of the ringgit	50 percent
Impact of peak exchange rate depreciation on	
• Net wealth	14 percent of GDP
• Cash flows	5 percent of GDP
Total impact on cash flows of interest rate increases And exchange rate depreciation at peak interest and exchange rates	10 percent of GDP
Total impact on net wealth of stock market losses And external debt at peak exchange rates and lowest stock market capitalization	169 percent of GDP

Sources: Data provided by the Malaysian authorities; and Fund staff estimates.

1/ Assumes amortization rates on medium- and long-term debt equal to the average of actual amortization in 1995–96; assumes 50 percent amortization each year of short-term debt. On hedging of medium- and long-term debt, the calculation assumes the proportion of unhedged debt to be 100 percent, 50 percent, and 25 percent for the federal government, NFPEs, and the private sector, respectively. As for short-term debt, 50 percent is assumed to be unhedged.

- The World Bank (1998) provides a measure of the direct impact of the shocks on the corporate sector. The exchange rate shock is approximated as the increase in the domestic currency value of foreign debt resulting from the change in the exchange rate from the first half of 1997 to the first half of 1998. The interest rate shock is

approximated by the increase in lending rates in the first few months of 1998 over the same period in 1997. These shocks were then applied to the end-1996 balance sheets of all nonfinancially listed firms in Malaysia and the impact on profitability (return on assets) is calculated. For the median firm, in Malaysia, this calculation suggests that profitability would have declined by 40 percent (but remained positive) and the share of firms with losses greater than equity would have been almost 20 percent.[16]

- Another analysis—conducted by Goldman Sachs (1998)—is based on projecting NPLs for the banking system using a "bottom-up" approach. Based on financial statements from 607 listed companies in Malaysia for 1997 and some interim results for 1998, this exercise projects financial results for each company for 1998 and 1999.[17] Earnings before interest, taxes, depreciation, and amortization (EBITDA) are calculated and compared to projected interest expenses. If EBITDA is less than interest expenses, the company's debts are classified as becoming nonperforming. The analysis suggests peak NPL ratios for Malaysia of the order of 20–25 percent.[18] The analysis then goes on to examine whether the NPLs are likely to be "structural," defined as when companies will not generate positive EBITDA, or "temporary," defined as when EBITDA is positive but less than interest expenses. The results suggest that about one-half to three-fourths of all NPLs may be structural. The implications of these results are (i) that foreclosures and/or operational restructuring are likely to be needed for many of the borrowers in addition to financial restructuring; (ii) the ultimate recovery rates are likely to be quite low; and (iii) unless growth and earnings pick up, financial restructuring is likely to have limited success, because many companies may continue to make operating losses.

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[16]This study was conducted for the five Asian crisis countries. The results suggest that the effect of the crisis on the Malaysian corporate sector would be much less adverse than in all the other countries. The exercise showed that the 1996 return on assets would have turned negative in Indonesia, Korea, and Thailand and, albeit remaining positive in the Philippines, would have declined by 65 percent. Also, Malaysia would have had the lowest share of firms with losses exceeding equity, with the Philippines coming up second with about 30 percent, and Indonesia topping the list with close to 80 percent of firms with losses greater than equity.

[17]The analysis, conducted in September 1998, assumes a decline in GDP of 6 percent, followed by a further small decline in 1999; a fall in interest rates of 220 basis points in 1998 and 1999; flat sales in 1998 followed by 1 percent sales growth in 1999; declines in operating profit margins; and unchanged corporate debt levels through 1999.

[18]These results are similar to those derived from aging or trend analysis using bank-by-bank data on NPLs.

E. Measures to Deal with the Crisis

26. **By most measures, the impact on the corporate sector and the economy at large of the financial crisis has been considerable.** The authorities recognized, by mid-1998, the need to reorient macroeconomic policies towards stimulating a recovery in growth and that comprehensive structural reforms were necessary to restructure the corporate and financial sectors. To this end, fiscal policy was eased in July 1998, followed by reductions in interest rates in August. The pegging of the exchange rate combined with controls on capital out-flows in September 1998, provided the scope for further reductions in interest rates.[19] At the same time, a concerted effort was made to restructure the financial and corporate sectors through the establishment of Danaharta, an asset management company, Danamodal, a special purpose vehicle to recapitalize banks, and the CDRC modeled after the London Approach.[20] In addition, the authorities have implemented several reforms to improve corporate governance and to strengthen regulations over banking and other financial institutions.

Corporate sector restructuring

27. **Key provisions of Section 176 were tightened with a view to preventing its misuse by companies as means of delaying adjustment.** Amendments made to Section 176 of the Companies Act in September 1998 require: (i) borrowers to pay RM 5,000 for filing a petition for protection from creditors; (ii) 50 percent of creditors, measured by the value of their debt, must already have agreed to a proposed restructuring plan and therefore have agreed to the filing of the petition; (iii) an independent director, approved by 50 percent of creditors measured by the value of their debt, must have been appointed; and (iv) restraining orders are initially granted for three months; failure to reach agreement within this period will require another filing which satisfies all the new, tighter requirements.

28. **The second forum for corporate restructuring is available through Danaharta's special administrator (SA) functions.** The legislative framework is provided in the Danaharta Act which was passed in September 1998, and confers two special powers. First, the ability to buy assets through statutory vesting, which enables Danaharta to acquire assets with certainty of title while preserving existing registered interests over the asset. Second, the ability to appoint special administrators to manage the affairs of distressed companies. If a corporate borrower is unable to pay its debts or fulfill its obligations, Danaharta may choose to appoint an SA. The specific steps involved are:

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[19]A detailed description of the evolution of macroeconomic policies is contained in the Recent Economic Developments paper.

[20]Detailed descriptions of the operations of Danaharta and Danamodal are contained in Chapter III.

- Danaharta obtains approval to appoint an SA from an Oversight Committee (comprising one representative each from the Ministry of Finance, Bank Negara Malaysia (BNM), and the Securities Commission).

- Once appointed, the SA takes over the control and management of the assets and affairs of the company. To preserve those assets until the SA is able to finish its job, a 12-month moratorium automatically takes effect during which no action can be taken against the borrower.

- The workout proposal prepared by the SA is then given to an independent advisor approved by the Oversight Committee (usually a merchant bank or an accounting firm). The independent advisor's mandate is to review the proposal taking into consideration the interests of secured and unsecured creditors and shareholders.

- The proposal and the independent advisor's evaluation are presented to Danaharta for approval.

- Once approved, the SA will call a meeting of secured creditors to vote on the proposal. A majority in value of secured creditors at the meeting must approve the proposal.

- Once approved, the relevant regulatory approvals need to be obtained before the proposal can be implemented.

Box IV.2 contains an outline of the first workout proposal completed through the SA process in March 1999 and Box IV.3 outlines the principles governing loan restructuring and the guidelines to apply these principles. The guidelines are intended to promote transparency and expedite the formulation of workout proposals.

29. **For restructuring the larger loans (over RM 50 million), the CDRC was set up.** The main rationale for setting up this alternative framework was that the insolvency legislation does not provide the range of solutions required to preserve value to stakeholders in a multi-lender and large debt situation. The CDRC was set up to provide the impetus to informal workouts between financial institutions and borrowers through compromise and consensus to expedite the restructuring of corporate debts. The CDRC has a close working relationship with Danaharta which can, by virtue of having taken over NPLs, be one of the creditors in a workout proposal under the auspices of the CDRC. Key features of the CDRC are based on the London Approach and is described in detail in Box IV.3.

30. **The progress to date with corporate debt restructuring is shown in Table IV.8.** The six cases that have been completed represent less than 1 percent of the total debt to be restructured under the CDRC. They include cases in which debt-restructuring proposals have been accepted by creditors and cases where restructuring has been taken over by Danaharta under its special administrator powers. Of the completed cases, two are diversified holding companies, two are in property and construction, and two are in finance and services. Of the

Box IV.1. Restructuring CapitalCorp Securities
An Example of the Application of Danaharta's Special Administrator (SA) Functions

CapitalCorp is a stock-broking company which, prior to Danaharta's involvement, had been under a Section 176 restraining order for almost one year, after having being suspended from undertaking securities trading activities by the KLSE. For an exposure of RM 30 million , Danaharta was able to facilitate resolution of about RM 220 million in nonperforming loans. It appointed an SA in January 1999. The SA went in and took over the control and management of CapitalCorp. A diagnostic review was then conducted, including of all creditors and their relative positions, a review of the viability of the business (with stringent sensitivity analysis), an analysis of the factors that gave rise to the current situation, and an identification of the areas of strength and weakness.

The main features of the workout proposal are as follows:

1. Secured creditors are to be paid in full in cash over time. Their rights to the security are preserved but as they are paid down, the security value to which they have claim will decline.

2. Unsecured creditors will be repaid in full in cash by way of a combination of redeemable convertible and nonconvertible preference shares. A part of the loan repayment (50 cents on the dollar) will be settled y shares that are redeemable at the end of five years with a coupon rate of 5 percent. Another 15 cents on the dollar will be repaid in year seven and the remaining 35 cents will be nonredeemable preference shares with the value dependent on the recovery of the company's bad debts. Creditors get to share in any recovery during the first five years.

3. Group companies and shareholders are required to inject cash and assets, accept waivers of intercompany debts, convert existing intercompany debt into preference shares, and accept a write-down of the value of existing shares.

CapitalCorp has been returned to its original shareholders who were also the "white knights." The value of their original shareholding was written down to 20 cents on the dollar and they injected new capital in the amount of RM 250 million for common stock. The management team is currently being strengthened.

At the moment, the proposal has received approval from the Foreign Investment Committee and is awaiting approvals from the Securities Commission and the Kuala Lumpur Stock Exchange. The proposal has been held up as exemplary and will become the model for other workout proposals under the SA function of Danaharta.

outstanding cases, close to 50 percent are diversified holding companies and another 20 percent are in property and construction. The rest are in the manufacturing and finance sectors. In recognition of the need to expedite the restructuring process, the CDRC has recently announced that it expects to complete restructuring of RM 30 billion (about 60 percent of total debt and more than 10 percent of GDP) by mid-1999 and to complete its function by mid-2000. Measures to accomplish this include a shift in the responsibility for hiring consultants from creditors to the CDRC and expansion of CDRC staff especially those with more experience in corporate restructuring.

Box IV.2. Danaharta's Loan Restructuring Principles and Guidelines

Loan management strategies will be applied to loans found viable after careful evaluation.

Loan restructuring exercises are to strictly adhere to the following principles:

- The original shareholders must take a proportionately bigger haircut than creditors.
- Settlements to secured creditors must be more favorable than those to unsecured creditors.
- The workout schemes should not result in a dilution of the security of the lenders, unless collateral is in excess of the outstanding loans.
- Danaharta will give the borrower only one opportunity in implementing the scheme so as to prevent borrowers from making revisions once the scheme is being implemented.
- Viable borrowers will be given the time and opportunity to make good their obligations, but their performance and their efforts to repay lenders will be closely monitored.
- The use of funds under a workout scheme should be clearly identified and strictly adhered to; the scheme should involve equity kickers such as warrants, convertible loans, etc.
- The repayment period for the restructured loans should not exceed five years.
- Any value realized in excess of the book value of assets (written down as part of the scheme) should be subject to a sharing ratio between the borrower and the lender.
- The schemes will include an anti-dilution clause to prevent existing shareholders to dilute eventual shareholdings of creditors through issuance of new shares.
- The scheme should include covenants for intercompany lending, transfer of assets, dividend payments, and future borrowing.
- All individual borrowers must make a statutory declaration of their net worth.
- Legal proceedings are to be taken against the borrower should the scheme fail. Consent should be obtained from borrowers before the commencement of the scheme to allow Danaharta to apply all available avenues for recovery in the event the workout scheme fails.
- Disposal of personal assets will only be allowed to settle outstanding debt.

Box IV.3. Malaysia: The Corporate Debt Restructuring Committee (CDRC)

A. Objectives

- To minimize losses to creditors and shareholders through coordinated workouts.
- To avoid placing viable companies into liquidation or receivership, thereby preserving jobs and productive capacity.
- To provide an approach for banking institutions to play a greater role in the financial rehabilitation of the corporate sector.

B. Key elements of the approach

- The CDRC does not have any legal status. It is meant to be completely voluntary and flexible To the extent that there are no "rules," only "general principles."
- The approach enables creditors and debtors to reach well-informed decisions about whether, and on what terms, a company having cash flow difficulty will continue receiving support.
- The CDRC approach does not guarantee survival of businesses. There will be no "steer" from the authorities on which companies should survive.

C. Principles of debt restructuring under the CDRC

- Debt restructuring should be for viable businesses and not those in receivership or liquidation, with total aggregate bank loans of RM 50 million or more, from at least three institutions.
- Companies that have obtained a restraining order on creditors under Section 176 of the Companies Act, may also apply on the condition that the restraining order is withdrawn when the standstill period (see below) is agreed upon.
- Decisions should be made on complete and accurate information shared between creditors and debtors.
- Creditors are to agree on a "standstill" period of 60 days (extendable) so that orderly decisions can be made. Moreover, existing credit lines must be kept open.
- The creditors committee should represent the interests of at least 75 percent of total debt of all creditors.
- A lead institution must be appointed early in the process to actively manage and coordinate it.
- Creditors' existing rights to collateral will continue.
- New credit during the restructuring process will have seniority.
- Debt trading is allowed, provided that it does not have a detrimental effect on the restructuring process.
- Debtors will normally assume all costs involved in restructuring, but creditors must endeavor to control costs.
- Debt-restructuring losses should be shared amongst creditors in the spirit of "shared pain."

D. Operational modalities

- A joint public-private sector steering committee is to be set up to facilitate meetings of the affected parties and to monitor the progress of all debt restructuring.
- The steering committee is appointed by Bank Negara Malaysia (BNM), and a full-time secretariat to assist the steering committee has been set up in BNM.
- The role of the creditors' committees will be to assess and agree on the viability of the debtor on the basis of accurate and complete information; decide on the terms for the debtor to continue to receive financial support; and report progress to the steering committee.

Table IV.8. Progress with Corporate Debt Restructuring

Status (as of May 31, 1999)	Number of Companies	Amount of Debt (RM billion)	Percent of Debt
Viability study being conducted	9	4.6	14.7
Awaiting restructuring proposal	14	9.2	29.5
Awaiting revised restructuring proposal	9	3.4	10.9
Awaiting creditor's decision	7	9.9	31.7
Completed/Sold To Danaharta	9	2.4	7.4
Total	57	31.2	100.0

Source: Data provided by the Malaysian authorities.

Corporate governance reforms

31. **Successful governance systems need to have some mechanism whereby shareholders can coalesce to have their preferences imposed on management, or can protect their rights and have legal recourse, if necessary.** Typically in emerging market economies, market and regulatory institutions that can play an important role in good governance tend to be underdeveloped or subject to subversion. Foreign banks play only a limited role in funding corporations and tend to work with only the best corporate clients and the size of foreign institutional investors, albeit growing, is still not very large.

32. **In recognition of the need to enhance standards of corporate governance in Malaysia, in early 1998, the authorities established a High-Level Finance Committee to establish a framework for corporate governance.** The Committee's report has developed the Malaysian Code on Corporate Governance which sets out principles and best practices for good governance; makes recommendations to strengthen the overall regulatory framework for listed companies; training and education of corporate participants in Malaysia to prepare them for the implementation of the recommendations. The recommendations cover duties, obligations, rights, and liabilities of directors, officers, and controlling shareholders, as well as various measures to protect the rights and financial stakes of minority shareholders. In addition, the SC and the KLSE have already introduced several measures aimed at reducing abuses, manipulation and, more generally, stock market volatility unrelated to fundamentals. The key measures are listed in Box IV.4.

Box IV.4. Key Recent Corporate Governance Reforms

Governance reforms fall into three main categories: those that enhance transparency and overall corporate governance, those aimed specifically at minority shareholders, and regulatory measures to reduce volatility in the stock market.

Transparency and overall governance

- September 1998: All dealings in KLSE-listed stocks will have to disclose the person on whose behalf the trading is being conducted. All new and existing nominee accounts will have to reveal the names of beneficiaries, and all dealings in KLSE-listed securities is to be effected only through the KLSE.

- October 1998: New guidelines issued for share buybacks and transfers of securities. Share buyback guidelines have the effect of regulating the purchase by a listed company of its own shares. For share transfers, securities accounts can now only be opened in the name of the beneficial owner or an authorized nominee of the deposited securities, making the system more transparent.

- March 1999: Quarterly reporting of financial statements by public limited companies (PLCs) was introduced, with reports to be filed within two months from the end of the financial quarter. Reports must include the balance sheet, the income statement, and explanatory notes. By keeping the market informed of financial position, market discipline can be brought to bear on the actions of the company.

- March 1999: Restrictions were placed on the number of directorships to enhance corporate governance so as to enhance the quality of corporate governance practiced by directors of PLCs. Each director of a PLC can hold no more than ten directorships in PLCs and no more than fifteen in companies other than PLCs.

Strengthening the position of minority shareholders

- July 1998: The rules on related and interested party transactions were revised to widen the definition of related and interested parties, to require all such transactions to be announced and approved by shareholders, etc.

- January 1999: Enhanced disclosure by PLCs on matters related to takeovers and mergers. The standards set will result in improving the clarity, consistency, and timeliness of disclosed information and would thus protect minority shareholders.

- Mid-2000: (i) Amendments to the related party transaction provisions of the Companies Act which include restrictions on a significant shareholder's right to vote in transactions in which he has an interest, higher penalties for breach of this provision, and requiring prior approval of shareholders in respect of such transactions; (ii) amendments to the Companies Act to enhance the timeliness and quality of information that goes out to shareholders before a general meeting. These include amendments to increase the notice period for annual general meetings from 14 to 21 days and to allow proxy representation by mail. The latter provision is aimed mainly at foreign institutional investors; (iii) increasing and simplifying the ability of shareholders to take court action against errant directors which include the introduction of a statutory derivative action, simplifying procedures for a class action, allowing shareholders or a regulatory body to seek injunctions to prevent breaches of the company law, allowing shareholders access to company records for purposes of a court action, etc.; and (iv) organizing the setting up of a minority shareholder watchdog group. The Employees Provident Fund, as one of the largest domestic institutional shareholder is tasked with coordinating the establishment of this group. Technical assistance from the World Bank or the Asian Development Bank will be requested for this undertaking. This move is aimed at increasing shareholder activism, increasing adherence to corporate governance standards, and minimizing abuses by insiders against minority shareholders.

Box IV.4 (Concluded). Key Recent Corporate Governance Reforms

Regulatory improvements

- January 1998: Tighter restrictions were imposed on stock-broking companies in terms of their gearing (or leverage) ratios, margin financing exposure to a single client and to a single security, as well as total trading exposures.
- December 1998: New risk-based capital adequacy requirements were imposed on stock-broking companies
- April 1999: Listing requirements for PLCs listed on the Main Board and the Second Board have been enhanced. Requirements for share listing, reverse takeovers, and the fixing of warrant exercise prices have been revised. Construction, trading, and retailing companies can only be listed on the main board. Minimum share capital has been raised for listing on both boards, and track record requirements have been made more stringent, including for companies seeking a back-door listing or a reverse takeover, where a private firm acquires control of a listed entity by paying cash or injecting assets. Because most warrants that are currently traded are "out of the money," PLCs can issue and list new warrants to replace existing ones, with exercise prices of the new warrants being based on market prices of existing warrants or at a discount.

33. **The authorities have also announced several regulatory reforms to reduce the scope for the reemergence of the vulnerabilities that were exposed during the crisis.** The key reforms are:

- The discontinuation of the two-tier regulatory system for banks as of March 31, 1999. Incentives that were previously accorded to Tier 1 institutions will now be made available to all institutions. In addition, banks will no longer be permitted to open new branches without proof of financial and personnel resources.
- The increase in the frequency of on-site inspections to at least once a year, and the examinations are to be conducted on a consolidated basis.
- The announcement of plans to develop a system of prompt corrective actions that will be triggered by transparent prudential indicators so that emerging problems can be handled in a timely manner.
- The announcement of plans to impose different minimum risk-weighted capital ratios on individual banks, taking into account loan concentration, sectoral exposures, and internal controls, to disallow lending to controlling shareholders, to improve credit risk management, and to review directors and CEOs of banks on a periodic basis to ensure that they remain fit and proper.
- The announcement of plans to minimize systemic risk by distancing unsupervised entities from banking institutions, restricting financial exposure between the supervised and the unsupervised entities and requiring that future bank recapitalization by shareholders be funded through retained profits, equity issues, or long-term bonds, rather than short-term debt.

- The announcement of plans to issue guidelines that would facilitate asset securitization and debt restructuring, including through allowing corporations undergoing debt restructuring to issue bonds rated below investment grade to convert existing loans to bonds.

F. Conclusions and Policy Recommendations

34. **Overall, the Malaysian authorities are making progress with tackling the various measures needed to facilitate corporate sector recovery and to strengthen the sector.** Corporate debt restructuring is under way, and regulatory reforms and reforms of corporate governance are being planned and, in some instances, are already being implemented.

35. **In addition to expediting the planned reforms and announcing clear timetables for their implementation, the focus of attention now needs to turn to operational and asset restructuring, including asset sales and other cost-cutting and efficiency-raising measures.** In particular, the CDRC process needs to be substantially strengthened, as it will ultimately be responsible for the resolution of a substantial share of total system NPLs.

- While the structure of the CDRC process takes into account the need for "shared pain" between borrower and lender, care should be taken, in practice, to ensure that the process does not unduly favor borrowers at the expense of creditors. Moreover, since cases handled through this process represent many of Malaysia's largest and most important corporations, it is important that the CDRC be seen as going the extra distance to ensure a proper balance between the interests of lenders and borrowers.

- More importantly, the outcomes of the CDRC process will ultimately tend to have an influence on Danaharta's effectiveness. Although not all Danaharta loans are eligible for the CDRC process, to the extent that there is a perception that borrowers are better off with the CDRC, Danaharta's effectiveness could be undermined. Therefore, the treatment of all parties under the CDRC must be viewed to be as equitable as under Danaharta.

- While being mindful that each workout will need to be designed on a case-by-case basis, it is necessary to put more structure to the CDRC process. Clearer guidelines need to be issued for restructuring proposals under the CDRC—the Danaharta loan restructuring guidelines provide a good example for this—so as to set out ground rules that are known in advance by all parties and impart greater transparency and objectivity to the process. In particular, the due-diligence process needs to be of the highest quality with clear sensitivity tests to business projections, assessment of management and business projections, specification of contingency plans, and clear operational restructuring, including asset sales, business reorganization, and other cost-cutting measures. For example, a criticism that has been leveled against the Renong workout proposal is that the cash-flow projections for the subsidiary that is floating the loan to repay Renong's debts, may be adversely affected by the terms of the workout. This has caused concern among the subsidiary's creditors about its

viability. Therefore, there should be strict scrutiny of viability and rigorous adherence to corporate governance principles so as to reduce the likelihood that problems will resurface.

36. **Experience with strengthening the corporate sector suggests that an important step is getting the state out of the financial system and increasing competition in the financial system.** For this reason, while recognizing that it is still early in the process of restructuring, it is imperative that Danaharta and Danamodal exercise their "exit" options the earliest possible.

- In particular, there is the concern that the increased focus on speeding up purchases of NPLs by Danaharta may weaken the implementation of the strong procedures to conduct due-diligence and thus make ultimate asset disposal or management more problematic. Thus, Danaharta could, unintentionally, become an NPL warehouse ultimately resulting in a heavy fiscal "overhang." For this reason, it is imperative that Danaharta retain only those assets to which it is able to add value. In cases where such value addition cannot be achieved, the assets should be liquidated either through outright sale of the loans or through the sale of collateral soon after foreclosure. Asset sales will also serve the important purpose of establishing reference prices for investors, which is a necessary step in the broader recovery process.

- As for Danamodal, consideration could be given to relaxing the limits on foreign bank participation when the time comes for Danamodal to exercise its exit options. Malaysia's banking system has had a significant presence of foreign banks for the past four decades and this has served Malaysia well in terms of generating competition for domestic banks and enhancing the efficiency of the banking sector overall. Permitting greater foreign bank presence in the country can therefore be a beneficial move, both in terms of further increasing competition and quality of banking services, and bringing in new capital into the industry. Recent announcements that foreign banks will be allowed to open more branches if they take over finance companies and their liabilities is a step in the right direction.

37. **Finally, the overdependence on short-term borrowing and on the equity market reflects the relatively small size of the market for long-term private debt securities.** Thus, measures need to be expedited to develop and deepen the markets for private debt securities, including through the promotion of asset-backed securities and strengthened regulation of these markets. To this end, BNM has strengthened its commitment to developing the ringgit bond market by announcing plans to introduce shelf registration for private debt securities, deepen the repo market, and facilitate greater asset securitization. Other measures to facilitate the development of long-term capital markets include a gradual relaxation of the investment restrictions on the EPF (which has a legal requirement to invest a significant proportion of its funds in government securities); greater reliance on public offer of bonds rather than the more prevalent private placement system so as to increase the depth and breadth of this market; the latter would require strengthening disclosure requirements,

and accounting and auditing standards; and improving the skills of institutional portfolio managers to equip them to deal with a wider array of investment choices.

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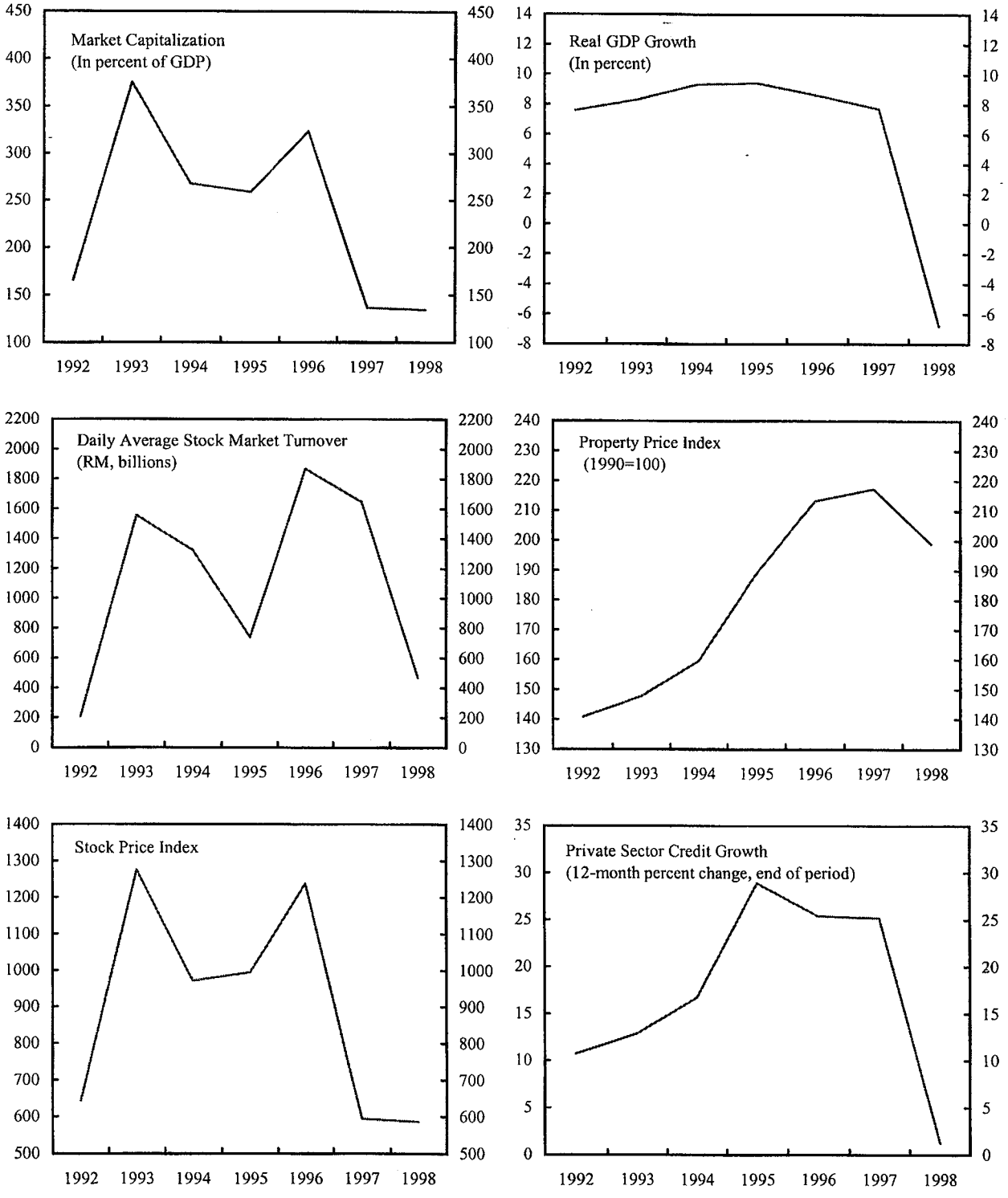
Chart IV.1

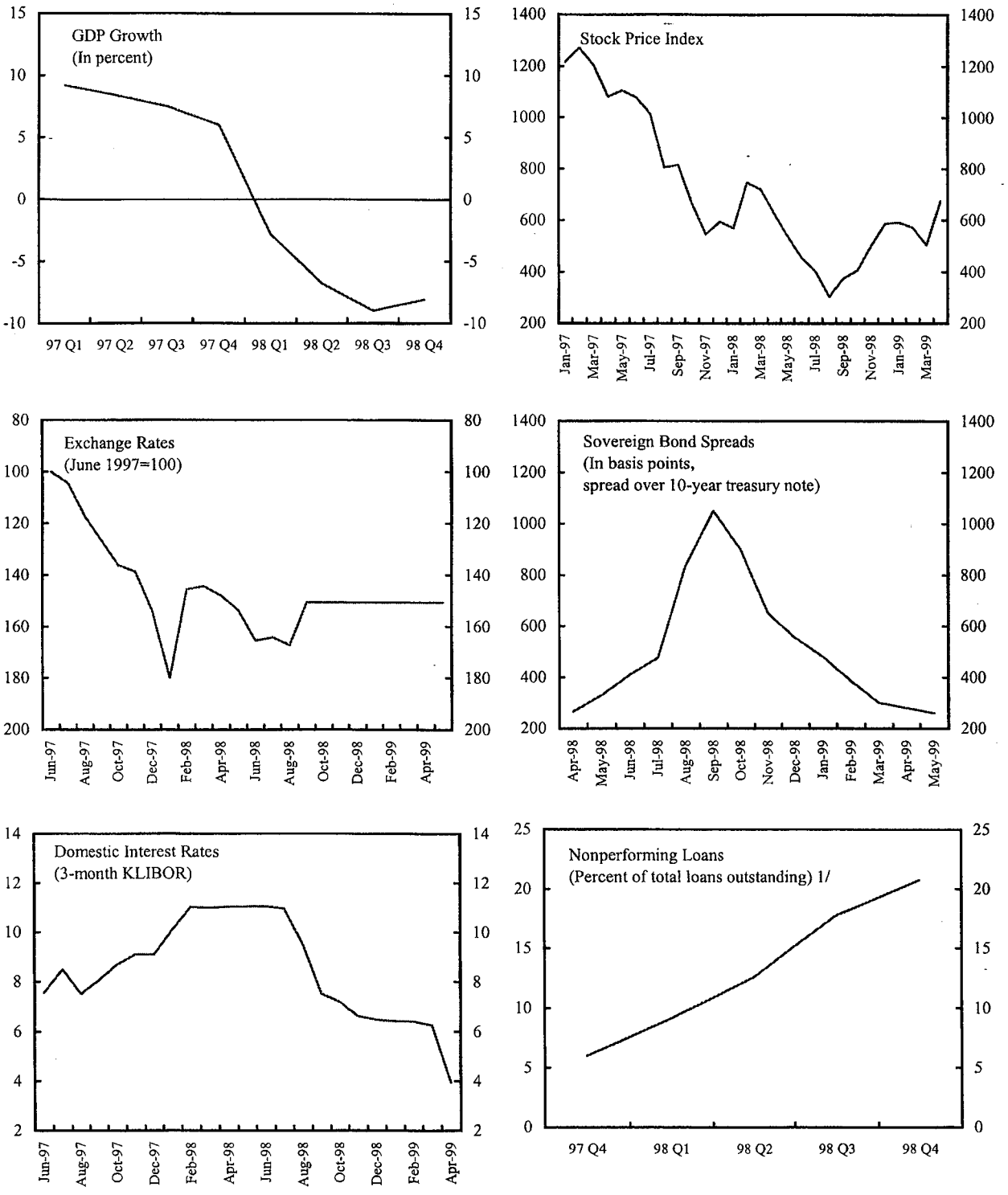
Malaysia
Growth and Asset Market Indicators, 1992-98



Sources: Data provided by the Malaysian authorities; and Fund staff estimates.

Chart IV.2

Malaysia
Indicators of Corporate Sector Distress, 1997-99



Sources: Data provided by the Malaysian authorities; and Fund staff estimates.

1/ Includes loans sold to Danaharta.

Malaysia: Investment and Ownership Regulations

A. Guidelines Governing Foreign Ownership

Type of Investment	Foreign Ownership[1]
Export-oriented companies	
Exports of 80 percent or more of output.	Up to 100 percent.
Exports of 51 percent to 79 percent of output.	Up to 79 percent depending on location, level of technology, size of investment, value-added, and local input content.
Exports of 20 percent to 50 percent of output.	Between 30 percent and 51 percent depending on the factors mentioned above.
Exports of less than 20 percent.	Up to 30 percent.
High-technology producers	
Companies producing high-tech or other priority products for the domestic market (as determined by the government from time to time) and Multimedia Super-Corridor status companies.	Up to 100 percent.
Resource-extraction activities	
Companies involved in mining and processing of mineral ores.	Up to 100 percent depending on level of investment, technology, degree of integration, and value-added.
Insurance companies	
Insurance companies already incorporated in Malaysia.	51 percent.
New entrants (who must buy into local companies, because no new licenses are to be given).	30 percent.
Financial institutions	
All financial institutions (other than insurance companies).	30 percent.
Other	
Telecommunications firms.	61 percent.[2]
Shipping agencies.	70 percent.
Forwarding agencies.	49 percent.

[1]For new manufacturing projects, restrictions have been substantially relaxed (see paragraph 6).

[2]Foreign equity should be reduced to 49 percent after five years.

B. Domestic Ownership

(In cases where foreign equity ownership is less than 100 percent)

Type of Investment	Bumiputra Ownership	Nonbumiputra Ownership
Projects initiated by foreigners where no local partners have been identified		
70 percent or more is held by foreigners.	Balance reserved.	None.
Less than 70 percent is held by foreigners.	30 percent reserved.	Balance available.
Projects initiated by bumiputras as joint ventures with foreigners		
70 percent or more is held by foreigners.	Balance reserved.	None.
Less than 70 percent is held by foreigners.	Balance reserved, unless bumiputras cannot take up the entire amount.	None, unless bumiputra investors cannot be found.
Projects initiated by non-bumiputras as joint-ventures with foreigners		
70 percent or more is held by foreigners.	None.	Balance reserved.
Less than 70 percent held by foreigners.	Balance reserved, unless bumiputra investors cannot take it up or when special permission is granted by Ministry of International Trade and Industry(MITI).	30 percent reserved, unless special permission is granted by MITI.
Nonbumiputra-owned domestic companies		
For publicly listed companies.	30 percent reserved.	Balance.
For unlisted companies.	No reservation.	No restriction.
Bumiputra-owned domestic companies	No restrictions.	No reservation.

V. Fiscal Policy in Malaysia: Issues and Challenges Ahead[1]

Abstract

Fiscal policy in Malaysia has traditionally been used to pursue the government's medium-term development objectives, with short-term considerations usually assuming a subordinate role. The role of fiscal policy in short-term demand management has become more prominent since 1998, when the government adopted expansionary macroeconomic policies to revive the economy. However, rigidities in the structure of public finances and in the conduct of fiscal policy have prevented the authorities from fully delivering the desired fiscal stimulus. This chapter analyzes the role of fiscal policy over the past year and suggests ways to improve its flexibility in view of lessons learned from the recent experience.

A. Introduction

1. **Over the past three decades, fiscal policy in Malaysia has been guided mainly by the medium-term objectives set out in the country's five-year development plans.** As a result, annual budget plans have generally reflected the priorities of the medium-term development plans.[2] The size and composition of expenditure and revenue has been geared toward the attainment of these medium-term objectives, and short-term demand management has typically played a relatively minor role.

2. **During the 1990s, however, demand management has played an increasingly more active role in the conduct of fiscal policy.** Beginning in 1992, the authorities adopted a tighter fiscal stance, partly in an effort to slow down domestic demand and prevent an overheating of the economy arising from a surge in capital inflows. A modest easing of demand pressures in 1996 provided room for a more relaxed fiscal policy, but renewed demand pressures in 1997 necessitated tighter fiscal management. Up to that point, fiscal management was facilitated by the relatively smooth and predictable environment of strong and stable growth.

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[1]This chapter was prepared by Dimitri Tzanninis (ext. 34114) who is available to answer questions.

[2]The early 1980s were a notable exception, as demand management became the principal task of fiscal policy. The authorities sought by adopting expansionary fiscal policies to insulate the economy from what was perceived as temporary adverse developments in the external environment. In mid-1982, when it become evident that the deterioration in the external environment was permanent and that the domestic and external imbalances were becoming unsustainable, the authorities embarked on a course of fiscal consolidation.

3. **The severe financial crisis that has affected Malaysia and the region since 1997 has posed new challenges for fiscal policy**. Since mid-1998, the Malaysian authorities have sought to stem the decline in output by adopting a policy strategy designed to revive economic activity. To this end, the stance of fiscal policy shifted from being contractionary to being expansionary during 1998, reflecting a number of measures taken over the course of the year that aimed to achieve a federal government deficit of over 2½ percent of GDP, compared with a surplus of about 2½ percent of GDP in 1997 (Table V.1).

4. **Despite stepped up expenditures since 1998, the contribution of fiscal management to short-term policy objectives has been smaller than planned.** The deficit of the federal government in 1998 was only 1½ percent of GDP—about half the target—reflecting higher-than-anticipated collection of direct taxes and delays in project implementation. The 1999 federal government budget targets a deficit of 5½ percent of GDP in an effort to provide a further stimulus. However, the actual stimulus could turn out to be smaller than planned, as a number of institutional and operational factors constrain the use of fiscal policy to pursue effectively the authorities' stabilization objectives.

5. **This chapter draws lessons from the recent experience and proposes a number of measures that would help to enhance the flexibility of fiscal management in the future.** First, it analyzes factors that constrain the use of fiscal policy for stabilization purposes. Second, it discusses an agenda for fiscal reforms. The analysis points to the existence of rigidities in both the structure of public finances and the way fiscal management has been exercised as the principal reasons behind the relative ineffectiveness of stabilization efforts.

6. The remainder of the chapter is organized as follows. Section B puts fiscal policy in Malaysia in a broader perspective by presenting a brief description of the structure of the nonfinancial public sector. Section C discusses the main principles guiding the formulation and conduct of fiscal policy. Section D reviews recent developments in federal government finances against the background of the short-term objectives of fiscal policy. Section E evaluates the performance of fiscal policy in 1998–99, partly on the basis of summary quantitative indicators. Section F suggests an agenda for reform.

B. Structure of the Nonfinancial Public Sector

7. The Federation of Malaysia comprises the federal government, 13 state governments and two federal territories, and 148 local governments. The nonfinancial public sector covers the federal government, state and local governments, statutory bodies, and NFPEs.

8. The division of powers between the various layers of government is defined in the federal constitution. Malaysia's federal arrangements give the federal government revenue-raising power over most important taxes, and the states expenditure responsibilities in a number of areas, including basic infrastructure (such as water supply), land and mines, and

local governments.[3] As a result, the federal government undertakes about three-fifths of general government expenditure but collects over four-fifths of general government revenue. Given this imbalance, the constitution provides for intergovernmental transfers (grants) to bridge the gap between states' revenues and expenditures. In addition, the federal government provides loans—often on soft terms—to state governments to help them finance their development spending.

9. The **federal government's** main functions are undertaken through 14 key ministries—heading a number of operational units, called departments—and a number of statutory bodies. Central to the formulation and implementation of the government's development policy is the Economic Planning Unit, the planning arm of the federal government. Each **state**, led by the chief minister, has its own constitution and legislature that legislates on matters not reserved for the federal government. Each state has its own planning unit. Nearly three-quarters of states' own revenue is derived from nontax sources. **Local governments** have a narrow range of responsibilities, mainly in the provision of basic civic services. State governments can exercise a considerable degree of influence on local finances, including through control over state government transfers. In addition to these transfers, local governments finance their operations with federal government transfers, local tax and nontax revenue, and the sale of assets. Among these three layers of government, only the federal government can borrow from external sources.

10. **Statutory bodies** comprise any corporate body that is established by federal and state laws to carry out government tasks. There are 58 statutory bodies in the federal government. **NFPEs** are productive entities in which the government holds at least 50 percent of equity, either directly or indirectly through other public entities. Subsidiary companies of NFPEs are also classified as NFPEs.[4] NFPEs operate on a commercial basis outside the federal government budget, and are principally involved in the sale of industrial and commercial goods and services. NFPEs are allowed to borrow from foreign sources; however, they enjoy no special privileges on domestic borrowing. Until the mid-1980s, NFPEs played a major role in the pursuit of government objectives. Following the privatization policy adopted in the mid-1980s and the emphasis on enhancing the role of the private sector, the remaining NFPEs have increasingly been operating along commercial principles.

11. **The federal government is primarily responsible for implementing fiscal stabilization policies in Malaysia.** States governments have a relatively narrowly-defined range of responsibilities, primarily in the provision of essential services, and a small and

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[3]The main taxes assigned to the federal government include taxes on corporate and personal income, excise and customs duties, and petroleum taxes. The main revenue sources assigned to the states include agricultural and urban land, mining, forestry, drainage, and irrigation.

[4]The number of NFPEs declined from 56 in the mid-1980s to 28 currently, reflecting company restructuring and partial or full privatization.

inelastic revenue base. Consequently, their ability to contribute to stabilization objectives is rather limited, as reflected in the relatively small share of their revenue and expenditure to total general government revenue and expenditure (Table V.2). With local governments and statutory bodies having an even smaller share, and with NFPEs operating largely on commercial principles, the federal government accounts for most of the impact of the public sector on the economy (Chart V.1).[5]

12. **The measured size of the nonfinancial public sector in Malaysia understates the true impact of government on the economy owing to widespread use of off-budget activities,** most notably in infrastructure projects.[6] Following the drive for privatization of NFPEs undertaken between the mid-1980s and mid-1990s, the government's approach has shifted from outright privatization of enterprises to privatization of projects. Privatized projects remain in most cases part of the government's development plan, but the degree of government control over their financing and implementation is rather weak. Financing for these projects is provided to a significant extent from private sources on commercial principles, thereby imparting an element of financial discipline. A sizeable component of the government's investment program is carried out off-budget (see Table V.1). While privatization of projects has transferred a major portion of expenditure—particularly for infrastructure—to the private sector, the costs to the government have not been eliminated; tax concessions, government participation, and the provision of loans at favorable terms have continued to impact public finances.

C. Principles Guiding the Formulation and Implementation of Fiscal Policy

13. **Malaysia's public finances operate on the distinction between operating (recurrent) and development (capital) budget.** Against the backdrop of unsustainable fiscal expansion in the early 1980s, the principal objective of fiscal management in recent years has been the promotion of macroeconomic stability and growth. To this end, the availability of revenue determines the size of the operating budget, and the capacity to raise non-inflationary financing guides the size of the development budget. A strong culture of underestimating revenues has also served to reinforce prudence; the result has been a consistent record of more-favorable-than-planned overall balances (Chart V.2).

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[5]Nonetheless, the federal government is relatively small in relation to GDP, even though it pursues a wide range of objectives. The objectives have generally been met by shifting the composition of expenditure, rather than increasing the overall size.

[6]A broader coverage of the public sector to include off-budget activities would better capture the true impact of government operations on the economy. However, information on off-budget activities is limited.

14. Two main principles have guided budget formulation and the conduct of fiscal policy in recent years: the preservation of an operating surplus, and fiscal sustainability.

- The authorities regard the **preservation of an operating surplus** as an essential mechanism for providing fiscal discipline, and have, to the extent possible, committed to adhering to the rule at all times. The rule serves the underlying objective that government development spending be financed partly by government savings. Coupled with the practice of underestimating revenues, the rule has helped the authorities to contain current spending.

- **Fiscal sustainability** has become a principal consideration in the formulation of fiscal policy since the mid-1980s when adjustment efforts succeeded in putting the economy on a more favorable debt path. The authorities have since been more mindful of the implications of annual budgets for fiscal sustainability, and have refrained from unsustainable expansions in fiscal policy. While this principle does not translate to a strict operational rule, it nonetheless guides fiscal management in Malaysia.

15. **Reflecting the disciplined application of these prudential principles in recent years, the authorities have managed to maintain tight budgetary control** despite constraints imposed by the complex institutional framework. Notwithstanding the variety of objectives pursued by the federal government, the multiple layers of government, and the existence of off-budgetary operations which complicate fiscal management, the authorities had until recently been able to build up substantial head room from the prudent exercise of fiscal policy over the past several years. This achievement is attributable to a broad consensus on fiscal conservatism, and has limited fiscal deficits, financing requirements, and government debt (see Chart V.1).

D. Recent Developments in Federal Government Finances

16. **Fiscal policy shifted from a contractionary to an expansionary stance during 1998.** The federal government budget for 1998 aimed to increase the fiscal surplus to 3 percent of GDP from an anticipated surplus of 2 percent of GDP in 1997.[7] Against the backdrop of a rapidly deteriorating external environment and much-weaker-than-anticipated economic activity, the government announced two mid-year policy packages designed to revive economic activity through spending on development projects, including infrastructure. The revised federal government budget aimed for a fiscal deficit of 2½ percent of GDP in 1998, compared with an actual surplus of over 2½ percent of GDP in the previous year.

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[7]Developments in federal government finances are discussed in detail in Chapter II of the accompanying Recent Economic Developments.

17. **Despite stepped up development expenditures during 1998, the boost to demand was smaller than planned.** In the event, the federal government budget recorded a deficit of 1½ percent of GDP, reflecting higher-than-expected direct tax revenues and delays in project implementation. Two main factors accounted for the lower-than-planned fiscal deficit in 1998:

- **The relative lack of automatic stabilizers**—in both the tax and expenditure systems—did not allow for a full fiscal response to the sharp fall in economic activity, as evidenced by continued growth in direct tax revenues in 1998.[8]

- **The reliance on infrastructure projects to kick-start the economy.** Considerable lags in commencing spending on projects prevented the government from achieving its spending targets, both on- and off-budget.

18. **The 1999 budget aims to revive economic activity by providing a strong fiscal stimulus.** The budget provides for a widening of the federal government deficit from 1½ percent of GDP in 1998 to 5½ percent of GDP in 1999, implying a fiscal impulse of 4 percent of GDP. In addition, the stimulus will be supplemented by significant increases in off-budget spending (see Table V.1).

E. Assessing the Stance of Fiscal Policy in 1998–99

19. **The widening of the budget deficit in 1999 is not necessarily an indication of a more proactive fiscal policy,** without considering discretionary policy measures. Part of the increase in the budget deficit is discretionary, and part of it reflects primarily a decline in direct tax revenues.[9] Excluding the effect of direct tax collections, the increase in the federal government deficit in 1999 would have been much smaller than in the budget. In fact, it is argued below that only a small part of the increase in the budget deficit reflects discretionary policy measures.[10]

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[8]Income tax due (both for individuals and corporations) is based on income generated during the preceding year. With strong growth in 1997, direct tax collections rose by about 5 percent in 1998.

[9]Direct tax collections are projected to decline by about RM 10 billion (3¼ percent of GDP) in 1999, reflecting the fact that tax collections will be based on income generated in 1998.

[10]Changes in the budget balance tend to be poor indicators of the cyclical impact of fiscal policy, because certain revenue and expenditure categories are affected by cyclical conditions; thus it is not always clear whether such changes are the cause or the result of economic fluctuations.

20. **Excluding off-budget spending, it appears that the 1999 budget is not as proactive as intended.**[11] Discretionary tax measures have in fact been contractionary. The new tax measures included in the budget are expected to mobilize RM 0.5 billion (¼ percent of GDP) in additional net revenue. With discretionary revenue measures making a small negative contribution to fiscal stimulus, the discretionary stimulus is to come mainly from discretionary expenditure increases.

21. **Expenditure measures in the budget provide for a modest stimulus of just over 1 percent of GDP.**[12] When the budget was formulated in 1998, total expenditures were targeted to decline by 1½ percent over the anticipated outturn. With expenditures falling short of the target in 1998, spending plans for 1999 now appear more expansionary. Nonetheless, the increase in non-interest expenditures in 1999 remains relatively small (5 percent over the 1997 outturn). Considering revenues and expenditures together, **the discretionary measures in the 1999 budget seem to provide for a small stimulus of about 1 percent of GDP.**

22. **The budget outturn in 1999 is likely to involve a lower-than-planned fiscal deficit, implying that discretionary fiscal policy will be broadly neutral in its impact on aggregate demand.** Despite efforts to step-up project implementation, it is likely that development spending will fall short of budget targets, implying virtually no discretionary stimulus; indeed, development spending in the first quarter of 1999 was 29 percent below its level in the same quarter of 1998. Moreover, tax revenue projections in the budget—especially for direct tax revenues—appear to be conservative.

23. **The bulk of the discretionary fiscal stimulus is designed to come from off-budget spending.** Spending on off-budget projects is targeted to accelerate from RM 1 billion in 1998 to over RM 5 billion in 1999, implying a net contribution to aggregate demand growth of around 1½ percent of GDP. However, difficulties in project identification,

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[11]The assessment is based on the identifiable discretionary measures in the budget. However, it is difficult to measure the exact fiscal stimulus in 1999, given that the part of the planned stimulus relating to infrastructure projects will carry over into 2000 and beyond. The task is further complicated by the pattern exhibited by direct tax revenues in 1998–99 owing to their dependence on the previous year's income. This pattern distorts the operation of automatic stabilizers on the revenue side and further complicates assessment.

[12]In assessing the impact of discretionary measures, the Fund staff traditionally relies on quantitative indicators that attempt to separate the impact of the economic cycle on the budget from the impact of discretionary policies. Such indicators include the structural impulse, which aims to capture the contribution of discretionary fiscal policy on the growth of aggregate demand. Calculations of the stimulus arising from discretionary measures are based on an adjusted structural impulse, which is described in Table V.1 and its footnotes.

implementation, and financing could put obstacles in the way of delivering the planned stimulus.

F. Agenda for Reform

24. **Prudent fiscal policies during the 1990s have enabled the authorities to create substantial head room in terms of debt dynamics.** While fiscal prudence may have served the authorities well during most of the 1990s when output growth was maintained at high and relatively stable rates, the recent severe downturn has pointed to a number of rigidities in fiscal management.

25. **Looking forward, the effectiveness of fiscal policy could be enhanced by strengthening the role of the budget as an automatic stabilizer, and by formulating and implementing the budget more flexibly.** Measures could include the following:

- **Addressing short-term demand problems by relying on fiscal measures that could have a more immediate impact on the economy.** Infrastructure projects enhance the country's growth potential and have high multiplier effects; indeed they have been an integral part of Malaysia's development strategy. However, there are faster and more effective means available to deliver a required fiscal stimulus. First, operating expenditures have a more immediate impact on aggregate demand. For example, transfers to state and local governments are effective means of providing stimulus, since state and local governments are usually in a better position to identify and start small spending programs. Second, expansion of development spending programs that are already in place could have an immediate effect. For example, expanding the scope of ongoing small-scale spending programs—such as small rural and housing projects—and providing additional funds for the social sectors would involve reasonably short lags.

- **Exercising fiscal policy more flexibly in times of crisis.** The head room created in the past was not fully exhausted over the past year. Adherence to rigid implementation rules—such as the requirement that revenues cover operating expenditures—in times of severe economic crisis may in fact be destabilizing, since strict application of the rule implies cuts in operating expenditures during economic downturns. The authorities could aim to balance the operating budget over the course of the economic cycle instead of each year.

- **Building more automatic stabilizers in Malaysia's budget, on both the revenue and expenditure sides.** On the revenue side, the introduction of the VAT could help, provided that it is broad-based and replaces existing taxes that have widespread

exemptions.[13] Further efforts could include steps to reduce tax exemptions and expand the base of the tax system. On the expenditure side, strengthening Malaysia's social safety net would not only provide a larger cushion for the most vulnerable segments of the population, but should also increase the stabilizing role of the budget. For instance, the bulk of Malaysia's safety net structure has not been responsive to changes in economic activity because it is based mostly on social rather than economic criteria.

- **Integrating off-budget activities into the authorities' overall budgetary planning to improve the transparency and effectiveness of fiscal operations.** This would also make clearer the financing implications, as many of these projects compete with the government for financing while, at the same time, the government may be co-financing the projects. The provision of financing to off-budget activities based largely on commercial principles serves as a good prudential measure. However, it diminishes the effectiveness of fiscal policy, since control over major policy initiatives is largely in the hands of the private sector. This is particularly important in the current circumstances when the thrust of the discretionary fiscal stimulus has been planned to come from off-budget spending.

[13]The announced shift in the tax assessment year for the income tax from the previous year to the current year beginning in 2000 will also enhance the role of the budget as an automatic stabilizer.

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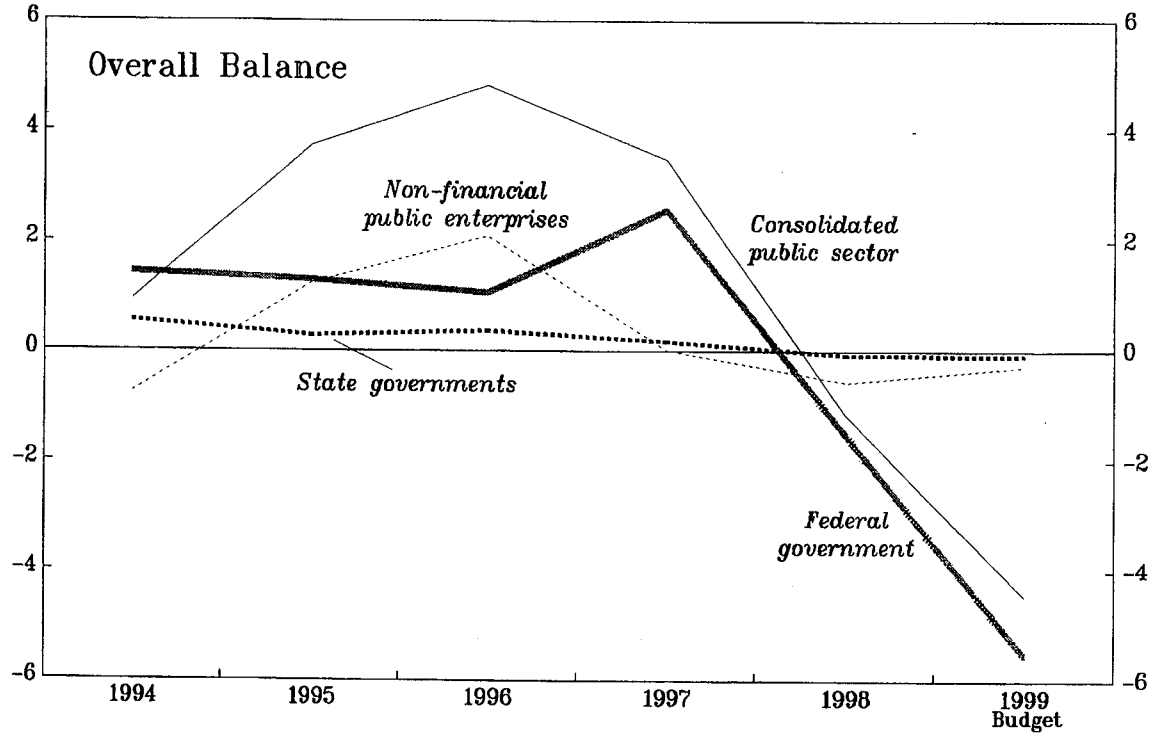
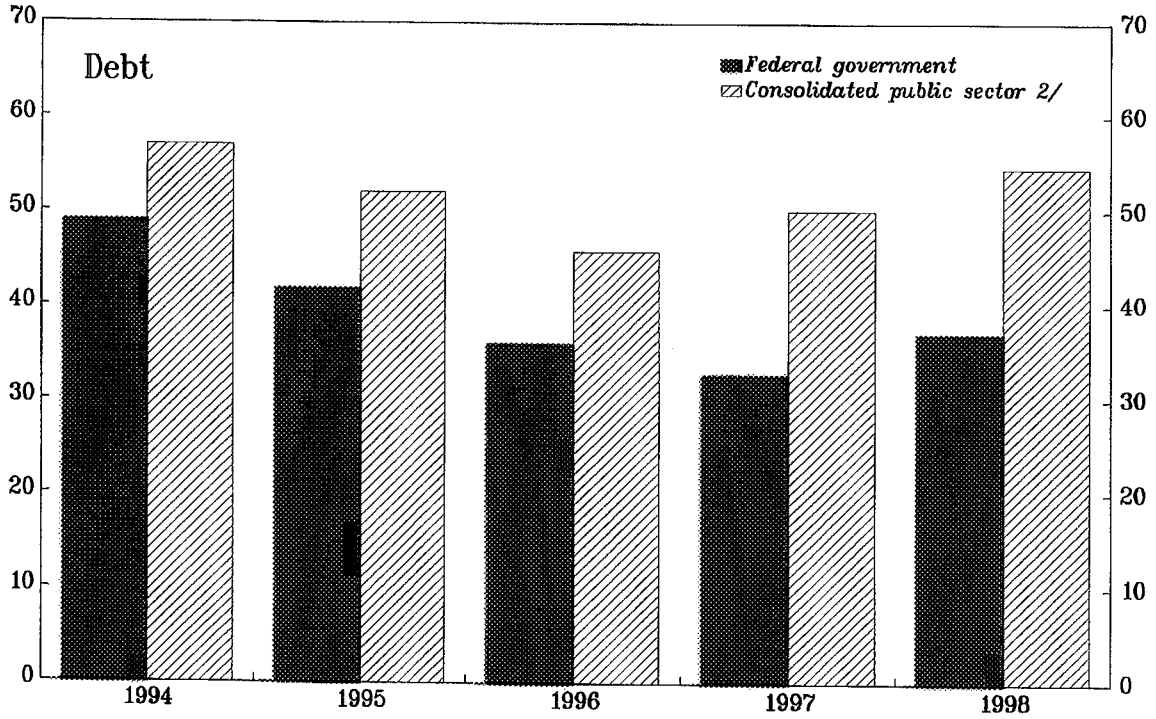
CHART V.1

MALAYSIA

PUBLIC SECTOR ACCOUNTS, 1994-99 1/

(In percent of GDP)





Sources: Data provided by the Malaysian authorities; and Fund staff estimates.

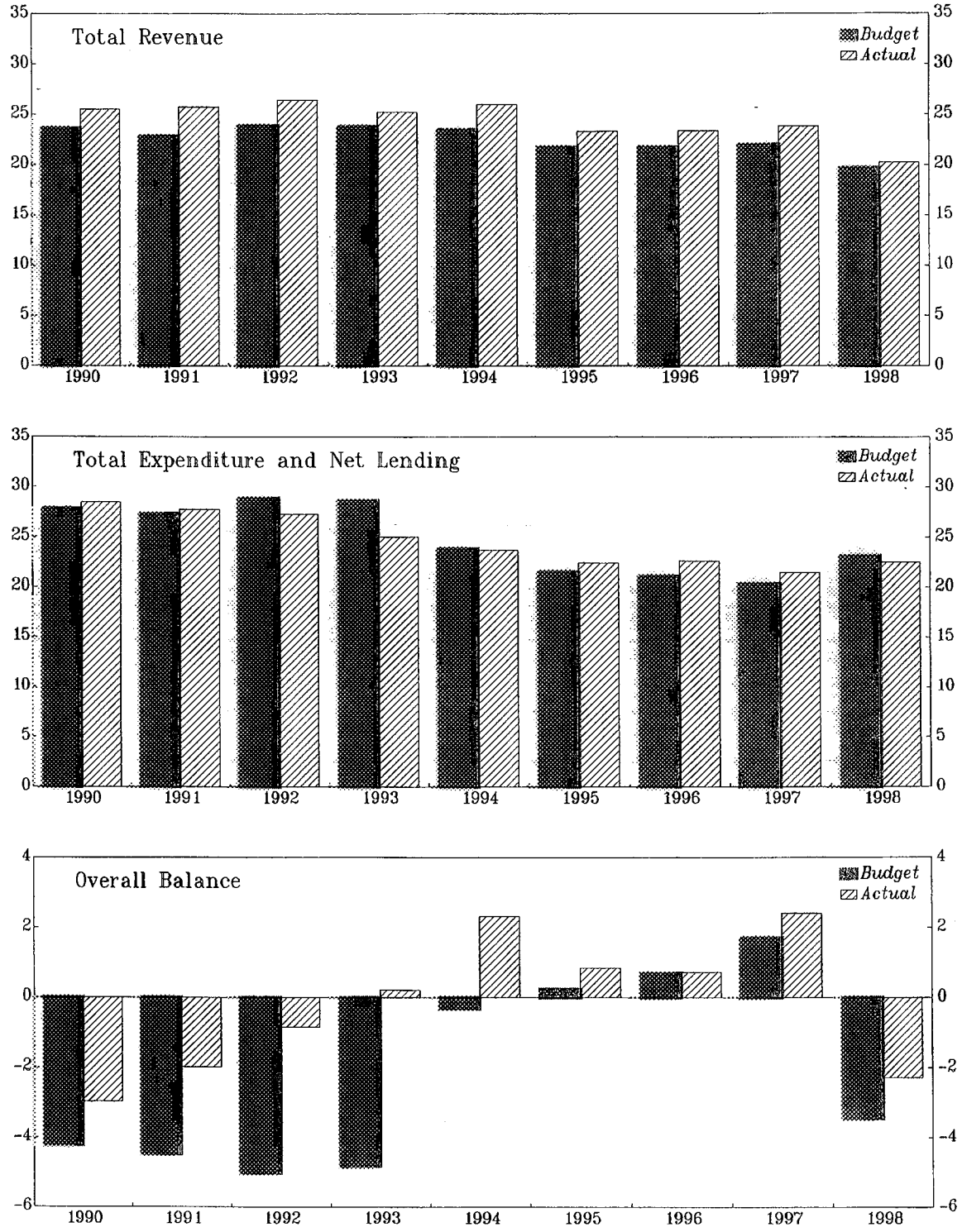
1/ The consolidated public sector comprises the operations of the federal government, state and local governments, statutory bodies, and nonfinancial public enterprises (NFPEs).
2/ Staff estimates. They exclude domestic debt of the NFPEs.

CHART V.2

MALAYSIA

FEDERAL GOVERNMENT REVENUE, EXPENDITURE, AND OVERALL BALANCE 1990-98 1/

(In percent of GDP)



Source: Data provided by the Malaysian authorities.

1/ Data are in the authorities' format.

Table V.1. Malaysia: Summary of Federal Government Operations, 1997-99 1/

(In percent of GDP, unless otherwise indicated)

	1997	Budget 2/ 1998	Prel. 1998	Budget 1999	IMF est. 1999
Federal government					
Revenue	24.0	19.8	20.4	17.9	18.5
Expenditure and net lending	21.4	22.4	21.9	23.4	22.3
Overall balance	2.6	-2.6	-1.5	-5.5	-3.8
Off-budget spending	...	1.1	0.4	1.8	1.6
Overall balance (including off-budget spending) 3/	...	-3.7	-1.8	-7.3	-5.4
Memorandum items:					
Fiscal impulse 4/ 5/	-1.5	5.0	3.6	4.1	2.6
Structural impulse 6/	-1.6	5.0	3.8	4.1	2.2
Adjusted structural impulse 7/					
Federal government	-1.3	4.6	2.9	0.9	-0.1
Revenue impulse	-2.4	3.3	2.8	-0.2	-0.8
Expenditure impulse	1.1	1.2	0.1	1.1	0.7
Off-budget spending	...	...	...	1.5	1.3
Adjusted structural impulse (including off-budget spending) 7/	...	...	...	2.4	1.2

Sources: Information provided by the Malaysian authorities; and Fund staff estimates and projections.

1/ Figures are presented in the IMF format.

2/ Refers to revised budget plans announced in July 1998.

3/ The figures exaggerate the overall balance because they do not net out federal government contributions to off-budget projects.

4/ The fiscal impulse is a measure of the overall cyclical impact of the budget. It is calculated as the first difference of the fiscal stance. The fiscal stance is the gap between the actual federal government balance and the cyclically-neutral balance. The latter is calculated assuming that neutral revenue grows in line with actual GDP and that expenditure grows in line with potential GDP. The base year, in which actual and potential GDP are assumed to be equal, is 1993.

5/ While the fiscal impulse measure shows indeed a sizeable positive contribution of the 1999 federal government budget on the growth of aggregate demand, it would nonetheless be inappropriate to use this measure to assess discretionary fiscal policy in 1999. The measure loses its precision when there are large swings in output or when the widening of the fiscal deficit reflects to a significant extent the impact of automatic stabilizers. First, fiscal impulse calculations rely on estimates of potential output. Such estimates become very unreliable in periods of sharp swings in output, such as in 1998-99. Second, by design, the fiscal impulse measure treats automatic stabilizers as discretionary fiscal policy. This reduces the reliability of the measure when large changes in output increase the contribution of automatic stabilizers--weak as they may be--on the budget, as it has been the case in 1998 and 1999.

6/ Defined as the (negative) difference in the structural balance. The structural balance is the difference between a "full employment budget" and the fiscal stance. The structural impulse adjusts for the effects of automatic stabilizers, and is thus a measure of the effects of discretionary fiscal policy rather than the overall cyclical impact of the budget. However, the measure is subject to the same limitations as the fiscal impulse measure.

7/ The adjusted structural impulse improves upon the structural impulse by separating, to the extend possible, discretionary from nondiscretionary measures. The revenue impulse is based on estimates of the net revenue impact of new tax measures in the budget. The expenditure impulse is based on total expenditures after netting out interest payments.

Table V.2. Malaysia: General Government Operations, 1990-99 1/ 2/

(In percent of GDP)

	1990	1995	1996	1997	Budget 3/ 1998	Prel.	Budget 1999
Total revenue and grants	32.8	28.6	28.8	28.7	25.1	25.4	23.0
Of which:							
Federal government	25.0	23.4	23.7	24.0	19.8	20.4	17.9
State governments	4.6	3.1	3.2	2.9	2.7	2.4	2.2
Total expenditure and net lending	35.2	26.3	26.8	25.3	27.1	26.5	27.8
Total current expenditure 4/	26.5	19.5	20.6	18.8	19.2	18.5	20.1
Of which:							
Federal government	19.1	15.2	16.3	14.8	14.9	14.3	15.7
State governments	3.5	1.8	1.8	1.6	1.3	1.2	1.4
Total direct development expenditure 4/	10.0	7.3	6.0	6.4	7.4	7.6	7.7
Of which:							
Federal government	5.6	4.3	3.4	3.8	4.6	4.9	5.5
State governments	2.6	1.7	1.4	1.4	1.5	1.5	1.0
Net lending 5/	-1.3	-0.5	0.2	0.1	0.5	0.4	0.0
Overall balance	-2.4	2.3	2.0	3.5	-2.0	-1.1	-4.8
Financing	2.4	-2.3	-2.0	-3.5	2.0	1.1	4.8
External	-0.8	-0.9	-0.9	-0.6	0.7	0.7	-0.1
Domestic (including change in assets)	3.2	-1.4	-1.1	-2.8	1.4	0.4	4.9

Source: Data provided by the Malaysian authorities.

1/ Includes federal, state, and local governments, and the statutory bodies.
2/ Figures are presented in the IMF format.
3/ Refers to revised budget plans announced in July 1998.
4/ Net of transfers.
5/ Including adjustments for accounts payable.

VI. Monetary and Exchange Rate Policy Options[1]

A. Introduction and Summary

1. **In September 1998, Malaysia imposed selective exchange controls in order to achieve monetary independence.** That independence has been used to reorient monetary policy toward the stabilization and recovery of the domestic economy. The authorities, however, have indicated that controls are intended to be temporary, and steps have already been taken in recent months to liberalize some elements of the controls.

2. **This paper considers Malaysia's monetary policy options in the context of a prospective return to a relatively open capital account.** The fundamental choices are between returning to the pre-crisis regime involving very limited exchange rate flexibility, or moving toward a more flexible exchange rate regime. A more-or-less fixed exchange rate regime would imply that monetary policy could not be used to contain domestic inflation and stabilize output, at least over medium-term horizons.

3. **In the 1980s and 1990s, the Malaysian economy has periodically been buffeted by significant external shocks including terms-of-trade shifts and large-scale capital flows.** On such occasions, a sharp conflict has arisen between the objective of maintaining a stable nominal exchange rate and promoting domestic economic stability.[2] To minimize the conflict between policy objectives in such situations, the authorities have responded with a variety of temporary administrative measures, including exchange controls. By their nature, however, such measures have tended to be adopted following crises rather than preemptively and, consequently, do not appear to have been very effective in insulating the economy from external shocks. In view of this experience, it is recommended that Malaysia move toward a more flexible exchange rate regime so as to facilitate the pursuit of domestic stabilization objectives within an open capital markets framework.

4. **The paper examines flexible exchange rate policy frameworks consistent with the central objective of Malaysian monetary policy of maintaining low inflation:** monetary targeting, inflation targeting, and nominal income targeting. Empirical evidence suggests that demand for M1 may be sufficiently stable to use as an indicator variable for policy, but further research would be needed to determine its suitability in the more demanding role of an intermediate target variable. Like central banks in most industrialized countries, Bank Negara Malaysia (BNM) concern over the stability of the monetary aggregates has led them to downgrade the importance of the monetary aggregates as policy indicators over the past decade. Empirical evidence also suggests that the alternative of direct

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[1]This chapter was prepared by Scott Roger (ext. 39417) who is available to answer questions.

[2]See, for example., the comparison of the 1985–86 and 1997–98 crises in Bank Negara (1999).

inflation targeting may be a superior option for Malaysia. The main concern with practical implementation, in current circumstances in particular, is uncertainty regarding the level of "potential" or noninflationary output. If estimates of potential output are very uncertain, a less forward-looking but also less risky approach, such as nominal income targeting, might be appropriate, at least until potential output could be estimated with greater confidence.

5. **The possibility of a mixed regime, involving some limits on exchange rate flexibility is also considered**. In order to minimize the inherent conflict between policy objectives implicit in such a framework—and market testing of policy priorities—a fairly wide exchange rate target range would be required. An alternative approach would be to pursue inflation targeting with an element of exchange rate smoothing built in, but recognizing that this smoothing would likely come at a cost of higher cyclical variation of inflation and output and greater vulnerability to speculative pressures on the currency. Sterilized intervention in the exchange market to counter very short-term volatility would be compatible with maintaining a flexible exchange rate over the medium term.

6. **Institutional and communications issues relating to the adoption of a policy framework involving more exchange rate flexibility are also discussed.** Fundamentally, a more flexible exchange rate regime gives greater policy autonomy to the central bank. To ensure that such autonomy commands credibility, arrangements would be required to bolster policy accountability, mainly through enhanced public communication by the central bank.

7. **In the annex, practical issues relating to the implementation of an alternative policy framework are discussed.** These include: the choice of the target measure of inflation; factors affecting the width of the target range; the choice of the policy horizon and its implications for the weight placed on the exchange rate in setting policy; and key elements needed in the inflation forecasting framework.

B. Background

8. **With the eruption of the Asian financial crisis in mid-1997 monetary policy in Malaysia, as in most other countries in the region, was faced simultaneously by downward pressure on the exchange rate, falling asset prices, and financial system distress.** A basic dilemma in formulating policy in these circumstances was whether to respond mainly to the prospect of weakening demand resulting from falling asset prices and increased liquidity constraints, or to focus primarily on resisting further weakness in the exchange rate and the impact of currency depreciation on consumer prices. Following the brief initial defense of the ringgit, monetary policy in Malaysia could be characterized as following a somewhat mixed strategy. Although downward pressures on the currency were not fully resisted, concern for the inflation outlook and continuing exchange market pressures led the stance of policy to be progressively tightened over the latter part of the year and into early 1998, through interest rate increases and administrative measures to restrict credit growth.

9. **In the second quarter of 1998, the government shifted the stance of fiscal policy from restraint toward stimulus.** By easing the policy dilemma facing monetary policy, the announcement of the fiscal measures likely contributed to some stabilization of exchange rate expectations. Nonetheless, by midyear, as evidence emerged of a very sharp contraction of activity and, consequently, a lowering of prospective inflation pressures, monetary policy also began to be eased.

10. **Monetary policy was decisively reoriented toward domestic stimulus in September, with the imposition of controls on short-term capital flows and the pegging of the exchange rate against the dollar.** In other words, the authorities responded to the policy dilemma or conflict by introducing an additional policy instrument capital—controls—in order to be able to pursue both domestic and external objectives simultaneously. In the period since September, interest rates in Malaysia have eased significantly, while the exchange rate has remained stable and official reserves have risen.[3]

11. **The authorities have made clear that the controls introduced in September were intended as a temporary measure.** Over the period since their introduction, controls have been liberalized in a number of areas. The most important modification to date has been the replacement of the one-year holding period restriction on nonresident portfolio capital with a system of graduated levies on repatriation of capital and/or profits.

C. Options in the Choice of Monetary Policy Frameworks

12. **As restrictions on capital flows are further liberalized, the authorities will need to determine what form of monetary policy framework will best serve the achievement of their macroeconomic objectives on a sustainable basis.**

13. **A fundamental decision to be made in the choice of a monetary policy regime is between the commitment to a fixed exchange rate and the adoption of a flexible exchange rate regime.** Frankel (1995) provides a clear exposition of the "impossible trinity" of simultaneously maintaining open capital markets, a fixed exchange rate, and monetary independence. Frankel also indicates that sterilized intervention by the central bank can only temporarily delay this trade-off. In Malaysia's case, the return to international capital mobility will eventually require the authorities to choose between maintaining a fixed exchange rate, involving a loss of monetary independence, or adopting a flexible exchange rate in order to retain monetary independence.

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[3]It is not entirely clear how much the controls facilitated the easing of interest rates while maintaining exchange rate stability, since other countries in the region were also able to ease interest rates and see their currencies strengthen. Indeed, it could be argued that the controls were mainly effective in preventing the currency from appreciating rather than in preventing further depreciation. There can be little doubt, however, that the controls, together with the pegging of the exchange rate, have reduced short-term exchange rate uncertainty.

A fixed exchange rate regime

14. **In general, the case for a fixed exchange rate depends on the evaluation of the microeconomic benefits of a fixed exchange rate as compared with the macroeconomic costs of a loss of monetary independence.**[4] The optimum currency area literature, pioneered by Mundell (1961), identifies a number of key considerations that, in principle, should influence the evaluation. These include, notably, the degree of trade or product market integration of the currency areas (in a two country world, this would be equivalent to "openness"), the degree of labor mobility between the two countries, the extent of price and wage flexibility, and the degree to which the two areas are similar in terms of economic structure and exposure to asymmetric shocks.

15. **The more closely integrated the two economies, the larger will be the microeconomic benefits of a fixed exchange rate.** Indeed, taken to its logical conclusion, these benefits would be maximized by the formal adoption of a common currency, not by a pegged exchange rate or even by a currency board arrangement. The microeconomic benefits will be gained at least cost in terms of macroeconomic performance if the two economies are very similar in terms of structure, other policy settings, and exposure to external disturbances. In this event, loss of monetary independence has little meaning, since the partner country's monetary policy would be appropriate for both. Alternatively, even if the two economies differ in important respects, if labor is highly mobile, or prices and wages are highly flexible, the gains from the pursuit of an independent monetary policy are very limited.[5]

16. **In the case of Malaysia, it seems unlikely that the potential microeconomic benefits of currency integration with any of its principal trading partners—Japan, the United States, Singapore, and the Euro area—would outweigh the macroeconomic cost of an exchange rate union.** Although the Malaysian economy is very open to trade, with the value of exports and imports each over 100 percent of GDP, its trade is not highly concentrated on any one partner country. The United States, Japan, and Singapore each

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[4]See, for example, Obstfeld and Rogoff (1995) or McCallum (1997). The principal micro-economic benefits of a common currency are generally regarded as being: (i) the saving in transaction costs associated with trade in goods and services; and (ii) the savings of (opportunity) costs resulting from exchange rate uncertainty. In some cases, these may be reflected in pecuniary costs of hedging; in other cases the cost may be in terms of business foregone. A detailed discussion of the issues and estimation of microeconomic benefits is found in Commission of the European Economies (1990).

[5]Put slightly differently, if Malaysia was characterized by a high degree of international labor mobility and/or highly flexible wages and prices, there would be neither the need nor the scope for meaningful stabilization policy. The case for an independent monetary policy, therefore, largely presumes the existence of rigidities in labor and/or product markets.

account for 17 percent to 18 percent of Malaysia's external trade, while the Euro area share is a little over 10 percent. The proportion of total trade invoiced in dollars is estimated to be much higher—around 70 percent[6]—than the share of trade with the United States, but is not likely to be markedly higher than for most other countries.

17. **The high ratios of imports and exports relative to GDP may also give a somewhat misleading impression of the microeconomic benefits to be gained from currency integration with either the dollar or the Japanese yen.** The very high ratios of imports and exports to GDP reflect the fact that much of Malaysia's trade involves importation of materials for processing and reexport. For many of the firms involved in the traded goods sector, particularly the subsidiaries of multinationals, much of their financial activity is likely to be conducted in dollars, or possibly yen, whatever Malaysia's exchange rate regime. Consequently, the potential saving to businesses in terms of exchange transaction costs or currency risk hedging would likely be significantly less than the trade numbers might suggest at first glance. This would be especially the case if full currency union did not occur, since transaction costs of currency conversion and some currency risk would still remain.

18. **On the other side of the ledger, for Malaysia the macroeconomic cost of a loss of monetary autonomy could be substantial.** Experiences of the 1980s and 1990s show that the Malaysian economy is subject to quite different macroeconomic developments than the U.S. and Japanese economies. Despite the importance of the U.S. and Japanese markets for Malaysian exports, Malaysia's business cycle has shown significant divergences from the U.S. or Japanese business cycles. The emphasis placed on limiting movement in the nominal exchange rate of the ringgit against the U.S. dollar throughout the 1980s and 1990s very much constrained the ability of BNM to tailor its policy to domestic stabilization needs.

19. **Indeed, the commitment to nominal exchange rate stability may have induced an element of procyclical monetary policy responses to shocks.** In the event of shocks that affect the equilibrium real exchange rate, resisting adjustment in the nominal exchange rate forces adjustment to take place through domestic output and price performance. In 1985–86, for example, Malaysia experienced an adverse terms-of-trade shock, leading to downward pressure on the ringgit.[7] To resist this pressure, interest rates were increased, accentuating the adverse output consequences of the terms-of-trade shock.[8] In 1993–94, Malaysia experienced strong capital inflows, putting upward pressure on the exchange rate. Despite the recognition that the inflows could lead to overheating in the economy, interest rates were allowed to fall

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[6]Bank Negara Malaysia (1999).

[7]Bank Negara Malaysia (1999).

[8]Kamin, Turner, and Van't dack (1998), pp. 11–12.

sharply in order to maintain exchange rate stability.[9] These episodes suggest that a monetary policy framework based on very limited exchange rate flexibility may accentuate rather than dampen the cyclical output and inflation effects of the sorts of shocks to which Malaysia is exposed.

20. **Malaysia's experience also suggests that the use of administrative measures to supplement the main instruments of policy have not been particularly effective as substitutes for exchange rate flexibility in moderating the business cycle.** Periodically through the 1980s and 1990s, BNM has introduced special measures to cushion domestic economic performance from disturbances while continuing to direct the main instrument of monetary policy—interest rates—toward stabilization of the exchange rate:

- In 1985–87, controls on deposit rates and lending rates were introduced to insulate domestic activity somewhat from increases in financial market rates.[10]

- In 1994, reserve requirements were raised; eligible liabilities were broadened to include external borrowing; the net external liability position of each bank was subjected to a limit; residents were prohibited from short-selling money market instruments to nonresidents; commercial banks were required to make deposits at BNM equivalent to the gross credit balances held in noninterest bearing vostro accounts (and such balances were included in the definition of eligible liabilities); and commercial banks were directed to cease nontrade related swaps and outright forward transactions on the bid side with foreign customers.[11]

- In 1998, selective exchange controls were imposed; guidelines were set for loan growth by individual banks; and restrictions on lending to certain sectors imposed in some cases and relaxed in others.

21. **Such measures are generally regarded as likely to lead to inefficiencies and misallocation of resources.** A more important drawback in practice appears to be that, because such measures are introduced in a discretionary manner, and with some reluctance, they tend to be applied too late to prevent much of the damage that they are intended to prevent. In this regard, Aziz (1995) provides a telling account of Malaysia's 1993–94 experience with large-scale short-term capital inflows. Capital inflows began on a large scale in 1993, and a variety of administrative measures were adopted in early 1994 to contain the impact of the inflows. Nonetheless, most of the potentially adverse consequences of short-term capital inflows identified by Aziz—including downward pressure on domestic

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[9]Aziz (1995).

[10]Alowi (1997).

[11]Aziz (1995).

interest rates, rapid money growth, sharp increases in asset prices, and over-heating of domestic demand—did in fact come to pass.

22. **Direct evidence on the degree of wage and price flexibility in the Malaysian economy is scanty.** However, the fact that the major shocks to the Malaysian economy in the 1980s and 1990s did lead to large swings in output is a strong indirect indication that wages and prices are not exceptionally flexible in Malaysia. This, in turn, implies that monetary policy can have significant short-term effects on economic performance.

23. **In short, Malaysia's macroeconomic experience in the 1980s and 1990s strongly suggests that if BNM is to pursue a macroeconomic stabilization objective, a more flexible exchange rate regime vis-à-vis the dollar will be necessary.**[12]

Flexible exchange rate regimes

24. **Within a flexible exchange rate regime, the main alternative monetary policy frameworks for providing a long-term nominal anchor are monetary targeting, inflation targeting, and nominal income targeting.** Each of these options is considered below, followed by a discussion of whether and how such frameworks might be supplemented by constraints on the degree of exchange rate flexibility.

Monetary targeting

25. **The most traditional nominal anchor for monetary policy has been the use of a monetary aggregate as an intermediate target variable.** The ultimate target implicit in this framework is nominal spending or income. For a monetary aggregate to perform well in the role of an intermediate target variable, three conditions should be satisfied:

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[12]A possibility that may be worth considering is whether some members of ASEAN, including Malaysia, together could provide the basis of a common currency area. Trade with Singapore, Thailand, Indonesia, and Brunei together accounts for about 23 percent of Malaysia's total trade, a higher share than its trade with Japan or the United States. In addition, the region's economies also appear to be more prone to symmetric rather than asymmetric macroeconomic shocks, and there is considerable labor mobility between some of the countries. In principle, therefore, a common monetary policy in the region might be better suited to stabilization of the region's economic performance than the *de facto* dollar peg of the past decade or more, and also yield some significant microeconomic gains. What would be required, of course, would be the establishment of a central bank for such a currency union. In view of Europe's experience with the move to a common currency, the development of an ASEAN equivalent could not be considered as a realistic possibility for the medium term, but should not be ruled out as a long-term goal.

- The relationship between money and nominal income growth should be predictable, at least over the medium term. If the relationship is unstable, then even if the central bank is able to achieve its intermediate target, there is no assurance that it will achieve its ultimate objective.

- The relationship between adjustments in monetary policy instruments and money growth should also be stable. Otherwise, achieving the desired rate of monetary expansion will be very uncertain.

- Monetary growth should not have a lagged relationship with nominal income growth. If money growth is a lagging rather than a leading indicator of nominal income growth, then use of money as an intermediate target will lead to greater variability of nominal income than targeting nominal income more directly.[13]

26. **Evidence on the suitability of monetary aggregates as intermediate targets is mixed.** In a recent study, Dekle and Pradhan (1997) found that demand for narrow money as well as broad money in Malaysia was stable over the long term, but also that real interest rates only exerted a significant influence over narrow money growth.[14] In addition, the authors did not find clear evidence that money growth led nominal income growth, a result consistent with the findings of Coe and McDermott (1997).[15]

27. **The empirical evidence lends support to BNM's use of the monetary aggregates as policy indicators rather than as intermediate targets.** Alowi (1997) indicates that in the 1980s structural changes affecting demand for M1 led the BNM to shift its focus to M2, and then, in 1984, to M3. Subsequently, with the increasing development of the financial system, attention shifted increasingly away from money aggregates toward market interest rates and money market liquidity conditions as policy indicators.[16] The evolution of BNM's approach has been similar to those of central banks elsewhere: almost all central banks pay some

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[13]Svensson (1998).

[14]Demand for both broad and narrow money, however, displayed a significant upward trend (i.e., downward trends of velocity). A curious result was that homogeneity of broad money demand in prices was rejected by the data, indicating that a doubling of the broad money supply would not necessarily be matched by a doubling of prices in the long term.

[15]Coe and McDermott found that monetary growth contained no leading information on the evolution of inflation beyond that contained in a measure of the output gap and lagged inflation.

[16]In practice, the priority given to stabilization of the nominal exchange rate precludes any very meaningful role for the monetary aggregates in policy formulation, regardless of their formal role.

attention to developments in money and credit aggregates, but since the 1980s, virtually all have demoted monetary aggregates from the traditional role of intermediate targets to the lesser role of just one of many economic indicators. Indeed, Svensson (1998) observes that despite its formal commitment to intermediate monetary targeting, in practice the "Bundesbank has systematically and intentionally missed its money target...," implying that even the Bundesbank has normally based policy actions on considerations other than the growth of money relative to the target range.

Inflation targeting

28. **In view of the questionable suitability of using monetary aggregates as intermediate policy targets, it would be sensible to consider the alternative of adjusting policy instruments directly in response to changes in the outlook for inflation relative to a publicly announced target, that is, to adopt an explicit inflation targeting framework.**[17]

29. **As with intermediate monetary targeting, a number of potential obstacles could make inflation targeting impractical.** Masson et al (1997) identify three particular threats to the successful or sustainable pursuit of inflation targeting in developing countries: dependence of the fiscal authorities on seigniorage and inflation taxes; fragility of the banking system; and shallow capital markets.

30. **Such obstacles are relevant to *any* monetary policy framework—not just inflation targeting—while a number of other considerations would favor inflation targeting in Malaysia:**

- Although the Masson et al study indicates a relatively high seigniorage benefit to the Malaysian Treasury over the sample period used, it would not be reasonable to go so far as to suggest that the fiscal authorities are so dependent on this source of revenue that commitment to a low inflation environment would be dismissed as unsustainable.

- Banking system fragility is not particularly an argument against inflation targeting; systemic financial crises can undermine any monetary policy regime. In the Malaysian case, this provides a strong argument for linking the institution of a new monetary policy framework to progress in restructuring of the financial system.

- The likelihood of a systemic financial crisis may not be independent of the monetary policy regime in place. To the extent that inflation targeting (or monetary targeting) leads to dampening of cyclical booms and busts and associated swings in asset prices,

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[17]There is now a fairly extensive literature on inflation targeting. Debelle (1997) provides a good overview of practical issues. Svensson (1997 and 1998) gives a more theoretical treatment of some issues and provides extensive references to the literature.

it may be less vulnerable to banking system crises than is a framework based on much more limited exchange rate flexibility.

- Shallow capital markets, like financial fragility, complicate the implementation of any monetary policy framework, not just inflation targeting. The more important point is that the kinds of measures referred to in Masson et al as contributing to shallow financial markets hamper the effective implementation of virtually any monetary policy framework.[18] Consequently, this is not so much an argument against inflation targeting as an argument for eschewing the kinds of measures that contribute to shallow capital markets.

- BNM already enjoys a reputation for maintaining low inflation, so that the adoption of an explicit target for inflation would not require a potentially difficult adjustment of private sector expectations.

- Inflation targeting requires timely, good quality economic statistics and a well-trained central bank staff able to analyze developments, provide high quality advice to the management on policy formulation, and communicate policy to the public. BNM is much better placed than most developing country central banks with regard to the availability of economic data and the capability of its staff.

31. **Implementation of inflation targeting in Malaysia would require some modifications to the way in which policy is formulated and working through a number of technical issues.** The main issues are discussed in somewhat greater detail in Annex VI.1, but are outlined briefly below:

- A target range for inflation would need to be specified. The *center* of the range should correspond to the authorities' desired long-term average inflation rate and should take into account measurement biases in the price index. The *width* of the range needs to strike a balance between its role in influencing expectations of the public, and its role in providing policy accountability or discipline. The width of the range should also take into account whether the target inflation measure excludes most supply disturbances.

- The policy horizon for achieving the inflation target should also be specified. If inflation targeting is to be consistent with stabilization of output, the policy horizon should be long enough—typically one to two years—for the main influence of monetary policy to be exerted through its influence on aggregate demand. A particularly important implication of targeting inflation at the one- to two-year

[18]Masson et al mention as factors that may lead to shallow capital markets: interest rate controls; high reserve requirements; sectoral credit policies; and compulsory placement of public debt; all of which they characterize as subtle forms of "fiscal dominance," (p. 23).

horizon is that the direct, but temporary, effects of exchange rate movements on inflation would not elicit a policy response. Policy would, however, respond to the longer-lasting effects of exchange rate movements on demand and expectations.[19]

- An inflation forecasting framework would need to be developed, linking adjustments in the stance of policy to medium-term output and inflation developments. The inflation forecasts would play a central role in formulating policy.

32. **An important implication of lengthening the policy horizon is that it should tend to lessen reliance on administrative measures in implementing monetary policy.** Pressures to resort to administrative measures would be lessened in two ways. First, resort to administrative measures tends to be most likely in the event of supply disturbances which generate a conflict between the central bank's commitment to maintaining stable inflation and its desire to stabilize real activity. Administrative measures are used, in effect, to introduce additional policy instruments so that more than one objective can be pursued, at least temporarily. Lengthening the policy horizon to the one- to two-year horizon is specifically intended to minimize this conflict by placing the inflation objective beyond the influence of recent supply disturbances. Second, if the policy horizon is short relative to the speed of transmission of interest rate changes to activity and inflation, then there will naturally be a tendency to resort to administrative measures that may act more rapidly, even if they distort efficient operation of the economy. Lengthening the policy horizon will lessen this tendency or incentive toward quick but distortionary "fixes."

33. **Perhaps the most important technical challenge to effective implementation of inflation targeting is the difficulty of measuring the degree of excess supply or excess demand in the economy.** As discussed in the Annex, Coe and McDermott (1997) constructed a measure of excess demand for Malaysia and found that it was an important explanator of inflation developments. However, the impact of the recent crisis on the current level of noninflationary output and its future rate of growth is bound to be quite uncertain.

34. **When the level of potential output is uncertain, the inflation targeting strategy should become less forward-looking.** Uncertainty regarding potential output and the extent of excess demand (the output gap) implies that forecasts of future changes in inflation, based on the output gap, will also be uncertain. In such circumstances, the logical response to uncertainty about potential output is to put more weight on current information about inflation.[20] Putting greater weight on current inflation, however, runs the risk of inducing

[19]In the context of recent developments, this approach would have implied a gradual easing of interest rates through the latter part of 1998 in response to weakening medium-term inflation pressures despite the prospect of a short-term rise in measured inflation as a consequence of currency depreciation.

[20]See Smets (1998) for an analysis of how optimal weights in Taylor-type rules vary with uncertainty regarding potential.

procyclical policy responses to supply shocks, unless policy focuses on a measure of core inflation that effectively filters out the impact of supply disturbances.[21]

35. **The difficulty of estimating the level of potential output is also probably the strongest practical argument for the alternative approach of nominal income targeting.**[22]

Nominal income targeting

36. **Nominal income targeting is less forward-looking than inflation targeting, but less demanding in terms of the knowledge of potential output that is required.** In contrast with inflation targeting, which involves policy adjusting in response to deviations of forecast inflation from the target, under nominal income targeting policy responds to deviations of actual nominal income from target inflation plus trend activity growth.[23] Nominal income targeting, therefore, is less forward-looking than inflation targeting. However, nominal income targeting does not require estimation of the *level* of potential output; all that is required is an estimate of the *trend growth rate* of potential output.

37. **Nominal income targeting may be preferred to inflation targeting if there is considerable uncertainty regarding the level of potential output.** Nominal income targeting may lead to greater inflation and output variation *on average* than inflation targeting, because it is less forward-looking. However, McCallum (1997) argues that nominal income targeting is more robust than inflation targeting on the basis that serious errors in estimating the *growth rate* of potential output are less likely than in estimating the *level* of potential output. The key issue in choosing between these approaches, therefore, should be an assessment of the potential gains from a forward-looking policy approach as compared with the potential risk of large errors. In Malaysia's current circumstances, where the level of

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[21]Of course, if the measure of core inflation was itself subject to severe measurement problems, this would be no advance on inflation targeting. At least some of the alternative measures of core inflation reviewed in Roger (1998) involve similar problems to those in measuring potential output.

[22]See, for example, McCallum (1997).

[23]A common criticism of nominal income targeting is that national income statistics are only available with a significant delay, which would hamper timely policy adjustments. McCallum notes, however, that targeting could in fact be based on a combination of the CPI and industrial production, or nominal retail sales, or some other more timely proxy for nominal income.

potential output is quite uncertain, a policy approach closer to nominal income targeting might be preferred, at least initially, to a full-fledged inflation targeting approach.[24]

38. **Nominal income targeting is not the only way to provide an element of insurance against significant errors in measuring potential output and, consequently, inflation pressures.** An additional consideration is that nominal income targeting may not be the only way to provide robustness to the policy rule. One way to guard against persistent or systematic errors in estimates of potential output or its impact on inflation would be to place some weight on deviations of the actual price level from the path for the price level consistent with the inflation objective. Thus, for example, if the central bank was persistently underestimating the level of potential output, this would tend to lead to undershooting of the inflation target. Including a policy response to the differential between the actual price level and the level consistent with the inflation target would lead policy to be slightly looser than would otherwise be the case. Once again, to avoid inducing procyclical responses to supply disturbances, it would be preferable to define the price level in terms of the core inflation measure.

Limited exchange rate flexibility

39. **An additional issue to consider is whether an inflation targeting or nominal income targeting regime could be combined with some form of limitation on exchange rate flexibility.** The discussion so far has emphasized the need for exchange rate flexibility to be able to pursue domestic economic stabilization objectives. Nonetheless, it is also recognized that exchange rate variability or uncertainty might loosen expectations for inflation (at least for tradable goods and services), and would increase uncertainty faced by producers in the tradables sector. In addition, adding an element of exchange rate targeting might be justified as a form of insurance against gross errors in the measurement of the level or growth rate of potential output. Two approaches to limiting exchange rate flexibility are discussed below. It should be emphasized that these approaches focus on how to limit movements in the exchange rate over extended periods of time, rather than dealing with very short-term volatility in the exchange rate. The issue of very short-term volatility is discussed subsequently.

40. **One approach would be to pursue domestic stabilization objectives (via monetary targeting, inflation targeting, or nominal income targeting) within the defined limits of an exchange rate target band.** For a composite regime such as this to be sustainable, three important considerations would need to be borne in mind in setting the range:

- The exchange rate target would need to be consistent with the target for inflation built into the domestic stabilization objective. For example, if the domestic stabilization

[24]It should be emphasized that nominal income targeting would not ensure good economic performance. The only claim is that it would be less vulnerable to very bad policy errors.

included an objective of, say 3 percent inflation, then the exchange rate target range should allow for the differential between this and the long-term expected foreign inflation rate.[25]

- The exchange rate target range would also need to be wide enough to be able to pursue domestic stabilization objectives to a meaningful degree. Basically, this would require that the range be wide enough to accommodate a reasonable estimate of the cyclical variation in the real exchange rate. If nominal exchange rate flexibility is not on the same scale, then cyclical adjustments in the real exchange rate will have to occur through changes in domestic inflation, primarily in the nontradables sector. The cyclical range of tradables prices relative to nontradables prices should thus provide a rough indication of the appropriate width of an exchange rate range consistent with domestic inflation and output stabilization objectives. The experience of inflation targeting countries such as Canada and New Zealand is that nominal exchange rate movements of over 20 percent over the course of a business cycle might be necessary. The higher degree of openness of the Malaysian economy and the concentration of exports in manufactures (making exports more responsive to exchange rate movements), however, suggests that a somewhat smaller rate of cyclical movement in the real exchange rate might be necessary for Malaysia.

- Sweden's experience with exchange rate target bands is also salutary in this regard. In a paper written in 1992—before the collapse of Sweden's exchange rate targeting—Svensson (1994a) argued that an exchange rate target range as little as 4 percentage points wide was sufficient to give Sweden a "sizable" degree of monetary independence. By monetary independence, however, Svensson meant the ability to exercise control over short-term movements in interest rates, not the persistent shifts in interest rates required to pursue domestic macroeconomic objectives.

- The setting of the initial level of the exchange rate range would need to take into account the estimated extent of over- or under-valuation of the current real exchange rate relative to a medium-term or cyclical average. Thus, if the real exchange rate were currently judged to be near a cyclical trough, the level of the target range should be set with the current exchange rate near the floor of the range in order to accommodate an expected cyclical recovery. Since measurement of equilibrium real exchange rates is extremely difficult, such an exercise would not be trivial, and the chances of making a significant error in the initial setting would be substantial.

41. **The main difficulty with a monetary policy framework involving the pursuit of domestic stabilization objectives within an exchange rate target range is that it implies a**

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[25]In fact, the exercise would be more complicated than this, since allowance should be made for inflation and productivity differentials between the tradables and nontradables sectors.

sharp change in the objectives and conduct of policy whenever the exchange rate reaches the boundaries of the target range. In practice, this could lead to very awkward behavior on the part of the central bank. For example, in the event of a positive shock to demand, domestic inflation and output stabilization would indicate the need for tighter monetary policy and currency appreciation. If the exchange rate reached the upper limit of the target range, however, the exchange rate constraint would then require the central bank to start loosening interest rates to prevent any further appreciation.[26]

42. **The example illustrates a fundamental tension involved in pursuing virtually any composite policy strategy: although an exchange rate target range may create a region of consistency between the domestic and external stabilization objectives of policy, the inconsistency is not fully eliminated.** Financial market participants will be aware of this inconsistency and thus the behavior of the exchange rate will be affected even when it is well within the target range. Exchange rate expectations, and uncertainty surrounding those expectations, for example, will play a crucial role in determining capital flow responses to international interest differentials. If markets are certain that the central bank will be willing to abandon domestic stabilization to defend the exchange rate target range, market expectations and uncertainty will be quite different than if the central bank is expected to set a higher priority on macroeconomic stabilization, casting doubt on any formal exchange rate commitment.

43. **Of particular concern, given Malaysia's experience since 1997, is the possibility that markets could move quickly to test the central bank's commitment to defend an explicit exchange rate target range.** If the range was sufficiently narrow to significantly constrain the ability of monetary policy to pursue macroeconomic stabilization, markets would see that the central bank would have a clear policy dilemma in defending the target range. This suggests that the introduction of a policy framework based on a relatively narrow target range for the exchange rate, coupled with domestic macroeconomic stabilization within the target range, would likely be challenged by markets, forcing the authorities to make a clearer choice of priorities amongst competing objectives.

44. **An alternative approach to adding exchange rate considerations to a policy framework principally geared to inflation and output stabilization would be to introduce an element of exchange rate "smoothing."** In analyses applied to the U. S. economy, Taylor-type policy rules involving output and inflation stabilization objectives also commonly involve an element of nominal interest rate smoothing.[27] Typically, interest rate smoothing is defended as a rational response of the central bank to

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[26]Svensson (1994b) also makes this point, arguing that nominal exchange rate targeting may lead to a procyclical, destabilizing monetary policy.

[27]See, for example, McCallum and Nelson (1998). Svensson (1997) also argues that uncertainty favors relatively gradual policy adjustments.

uncertainty regarding the nature of economic shocks and the structural characteristics of the economy, including the level or growth rate of potential output. In the event of such uncertainties, caution in policy adjustments is usually warranted. In an open-economy context, such as Malaysia's, a similar case might be made for exchange rate smoothing.

45. **In practical terms, this would involve an element of "leaning against the wind" in response to movements in the exchange rate.** This approach would differ from the exchange rate target band in two important respects. First, no explicit exchange rate commitment would be made. Second, the approach would focus on smoothing the path of the exchange rate rather than defending any particular level of the exchange rate. Both features would reduce the likelihood of speculative "attacks" on the currency, since there would be less scope for making profit at the expense of the central bank. In addition, the approach would permit accommodation of shifts in the equilibrium real exchange rate more readily than an approach focusing on defending particular levels of the nominal exchange rate. Nonetheless, it is important to recognize that excessive smoothing of movements in the exchange rate would compromise timely adjustments of the stance of monetary policy and, consequently, would lead to less satisfactory outcomes in terms of inflation and output stabilization.[28]

46. **Actions to counter very short-term volatility in the exchange rate can be consistent with inflation or nominal income targeting.** Inflation or nominal income targeting does require that the exchange rate be allowed to adjust over the course of the business cycle to counter upward or downward pressures on inflation. This does not, however, preclude the possibility of strong central bank responses to counter short-term volatility in the exchange rate. A number of points can be made in this regard:

- If inflation or nominal income targeting is pursued in a consistent and fairly transparent manner, speculation against the currency is likely to be reduced. Speculation is most likely to occur if the central bank's objectives are unclear or its commitment to the policy is doubted.

- Even if the policy commitment is unquestioned, speculative pressure on the currency can arise if markets and the central bank come to different assessments of economic developments and their implications for the inflation outlook. In such circumstances, sterilized intervention can play a useful role, particularly as a signal to markets that the central bank's interpretation of developments is different from theirs.

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[28]It could be argued that a form of inflation targeting but with heavy smoothing of the exchange rate versus the U.S. dollar more or less describes the pre-crisis policy regime in Malaysia, and points to the pitfalls of that approach. The description is not quite fair, particularly since it ignores the use of other policy instruments.

- The effectiveness of sterilized intervention in ending speculative pressures will depend importantly on market perceptions of the central bank's willingness to adjust its policy instruments (effectively unsterilized intervention) to back up its view.

- Sustained pressure on the exchange rate may indicate a need for the central bank to reexamine the appropriateness of its policy stance. Although the central bank may have the best forecasting apparatus and better quality analysis than any other individual participant in the foreign exchange market, the market has the law of large numbers in helping to minimize errors or bias in assessing developments. In addition, market participants draw on somewhat different and typically more diverse information than the central bank, particularly with regard to developments outside the country.

- Among inflation targeting countries, approaches to countering short-term exchange rate volatility vary considerably. In most, the central banks do engage in sterilized intervention (New Zealand is the exception). In Canada, intervention has traditionally been fairly frequent but small in scale, while in other countries intervention has been relatively infrequent, but on a larger scale when it has occurred.

- In Canada and New Zealand, Monetary Conditions Indices (MCIs) have also been used to guide interest rate responses to exchange market pressures. The use of the MCI typically leads to some easing (increase) in interest rates if the currency strengthens (weakens) for reasons unrelated to changes in the inflation outlook. The MCI is not a useful device, however, if exchange rate pressures reflect changes in fundamentals (either at home or abroad).

Institutional and communications issues

47. **Under a fixed exchange rate regime, the central bank's policy objective is abundantly clear and its room for maneuver in pursuing objectives other than the exchange rate commitment is extremely limited.** Imperfect capital mobility or asset substitutability may give some scope for pursuing other objectives, but not on a prolonged basis. In practice, the main area in which discretion may be exercised is in choosing when, or by how much, to adjust the exchange rate from time to time. With such limited policy autonomy, central bank accountability is in many respects a moot issue. For market participants forming expectations, the only real issue is the degree of the authorities' commitment to defend the policy objective.

48. **Under a flexible exchange rate, however, the central bank may have considerable room for discretion in setting policy while, at the same time, its objectives may be very unclear.** The lack of clarity associated with exchange rate flexibility raises two important issues:

- If the central bank is given complete autonomy in determining monetary policy, then the room for maneuver under a flexible exchange rate regime would represent an

important loss of democratic control over one of the principal instruments of macroeconomic policy. The performance of fiscal policy would remain ultimately accountable to the electorate, but monetary policy performance would not.

- By contrast, if the central bank were given no autonomy in setting policy, then the conduct of monetary policy would likely be strongly influenced by short-term political considerations. Of particular concern is the likelihood that monetary policy would be directed toward an inflationary policy of continuous economic stimulus, even though this would be damaging to the economy over time. Even if monetary policy were not exploited in this way, financial markets and private agents would be unlikely to rule out the possibility, and this itself would be damaging to economic performance.

49. **In inflation targeting countries, institutional arrangements have sought to balance the ultimate need for democratic control over monetary policy with the need to insulate the conduct of monetary policy from short-term political pressures; that is, arrangements have aimed to achieve central bank independence *within* government, not independence *of* government.** A key consideration in the design of such arrangements has been the recognition of their importance to the formation and anchoring of private sector expectations, especially in financial markets.[29] In all of the countries that have formally adopted inflation targeting, institutional arrangements have involved two basic elements: (i) the government has set the achievement of low inflation as the unambiguous goal of monetary policy; and (ii) the central bank has been granted operational autonomy to pursue that goal, but also required to be accountable to the government and public generally for its performance in achieving the goal.

50. **Specific details of how the goal of monetary policy is set varies somewhat from country to country**. In countries that switched to inflation targeting from very limited autonomy under exchange rate targeting, relatively legalistic changes to institutional arrangements occurred, while in countries that already had flexible exchange rate arrangements and a fairly high degree of policy autonomy, changes in arrangements have been less legalistic:

- In Sweden, the goal of price stability, and the independence of the central bank to pursue that goal, has been enshrined in the constitution.

- In New Zealand, the basic legislation governing the central bank was modified to replace the multiple objectives previously specified with a single goal of price stability. The legislation also determined that specific details of the inflation target

[29]Indeed, McCallum (1997) emphasizes that a key defining characteristic of a monetary policy "regime" is that it takes into account the response of private sector behavior.

should be set out in a public contract between the finance minister and the governor of the central bank.

- In Canada and Australia, no change in central bank legislation was made. Instead, public agreements between the central bank governor and the minister of finance specified that price stability should be the overriding objective of monetary policy, together with specifics of the operational inflation target.

51. **In Malaysia's case, where policy discretion has previously been heavily constrained by the commitment to exchange stabilization, a relatively formal institutionalization of the goal of low inflation might be appropriate to underscore the change in the policy regime.** At a minimum, BNM and the government would need to provide a clear public statement of the inflation objective, and the government would also need to give BNM an explicit mandate to formulate and implement monetary policy so as to achieve that objective.

52. **Central bank accountability arrangements are broadly similar across inflation targeting countries. The key elements in common include:**

- In all of the countries, the central banks have either been required (as in New Zealand) or have chosen to issue regular reports on the conduct of monetary policy in pursuit of the inflation target. In New Zealand and the United Kingdom, such reports are produced quarterly, while in Canada, Australia, and Sweden, such reports are semi-annual. Depending on the central bank's legislation, these reports are directed either to the minister of finance, or to parliament directly. The important point, however, is that the reports are in the public domain, and usually provide the basis for parliamentary testimony by the central bank governor. Thus, whatever the details of the central bank's formal accountability arrangements, in practice, central banks have provided accountability not just to the government of the day, but also to parliament and the public more generally.

- All of the central banks also engage in extensive public communications programs to explain their views on key issues in monetary policy in general and the current conduct of policy in particular. Such communication includes frequent speeches by senior central bank officials, briefings for journalists and financial analysts, hosting of conferences and workshops on monetary policy issues, as well as publication of articles and research papers on monetary policy topics.

53. **Although most central banks provide some public accountability along these lines, in inflation targeting countries, greater emphasis tends to be placed on transparency regarding the formulation of policy.** Moreover, since policy formulation is forward-looking, the central bank is unavoidably drawn in the direction of providing a forward-looking assessment of inflation and explaining its understanding of the policy transmission mechanism.

54. **BNM's current methods for providing public accountability are already quite good, but some modifications would be helpful.** In particular:

- Reporting on the rationale behind policy decisions would need to be more explicit and more forward-looking.
- Consideration should be given to semi-annual reports on policy formulation.
- BNM should also make more of its research relating to the formulation and implementation of policy available to the public in the form of published papers or articles.

D. Conclusions

55. **This paper suggests that as Malaysia moves toward liberalization of exchange control measures, the adoption of a flexible exchange rate regime would permit monetary policy to continue to focus on achieving domestic macroeconomic stability, reducing the likelihood and magnitude of the sorts of cyclical booms and slumps seen over the past two decades.**

56. **The paper also suggests that an inflation targeting framework or, initially, a less forward-looking approach along the lines of nominal income targeting, would be an attractive option.** The reorientation of monetary policy toward domestic macroeconomic stabilization last September could, in fact, be seen as a significant step in this direction. A number of additional steps would need to be taken to focus policy on the medium-term inflation outlook and ensure that the policy framework is capable of anchoring public expectations. These include:

- Modification of BNM's internal analysis of data and policy formulation process to focus on the implications of macroeconomic developments for inflation.
- Development of a reliable medium-term inflation forecasting framework. Essentially this requires a reasonable ability to forecast the impact of changes in interest rates on aggregate demand, and the ability to forecast the impact of changes in aggregate demand on inflation. The most problematic element of an inflation forecasting framework is usually the estimation of potential output. If a good estimate cannot be obtained, a less forward-looking approach based on nominal income targeting or core inflation targeting could be employed.
- Development of a reliable measure of core inflation.
- Estimation of the likely extent of upward bias in the measured rate of inflation, and determination of a suitable target range for inflation.

- Consideration of the appropriate form of institutional changes required to maximize the credibility of the commitment to achieving the inflation target, together with modifications to enhance BNM's public accountability.

57. **Ideally, technical issues relating to implementation of monetary policy under a flexible exchange rate regime should be developed prior to the formal public adoption of the framework.** In practice, this is not always possible, nor does it appear to be essential. In the cases of Britain, Sweden, and Spain, inflation targeting frameworks were adopted shortly after their currencies were uncoupled from the ERM. In each of these countries, technical aspects of inflation targeting, as well as institutional arrangements, were sorted out later. The key requirement at the time was to provide an anchor for market expectations, and the announcement of inflation targeting frameworks provided this.

58. **In Malaysia's case, the authorities may have more time to prepare for the implementation of a flexible exchange rate regime, but it should not be taken for granted that the authorities will be able to choose the timing.** A particular risk in current circumstances is that, with investment capital returning to the region and growing expectations that Malaysia will further liberalize its exchange controls, capital inflows on a significant scale could begin later this year. If that occurs, monetary policy will quickly be confronted with the dilemma of whether to allow the currency to float or to a large and inflationary increase in the money supply. In view of this possibility, examination of alternative flexible exchange rate frameworks should be considered as a high priority.

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Practical Issues in Developing an Inflation Targeting Framework

The target measure of inflation

1. All inflation targeting central banks set their targets in terms of the Consumer Price Index (CPI) or some subset of the CPI. Basically, the choice in favor of the CPI reflects the fact that in almost every country the CPI is the most widely known measure of prices and, therefore, the measure most relevant to the formation of inflation expectations. In addition, it is usually the highest quality price index constructed by the national statistical agency and is available much sooner than broader indices such as the consumption or national accounts deflators. In Malaysia, these same arguments would point to the CPI as the obvious measure on which to base an inflation target.

2. Nonetheless, inflation targeting central banks also routinely construct and use measures of "core" inflation in policy formulation and communication. As noted earlier, one of the attractions of inflation targeting is that, in the event of demand disturbances, the monetary policy will tend to react in a way that also stabilizes activity. That is, policy will tend to dampen inflationary booms as well as disinflationary recessions. In the event of supply shocks, however, inflation targeting could potentially lead to procyclical monetary policy responses. For example, in the case of an adverse supply shock boosting inflation while lowering growth, inflation targeting could lead to a tightening of monetary policy in response to higher inflation, and accentuate the downturn in activity.

3. Measures of "core" or "underlying" inflation are aimed at filtering out the direct impact of supply disturbances so as to give a more accurate impression of the persistent element of inflation relevant to monetary policy. As discussed in Roger (1998), there are a variety of techniques available to construct a measure of core inflation. A measure of core inflation should also improve estimation of the output gap Phillips curve. Development of a measure of core inflation for Malaysia would be a necessary element of the research agenda for developing an inflation targeting framework. Of particular concern are the government-administered prices that make up about 11 percent of the CPI basket. Such prices may introduce an unhelpful sluggish response of the aggregate CPI to developments in activity, leading to delay in adjusting policy and, consequently, greater volatility in output than would otherwise be the case.

The target range for inflation

4. An issue which arises in the context of almost any targeting framework—whether it is exchange rate, monetary, inflation, or nominal income targeting—is the specification of a target range. Among inflation targeting countries, specifications of the target range vary

somewhat, and it is not obvious that any one approach is clearly superior to the others. A number of considerations should be taken into account in specifying a target range:[1]

- The location of the center of the range should correspond to the authorities' target for the average rate of inflation over the business cycle. What the appropriate target rate should be is open to debate. In inflation targeting countries, the main factors behind the choice of the center of the target range have been:
  - A very low target rate of inflation rate is appropriate.
  - True price stability may correspond to a slightly positive measured inflation rate due to positive bias in the measured inflation rate.
  - A slightly positive rate of true inflation may be preferable to true price stability in order for monetary policy to be able to achieve, on occasion, negative real interest rates.[2]
- The appropriate width of the target range should also reflect a number of considerations:
  - If the primary purpose of the range is to serve as an accountability or disciplinary device for the central bank itself, then a fairly narrow range is probably desirable. A narrow range will limit the central bank's room for discretion in setting policy and encourage timely policy adjustments in order to keep within the range.
  - If the target range is regarded more as a signal to the private sector that the central bank expects to be able to keep inflation within a particular range most of the time, then reasonably wide bounds are sensible, since a narrow range will tend to result in more frequent excursions from the range, undermining confidence in the central bank's commitment to keeping inflation under control.
  - The volatility of the target inflation measure also matters. If the measure is strongly affected by supply disturbances, then a relatively wide target range is appropriate in order to be able to accommodate the impact of such disturbance without frequent excursions from the range. However, if the central bank's target or accountability is specified in terms of a measure of core inflation—as is the

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[1]See also the discussion in Debelle (1997) and Reserve Bank of New Zealand (1996).

[2]The objective would be to minimize the risks of a "liquidity trap" occurring in the event of deflation. The validity of this so-called "Summers effect," however, is debated (particularly for open economies) and has not been explicitly cited by any inflation targeting central bank as a reason for targeting positive measured inflation.

case in most inflation targeting countries—then a relatively narrow target range is appropriate.

- An additional argument in favor of a relatively wide target range stems from the proposition that a trade-off may exist between the variability of inflation and the variability of output. In this case, attempting to keep inflation within a very narrow range may result in a significant increase in output variability. The validity of this proposition is open to doubt, particularly if the measure of inflation used for accountability purposes is a measure of core inflation.[3]

5. In most inflation targeting frameworks, choices have favored target rates of inflation in the range of about 1 percent to around 3 percent, together with fairly narrow bands - less than 4 percentage points. To date, inflation targeting countries have succeeded in keeping inflation within the target range most of the time. Moreover, although there have been experiences of over- or under-shooting of the (undershooting in Canada, and overshooting in New Zealand), such excursions did not lead to financial market instability or a noticeable impact on inflation expectations.[4]

6. In Malaysia's case, before specifying an inflation target range, it would be advisable to consider whether biases in the CPI are likely to be similar to, or greater than, those indicated in the industrialized economies. In addition, it would be advisable to carry out at least some investigation of measures of core inflation in order to assess how much less volatile such measures might be than the official CPI. Judging by Malaysia's past inflation performance, however, it seems unlikely that the level or width of an inflation target range for Malaysia would need to be significantly higher or wider than in other inflation targeting countries.

The focus and horizon for policy formulation

7. In an open-economy context such as Malaysia's, monetary policy will affect inflation outcomes through two distinct channels: a "direct" channel via the impact of exchange rate changes on prices, and an "indirect" channel via the impact of changes in economic activity on price pressures:

- The "direct" transmission channel, generally regarded as having the most immediate impact is through the impact of policy-induced changes in the exchange rate on the domestic currency prices of "tradables;" goods and services whose prices are primarily determined in world markets. The second, more indirect and, typically, slower-acting channel of monetary policy transmission to inflation is through the impact of interest rate

[3]See, for example, Goodfriend and King (1997).

[4]See Reserve Bank of New Zealand (1996) for a discussion of the New Zealand experience.

and exchange rate changes on demand pressures in the economy. In this case, the influence of monetary policy is primarily on the prices of "nontradable" goods and services, which are largely determined in domestic markets.

- In view of the openness of the Malaysian economy, there is little doubt that monetary policy could exercise substantial control over the evolution of inflation through the direct channel. That is, monetary policy could be used to move the exchange rate in order to achieve desired outcomes for the tradables component of whatever measure of inflation was being targeted. This, in fact, is more or less the approach that is used in Singapore. In a small, extremely open economy, where the target price index is predominantly made up of tradables, this approach is entirely sensible; indeed, it underlies McKinnon's (1963) linking of trade openness to the determination of optimum currency areas. The importance of tradables prices in the Malaysian CPI, however, is not nearly as great as the ratios of imports and exports to GDP might suggest. In fact, imports of final consumer goods make up only about 6 percent of imports, or roughly 10 percent of GDP. Obviously the CPI also contains many goods whose prices are at least partly determined in international markets and, therefore, affected by exchange rate changes. Nonetheless, the CPI is much less sensitive overall to exchange rate changes than is the Producer Price Index, as has been vividly illustrated over the past year.

- The "indirect" transmission channel operates through the effects of changes in both interest rate and induced exchange rate movements on demand pressures in the economy which, in turn, affect wage and price inflation. Although inflation targeting could be implemented using the direct, exchange rate channel of influence on inflation, the standard approach to inflation targeting is to focus primarily on the indirect activity-based channel of influence over inflation. Consequently, monetary policy actions are directed toward adjusting aggregate demand so as to increase or decrease inflation pressures and, eventually, inflation outcomes. The basic reason for focusing on the indirect, activity-based channel of policy transmission is that, in the process of stabilizing inflation, policy will also tend to stabilize activity.

8. In practical terms, the standard approach to inflation targeting involves adjusting the stance of policy in response to deviations of projected inflation from the target inflation rate, with the projection horizon long enough to be dominated by the indirect, activity-based channel of transmission. The need to react to projected inflation reflects the fact that policy adjustments take time to influence excess demand pressure in the economy, and these, in turn, take time to affect inflation outcomes. In inflation targeting countries, the central banks typically gear policy adjustments toward controlling inflation projected out six to eight quarters into the future.

9. This approach would differ in some important respects from the current method of policy formulation in Malaysia. In particular, policy adjustments would be based on changes in the inflation outlook (and risks surrounding it), rather than on shifts in priorities between multiple objectives. Although developments in output, real interest rates, international competitiveness, money and credit growth and other variables would continue to be

important inputs into the policymaking process, policy would be adjusted on the basis of their implications for the medium-term inflation outlook, and outcomes for such variables would not be policy objectives in their own right.

Inflation projections

10. The development of a medium-term inflation forecasting apparatus basically requires two elements: (i) an aggregate demand relationship providing a link between adjustments to policy instruments (usually a short-term interest rate) and aggregate activity in the economy; and (ii) an aggregate supply relationship linking aggregate activity to inflation. In developed economies, the aggregate supply relationship is usually described by a Phillips curve in which deviations of inflation from expected (or past) inflation are related to deviations of actual output from "potential" or trend output (the output "gap").

11. An important empirical issue for applying inflation targeting to Malaysia is whether there is clear evidence of positive relationship changes in inflation and excess supply or demand in the economy. Coe and McDermott (1997) examined this issue for a range of countries including Malaysia.[5] The results indicate that a standard output gap Phillips curve can be readily fitted to Malaysian data. Indeed, the model fits better than in most other countries in the sample. The authors also find that the movements in the output gap feed through to inflation fairly quickly in the case of Malaysia.

12. Coe and McDermott's results suggest that inflation targeting would be likely to deliver better control over inflation than monetary targeting. In addition to testing whether the output gap could explain the evolution of inflation, Coe and McDermott also tested whether monetary growth could provide additional explanatory power beyond that already provided by the output gap. In the case of Malaysia, the authors found no additional explanatory power. This result is consistent with the results of Dekle and Pradhan which suggest that money growth may be caused by output growth rather than vice versa.

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[5]It may be noted that Coe and McDermott do not use a standard Hodrick-Prescott filter to estimate potential output. In the standard filter the smoothing parameter is set at 1,600. Implicitly, the value of the smoothing parameter involves an assumption about the proportion of output variation due to supply disturbances and the variation due to demand disturbances. The value of 1,600 is calibrated to U.S. data, and may be quite inappropriate elsewhere. In particular, in small open economies such as Malaysia, supply shocks may be much more prevalent, indicating the use of a lower smoothing parameter. The Coe and McDermott filter allows the value of the smoothing parameter to be determined endogenously.