

Understanding monetary policy in Malaysia and Thailand: objectives, instruments and independence

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1. Introduction

This paper sets out to update the author's overview of monetary policy in East Asia, presented at the Reserve Bank of Australia in 2001 and subsequently issued as a SEACEN Centre *Occasional Paper*. At the request of the Hong Kong Institute of Monetary Research, however, this paper focuses more narrowly on monetary policy in Malaysia and Thailand.

This tale of two policies features a broadly similar pursuit of price stability, in one case outside of, and in the other case within, an explicit inflation targeting framework. It features orientations to exchange rate stability: one until July 2005 explicitly bilateral and since evidently so; and the other looser and evidently effective. It features similar but not identical assignments of instruments to the achievement of these objectives. And both central banks set policy enjoying considerable behavioural independence, which might be usefully strengthened by greater legal independence.

This paper's survey of more recent events and its narrower focus allow an examination of how the two central banks have responded to the challenge of higher energy prices in 2004-05. We find that the fiscalisation of energy costs has reduced the challenge in Malaysia, while mostly just delaying it in Thailand. Given the need in an inflation targeting framework to specify the operating definition of inflation, there was a risk in Thailand of an inappropriate response to energy prices that not only showed great volatility but also a significant trend. In the event, the inflation targeting framework in general, and its focus on a core measure of inflation in particular, have not gotten in the way of an appropriate response to this upward trend in energy prices.

The plan of the paper follows that of the earlier one. First, the goals of monetary policy are discussed, and then the instruments. Finally, the question of whether the central bank enjoys sufficient independence to do the job is raised.

2. Goals

The central banks of Malaysia and Thailand have two main monetary policy goals: low inflation and stable exchange rates. In the case of Malaysia, the contribution of these goals to growth and development is often stressed. In addition, each at times pursues financial stability not through setting short-term interest rates but rather through credit or prudential policies. Finally, each takes seriously a developmental role vis-à-vis financial markets and

¹ Chief Representative, Representative Office for Asia and the Pacific, Bank for International Settlements. The views expressed are those of the author and not necessarily those of the BIS. The author thanks the discussants, Suchada Kirakul and Sukudhew Singh, as well as Claudio Borio, Andrew Filardo, Hans Genberg, Corrinne Ho, Marc Klau, Madhu Mohanty and Michael Spencer, without implicating them in any judgments or errors. The author thanks Sansau Fung and Paola Gallardo for research assistance.

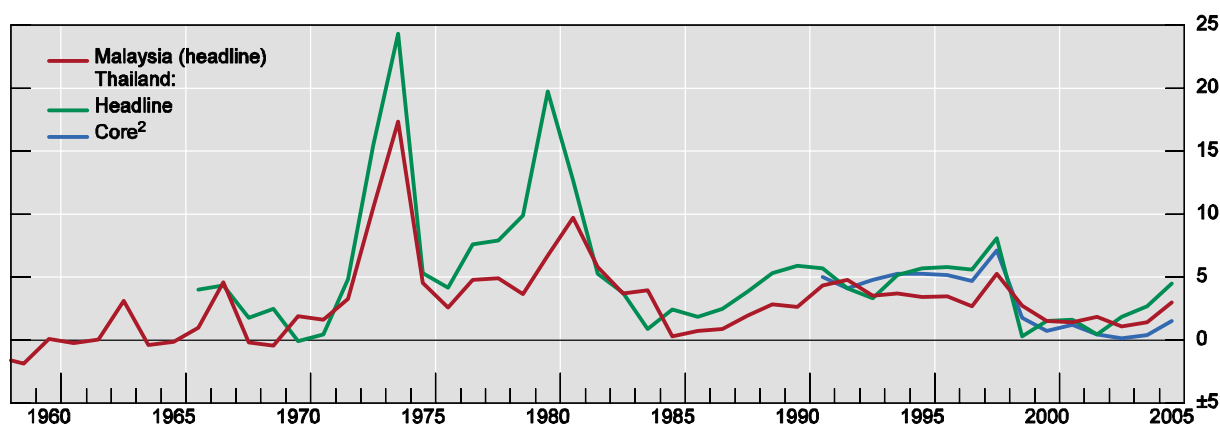
the financial services industry, in part in order to improve the working and transmission of monetary policy.

At first blush, multiple goals would seem to leave monetary policy overburdened and at risk of incoherence. The Tinbergian objection would be that the single stone (the short-term interest rate) cannot possibly hit so many birds. The next section on instruments, however, argues that there is a coherent assignment of instruments to the enumerated goals. To anticipate, the “impossible trinity” objection to having both inflation and exchange rate goals is answered through the assignment of the fractional instruments of (at times large) sterilised intervention and restrictions on cross-border movements of funds to the goal of exchange rate stability.

2.1 Low inflation

The central banks of Malaysia and Thailand share a commitment to achieving low inflation. This is evident in their long-term records. Graph 1 shows the inflation rates in the two countries since the founding of the Central Bank of Malaysia (Bank Negara Malaysia) in 1959 and since 1966 for Thailand. In both countries double digit inflation rates have been rare. During the Asian crisis of 1997-98, the decline of the Malaysian ringgit from about 2.5 to the dollar to about 4 to the dollar, and the parallel decline of the Thai baht from 25 to over 40 to the dollar caused a temporary rise in inflation to levels well above the long-term averages. Even then, this recent episode of relatively high inflation was mild compared to that during the oil shocks of the early 1970s and around 1980, especially in Thailand. Graph 1 also shows that the upward trend in Thai consumer price inflation over the past several years has been much more marked for headline inflation than for the Bank of Thailand’s measure of core inflation.

Graph 1
Consumer price inflation¹



¹ Average annual changes in consumer prices, in per cent. ² CPI excluding raw food and energy items.

Source: National data.

Table 1 shows the average, the range and the standard deviation of rates of inflation for the two Southeast Asian countries, as well as for Japan and the United States. Over the long run, inflation has averaged about 1% lower in Malaysia and about 1% higher in Thailand than in Japan or the United States. In the years since the Asian crisis, inflation has tended to be lower in Malaysia and Thailand than in the United States.

Table 1
Inflation and its volatility in selected economies¹

	Since 1959 ²				Since 2000			
	Average	Max	Min	SD	Average	Max	Min	SD
Japan	3.9	25.1	-1.6	4.5	-0.5	0.8	-1.6	0.4
Malaysia	3.1	23.9	-3.4	3.5	1.7	3.7	0.7	0.7
Thailand	5.3	28.8	-2.0	5.2	2.0	6.2	0.1	1.3
Thailand core ³	3.2	8.4	-0.1	2.4	0.7	2.4	-0.1	0.6
United States	4.2	14.8	0.3	3.0	2.6	4.7	1.1	0.8

¹ Based on changes in consumer prices over 12 months. ² For Japan, since 1961; for Thailand, since 1966; for Thailand core inflation, since 1990. ³ CPI excluding raw food and energy items.

Source: National data.

2.2 Exchange rate stability

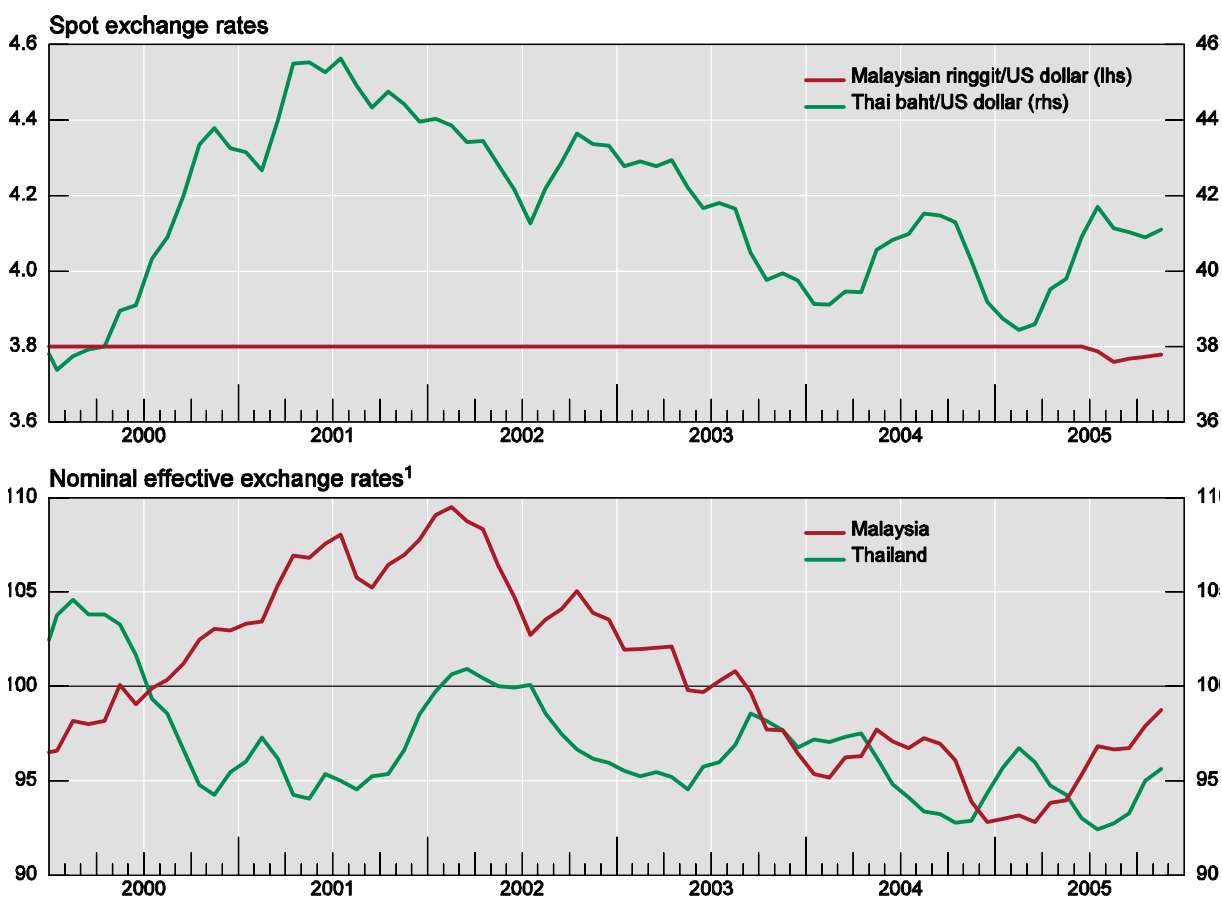
Policy in both Malaysia and Thailand has taken as one of its goals some form of exchange rate stability. This goal can at times come into conflict with the goal of low and stable inflation (see Amato et al (2005)). Such a conflict has occurred often enough among emerging market economies that many observers infer from evidence of exchange rate stabilisation that policymakers pay only lip service to the goal of low inflation. This inference is not warranted in the two cases at hand.

Exchange rate stability can conflict with the goal of low and stable inflation if it leads to inappropriate setting of policy interest rates or if the exchange rate directly transmits foreign prices in an inflationary or deflationary fashion. In the cases at hand, owing to the incomplete openness of their capital accounts and to the chosen forms of exchange rate stability, exchange rate policy has not hijacked interest rate setting. Given this and an environment of stable to falling global traded goods prices, preventing large exchange rate movements can be seen as having helped maintain low and stable inflation in these highly open economies. That said, Malaysia's former commitment to bilateral exchange rate stability ran a greater risk of posing a challenge to the maintenance of low inflation than Thailand's apparent pursuit of effective exchange rate stability. If the dollar exchange rate is stabilised, a strong dollar may risk deflation (as in China in 2000-01), and a weak dollar, inflation. In contrast, with stability in an effective exchange rate, cycles in the major exchange rates tend to exert less of such cumulative deflationary or inflationary forces.

Though it has taken different forms, the evident orientation of the two countries to exchange rate stability derives from similar structural characteristics. In both cases, the openness of the economy means that large effective exchange rate changes have the capacity to lead to an undesirable inflation or deflation. International experience of inflation targeting by emerging market economies in fact shows a significant association between large effective exchange rate changes, on the one hand, and missed inflation targets, on the other (Ho and McCauley (2003)). In addition, given the openness of both economies, large exchange rate appreciations can lead to an undesired loss of competitiveness in external markets, risking lower exports and economic activity. Finally, in addition to the effect on established firms, there is a widespread concern that exchange rate appreciation can undermine economies' attractiveness to new foreign direct investment.

However similar the sources of the concern for the exchange rate, policy has differed. From September 1998 to July 2005, Malaysia opted for bilateral exchange rate stability against the US dollar, while Thailand can be interpreted as having more and more evidently opted for effective exchange rate stability. Graph 2 shows the bilateral dollar exchange rates and the effective exchange rates of the ringgit and baht through 2005. While the baht has ranged since early 2001 between 38 and 46 baht per dollar - about 20% - its effective exchange rate has ranged more narrowly between 92 and 101. This reflects the fact that the baht shares much of the movement against the dollar of the currencies of Thailand's regional trading partners. In contrast, given that the ringgit until mid-2005 shared none of the movements against the dollar of the currencies of Malaysia's trading partners, its effective exchange rate has ranged more widely than that of the baht. In particular, it traces out the dollar's cycle against the major currencies, strengthening into early 2002 and weakening in the following three years until the dollar's rebound in 2005.

Graph 2
Exchange rates



¹ 2000 = 100; basket of 51 countries.

Sources: National data; BIS.

The contrast of Thailand's exchange rate outcomes with Malaysia's dollar peg is clear enough, but the interpretation of a stable effective rate as a policy goal requires further evidence. The null hypothesis is that observed effective stability in this decade (Table 2) is a market outcome. For instance, sterling, which is well known to have been free of official

intervention, has traded such that its effective exchange rate has not varied much in recent years.² One piece of evidence against the null is that market participants cite official intervention intended to influence the exchange rate on both sides of the market in the case of the baht. Another piece of evidence is public statements by Bank of Thailand officials, which often associate dollar/baht movements with parallel movements in regional currencies. This can be seen as not only an educational effort to refocus market participants away from the bilateral to the effective exchange rate but also a guide to the operational definition of stability.

Table 2

Historical volatility of the ringgit, baht, Singapore dollar and sterling

	Jan 1999 - May 2001				Jun 2001 - Dec 2005			
	MYR	THB	SGD	GBP	MYR	THB	SGD	GBP
Bilateral vs US dollar	0.00	6.66	4.00	7.77	0.00 (2.11)	4.56	4.65	8.13
Effective	3.69	6.90	3.65	5.63	4.04 (4.34)	3.49	2.95	5.53

Note: Volatility measured as annualised standard deviation of weekly (end-Thursday) percentage changes. For the latter period, data for Malaysia are through to 20 July 2005; data for remainder of 2005 shown in parentheses. See Klau and Fung (2006) on BIS effective exchange rates.

That effective exchange rate stability is a goal of policy in Thailand is made more plausible by the way that the baht traded before and after the change of central bank governors at end-May 2001. Before, a general policy of not intervening, and rather using variations in restrictions on cross-border capital flows to influence the exchange rate, left the baht among the more volatile currencies in East Asia other than the yen. Its bilateral dollar volatility was not far below that of sterling. From June 2001 to end-2005, the baht's volatility, especially in effective terms, fell to levels below those observed for sterling and not far above those of the Singapore dollar, which is explicitly managed against an effective basket. Whether the goal is to stabilise the level of the effective exchange rate around some target path set to be consistent with the inflation target, as in Singapore, or only the volatility of the effective exchange rate is hard to say.

Malaysia abandoned its commitment to bilateral exchange rate stability in favour of a commitment to effective exchange rate stability on 21 July 2005. Thus, in principle, the Malaysian and Thai interpretations of exchange rate stability have converged. Despite the announced shift in Malaysia, however, the bilateral volatility remains lower than the effective volatility. Graph 3 puts the management of the ringgit and baht in 2005 into a regional perspective, showing the ratio of a given currency's bilateral exchange rate volatility against the dollar to its overall effective volatility against the weighted average of its trading partners' currencies. The Chinese and Malaysian currencies registered a ratio of zero on this measure before 21 July because of their stability against the dollar and consequently considerable movement against the currencies of their trading partners. On this showing, Malaysia has moved quite a distance to over half since July 2005. As a result, the ringgit is closing in on the more dollar-oriented ASEAN currencies, namely the Indonesian rupiah and Philippine

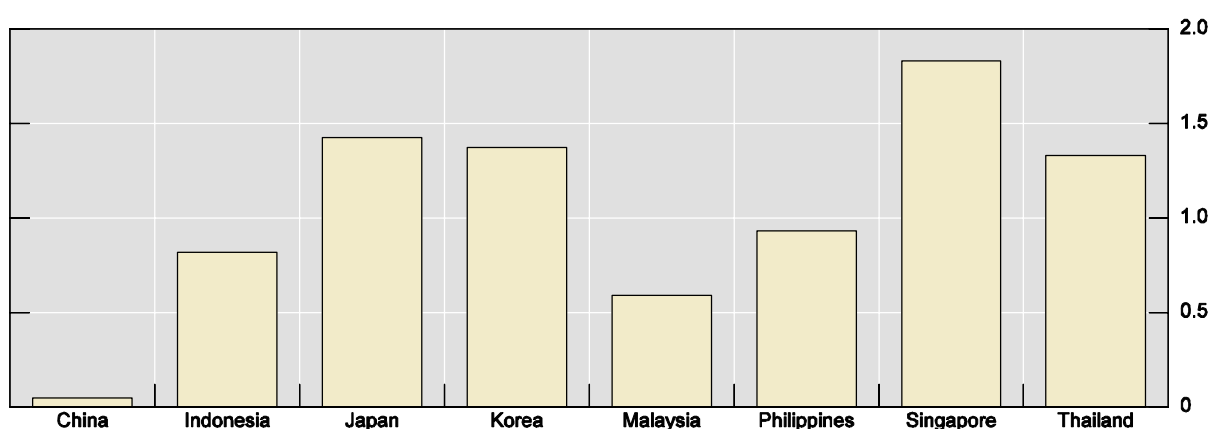
² Sterling's stability has led some observers to conclude that inflation targeters can be expected to have stable effective exchange rates but this expectation is not generally met. See Ho and McCauley (2003).

peso. The ringgit still has a way to go, however, to show greater bilateral than effective volatility, as do the Korean won, Singapore dollar or the Thai baht.

In passing, it is worth noting that the ringgit has made more of a move toward an effective orientation since July than the Chinese renminbi. Since the volatility ratio is constructed with weekly data, this is not solely a reflection of narrow de facto limits on movement of the renminbi against the dollar. Still, it can be said that Malaysia, and to a lesser extent China, have taken a first step toward the effective exchange rate orientation that is now typical of the region (Ho et al (2005)). The yen's performance on this measure in a year without official intervention serves as a warning that greater stability against the trade-weighted basket than against the dollar can be a market rather than a policy outcome.

Graph 3

Ratio of bilateral dollar volatility to effective exchange rate volatility in 2005¹



¹ For China and Malaysia, since 24 July 2005; calculations based on weekly data (Thursday closings).

Sources: National data; BIS.

2.3 Other goals

Both central banks pursue other goals as well.³ One common goal is financial stability. Asset prices in general and real estate prices in particular can give rise to concerns regarding overbuilding and unsustainable consumption on the upside and non-performing loans and “headwinds” slowing expenditure on the downside (Borio and White (2004), Disyatat (2005), Borio (2006), White (2006,a,b)). Consumer indebtedness that rises to excessive levels can also become a matter for policymakers’ concern. Neither central bank has a target for asset prices or debt burdens, nor necessarily a clear idea of what is too high. Instead, there is an occasional desire to lean against the wind of sentiment when this can place financial stability at risk. Such a desire does not contradict the assignment of interest rate policy to the achievement of low and stable inflation because other instruments are employed. If macroprudential policies succeed in, for instance, preventing a boom-bust cycle of debt-fueled

³ The Bank of Thailand’s public expression of concern regarding a return to a sizeable current account deficit can be seen as its contribution to the fiscal and structural policy debate, rather than as pointing to a goal for monetary policy. Consistent with this interpretation is the central bank’s public advocacy of “savings mobilization schemes”, such as a mandatory provident fund, which would stabilise the current account in the face of a rise in government-sponsored investment programme if such a scheme were to raise private savings. See Devakula (2005).

consumption, then it can leave less work to be done with policy rates. One thinks in this context of the mini-cycle of lower policy rates adopted by the Bank of Korea in 2004-05, partly in response to muted consumption after a previous spree of credit card use.

Maintaining positive or at least non-negative real returns on bank deposits also seems a concern of policy, even if it does not amount to a fully fledged goal of policy. Bank Negara Malaysia expressed this concern clearly when it elaborated a new interest rate framework in April 2004. While the former linkage of the base lending rate to the policy rate was dropped, constraints on deposit rates were left in place. In particular, minimum deposit rates for small and medium-sized accounts were kept at a level near the policy rate.⁴ Such pricing constraints generally allow for the assignment of (wholesale) short-term policy interest rates to the achievement of low and stable inflation.

The developmental goals of the two central banks must also be recognised. Better functioning money and bond markets are clearly matters of active interest. These can be seen as a means of facilitating the transmission of monetary policy as well as ends in themselves.

3. Instruments

The burden of this section's argument is that the Malaysian and Thai central banks match their several goals with several instruments. Like major central banks, each periodically announces a target level for a short-term policy interest rate. In addition, these central banks occasionally intervene in the foreign exchange market and thus place changes in their own balance sheets between flows on the current and capital account, on the one side, and the exchange rate, on the other. Their interventions in the foreign exchange market may have particular effect owing to the relatively small scale of the underlying asset stocks, and the remaining restrictions on capital account transactions overseen by both central banks. The other goals just discussed are pursued with still other instruments.

3.1 Setting policy interest rates

In setting policy interest rates, the two central banks show more similarities than differences. This section discusses the banks' different choices of the policy rate and rhythm of announcing changes. Notwithstanding these differences, the two central banks carry out broadly similar monetary operations, and show similar success at hitting their short-term interest rate targets.

3.1.1 Policy rates: choice, rhythm of decision-making and activism

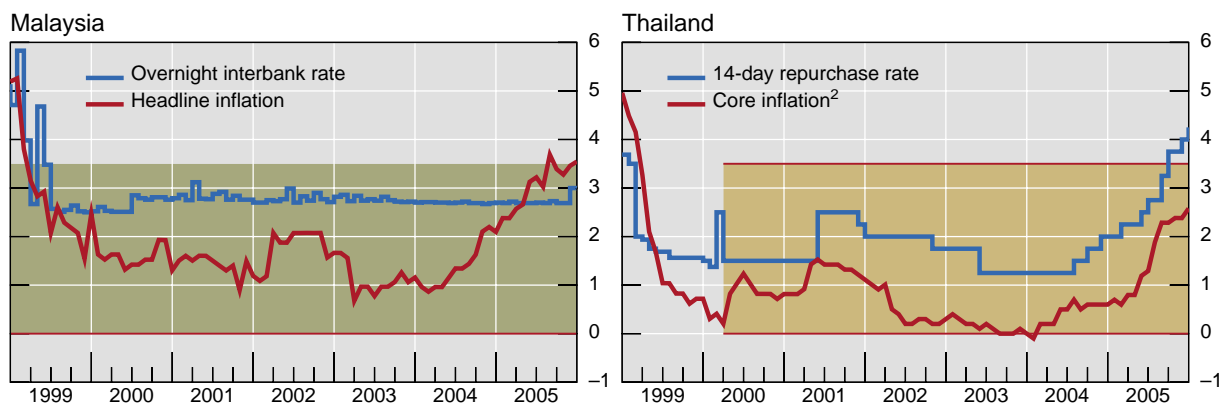
Both central banks periodically announce a target for a short-term rate on the basis of an assessment of the inflationary risks (Graph 4). An analogue to the US federal funds rate, the overnight interest rate, has served as the policy rate in Malaysia since April 2004: the "overnight policy rate" serving "as the indicator of monetary policy stance ... is effectively the

⁴ The April 2004 announcement included (Bank Negara Malaysia (2004)): "The minimum rates for fixed deposits with tenures between 1 and 12 months for balances of RM 1 million and below will be prescribed at the current prevailing levels of 3% for the one-month deposit and 3.70% for 12-month deposit. The minimum fixed deposit rates are being prescribed to ensure that depositors have a positive real rate of return". Bank Negara Malaysia (2005b p 65), elaborated: "Another important consideration is that a large section of the population, particularly the middle to lower income groups and retirees, relies on savings in the form of bank deposits. Minimum rates are therefore prescribed for deposits of RM 1 million and below ..."

target for the average overnight interbank rate". The Bank of Thailand has since early 2000 signalled its policy stance with the 14-day repo rate.

Graph 4

Policy rates and inflation¹



¹ Inflation based on changes in consumer prices over 12 months, in per cent; the shaded areas represent the inflation target ranges (not official for Malaysia). ² CPI excluding raw food and energy items.

Source: National data.

The rhythm of monetary announcements differs. In the case of Bank Negara Malaysia, the stance of policy has been announced quarterly since early 2004. In the case of the Bank of Thailand, monetary announcements are made at twice that frequency, every six weeks.

Beyond these differences in the term of the policy rate and the rhythm of policymaking, the difference in activism of the two central banks is striking. Bank Negara Malaysia kept the policy rate at 2.7% in all its announcements between February 2004 and August 2005, and for almost the previous four years that rate (though not designated as a policy rate) varied but little from that level. By this measure at least, Bank Negara Malaysia kept its interest rate settings stable for five years, far longer than did the European Central Bank. In contrast, the Bank of Thailand, having brought its policy rate down to 1.25% by mid-2003, set out about a year later on a tightening cycle that brought the policy rate to 5% in 2006. Another way of drawing the contrast is that the Bank of Thailand has moved rates down and up by a cumulative 5% since mid-2001, while Bank Negara Malaysia has moved its overnight rate by 80 basis points. Whether fiscal policy has carried more of the burden of economic stabilisation in Malaysia than in Thailand, and, if so, why this is so are questions beyond the scope of this analysis.

3.1.2 The character of monetary operations

The operations carried out by the two central banks resemble each other, though the choice of instruments differs (Borio and McCauley (2001)). These two central banks operate on the same side of the market by draining reserves out of the banking system in the face of a chronic excess of liquidity. This similarity reflects the common balance sheet structure; in particular, their foreign exchange reserve holdings stand at a multiple of the note issue (or the monetary base) and they use relatively short-lived sterilisation instruments. Thus, the operations needed to hold short-term interest rates at targeted levels generally drain liquidity. Bank Negara Malaysia mostly takes outright interest bearing deposits from commercial banks through daily tenders at maturities ranging from weeks out to several months, while the Bank of Thailand drains liquidity through repos. In both cases, however, other instruments are used. In particular, both central banks issue their own bills to drain liquidity on a longer-term basis of up to one year maturity, in the case of Bank Negara, and up to two year maturity in the case of the Bank of Thailand. In the former case, the outstanding amount

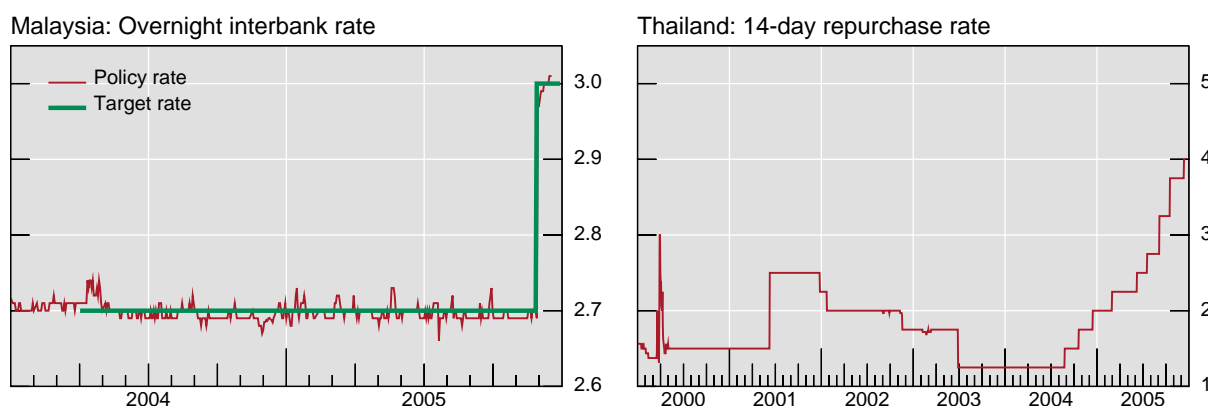
of bills has been limited by the central bank law to a modest sum. Bank Negara Malaysia announced its intention to shift to repos against government securities (see below), and the Bank of Thailand also uses short-term foreign exchange swaps to control liquidity. In both cases, operations have something of the character of debt management, with maturing liabilities requiring to be rolled over.

3.1.3 Do operations keep market interest rates at targeted levels?

In both cases, money market rates have tended to track their policy targets closely (Graph 5). In neither case is there evidence that the very large liquidity injections movements associated with foreign exchange market intervention, whether on the buying or selling side, have led to significant deviations between realised money market rates and policy targets. (Of course, as a technical matter, the T+2 settlement norm in foreign exchange means that the flows associated with intervention are well telegraphed to the monetary policy operations.) In this sense, one can say that a thorough sterilisation of the intervention has been the norm.

Graph 5

Policy rates

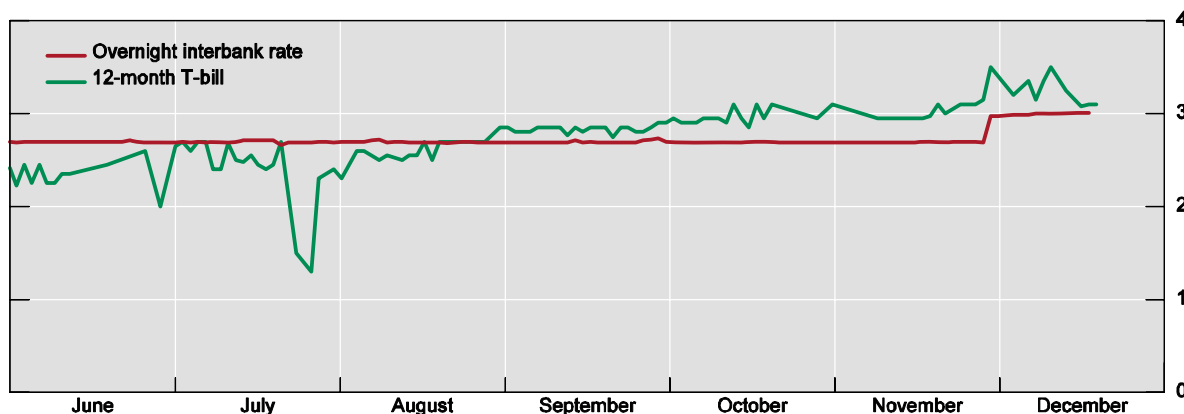


Source: National data.

That said, the transmission of the policy interest rate out the yield curve can be strongly affected by exchange rate expectations. In the case of Malaysia, extensive foreign ownership of money market securities has at times allowed Malaysia's money market yield curve to assume a peculiar shape. Twelve-month yields had fallen below the overnight policy rate even before 21 July 2005. In the immediate aftermath of that day's announcement of the unpegging of the ringgit, Malaysian government bill yields fell still further to levels well below the overnight rate target. This reflected expectations of further appreciation of the ringgit by the foreign funds that owned the paper (Graph 6). Such a peculiarly shaped yield curve appears exceptional.⁵ Indeed, as foreign investors have drawn the conclusion that there is not to be a quick killing to be made on long positions in the ringgit, they have sold their holdings of short-term central bank and government paper back to the Malaysian banking system, resulting in a more normal money market yield curve.

⁵ A difficult to answer question, however, is the extent to which bond yields have been held down by expectations of appreciation. In the case of Malaysia, one hears, lingering concern about the possibility of re-imposition of capital controls that would lock foreign investors into bond holdings has tended to limit foreign investment. This has probably worked against expectations of ringgit appreciation holding down bond yields.

Graph 6
Interest rates for Malaysia in 2005



Sources: Bloomberg; national data.

Box

Estimating a Taylor rule for Thailand

by Marc Klau and Robert N McCauley

This box builds on Mohanty and Klau (2004) to estimate Taylor rule-type reaction functions for the Bank of Thailand. Our main finding is that Bank of Thailand policy in the period of inflation targeting can be most plausibly modelled using the Bank's next year forecast of inflation.

We first re-estimate the baseline model from Mohanty and Klau and find evidence inconsistent with the proposition that there is a consistent reaction function in the 1990s and in the last five years. When the sample is extended from 2002 to the second quarter of 2005, the response of the short-term interest rate to inflation falls and becomes insignificant. Taken at face value, adding years during which the Bank of Thailand explicitly targets inflation produces estimates that convey an impression of increased gradualism (a higher value on the lagged short-term interest rate) and unresponsiveness to contemporaneous inflation! Also, a decline in the size and significance of the response to the contemporaneous real effective exchange rate is noticeable. We interpret these results to suggest that the reaction function differs across monetary policy regimes, since adding years from the more recent regime alters the findings.

Thus, our next step is to focus on the period of inflation targeting since 2000, and to use the policy rate, the two-week repo rate, rather than the one-month interbank rate. We also re-run the HP filter to estimate the output gap over the more recent sample period. The results suggest a major change in the lack of any response to the exchange rate, whether measured as a real effective exchange rate, a nominal effective exchange rate or a bilateral dollar exchange rate. This change is robust to the further changes in the choice of headline or core inflation, or the use of forecasts instead of contemporaneous values.

The estimated responses to inflation and the output gap over the period of inflation targeting become problematic, however. In particular, the response to contemporaneous inflation becomes so small that the long-run coefficient falls below one, suggesting that real interest rates are allowed to fall in the presence of higher inflation. In addition, the response to the output gap becomes perverse, and significantly so. These features are not changed when a dummy is entered for the 100 basis point rise in the policy rate in May 2001. Use of the core rather than headline inflation increases the responsiveness of the policy rate, but the smaller coefficient on the lagged policy rate means that this greater short-term responsiveness does not translate to a much higher long-term response. Use of the core measure, moreover, leaves the response to the output gap perverse.

Box (cont)

Estimating a Taylor rule for Thailand

Thus far, the estimated reaction functions have been backward-looking, with policy assumed to respond to realised inflation. The Bank of Thailand's *Inflation Reports* make it possible to use the policymakers' estimates of inflation at the end of the current year and at the end of the following year. Since these are given as fan charts, we use the centre of the distribution in the estimation.

These forecasts for the following year do not have the straight line look of some inflation reports (Graphs 12 and 13). Use of the inflation outlook for the current year does not change the estimates materially, leaving the perverse response to the output gap. Use of the inflation outlook for the following year, however, eliminates the perversity in the case of headline CPI and produces a proper response to the output gap in the case of core CPI. This comes at the expense of a fairly weak response to inflation in the former case, and none in the latter case, and a coefficient on the lagged policy variable in the region of one.

Finally, we investigated the sensitivity of the results to the period over which the HP filter was run in order to estimate the output gap. We found that, with potential output estimated over 1997-2005 rather than 2000-2005, the perverse response to the output gap still shows up when contemporaneous inflation is used. However, the outlook for this year's core inflation produces no perverse response to the output gap. Use of the more forward-looking next year's headline or core inflation rates, moreover, produce the expected response to the output gap at standard levels of significance. Again, this comes at the cost of a fairly weak response to inflation and a possibly unit coefficient on the lagged policy rate.

Taking it all together, several findings seem to emerge. First, no specification found a response of the policy rate to the exchange rate. This does not necessarily imply that the authorities are unconcerned with the exchange rate; it could imply that another instrument is assigned to it. Second, the estimates suggest that the policy rate is responding to forward-looking measures of inflation.

Box table

Estimated Taylor reaction function for Thailand

		Const	Δcpi_t	gap _t	Δxr_t	Δxr_{t-1}	ir_{t-1}	Dummy	R ²
1993 Q3-2005 Q2									
Baseline model with	REER	0.80 (1.65)	0.12 (0.46)	0.43 (2.46)	-0.06 (-1.09)	-0.19 (-2.80)	0.78 (6.00)		0.88
	XR	1.11 (1.75)	0.10 (0.34)	0.33 (3.08)	-0.07 (-1.17)	-0.17 (-2.72)	0.76 (7.02)		0.88
		0.65 (1.15)	0.04 (0.22)	0.35 (2.13)			0.87 (7.13)		0.85
2000 Q2-2005 Q2									
Baseline model with gap0005	REER	0.42 (1.18)	0.25 (3.21)	-0.29 (-3.55)	-0.03 (-0.96)	0.01 (0.34)	0.46 (2.68)		0.61
	XR	0.35 (0.96)	0.25 (3.04)	-0.26 (-3.40)	0.00 (0.02)	0.01 (0.65)	0.52 (3.06)		0.60
	NEER	-4.45 (-1.72)	0.04 (2.11)	-0.19 (-2.35)	-0.03 (-0.86)	-0.00 (-0.18)	0.52 (2.59)		0.50
		0.39 (1.20)	0.24 (3.22)	-0.25 (-3.61)			0.50 (3.24)		0.64
		0.28 (0.99)	0.20 (2.97)	-0.19 (-2.94)			0.59 (4.26)	0.27 (2.57)	0.73

Box table (cont)									
Estimated Taylor reaction function for Thailand									
		Const	Δcpi_t	gap _t	Δxr_t	Δxr_{t-1}	ir _{t-1}	Dummy	R ²
2000 Q2-2005 Q2									
Core CPI	NEER	1.19 (3.55)	0.47 (2.75)	-0.18 (-2.49)	-0.02 (-0.59)	0.01 (0.43)	0.14 (0.63)		0.57
Headline CPI estimate, current year	NEER	0.64 (2.09)	0.30 (3.54)	-0.26 (-3.69)	-0.04 (-1.33)	0.02 (0.56)	0.32 (1.89)		0.65
		0.59 (2.03)	0.28 (3.37)	-0.22 (-3.47)			0.38 (2.44)		0.65
Core CPI estimate for current year	NEER	1.00 (2.83)	0.32 (2.02)	-0.14 (-1.70)	-0.02 (-0.49)	0.02 (0.36)	0.25 (1.13)		0.49
		0.95 (3.04)	0.32 (2.17)	-0.12 (-1.73)			0.28 (1.45)		0.54
Headline CPI forecast, next year	NEER	-0.40 (-1.39)	0.24 (2.70)	0.06 (0.60)	-0.00 (-0.01)	0.03 (1.28)	1.00 (4.88)	0.36 (3.64)	0.87
		-0.46 (-1.72)	0.19 (2.57)	0.08 (1.09)			1.09 (6.28)	0.39 (4.75)	0.87
Core CPI forecast, next year	NEER	-0.47 (-1.19)	0.03 (0.23)	0.21 (2.03)	0.02 (0.78)	0.00 (0.03)	1.27 (4.27)	0.49 (4.05)	0.80
		-0.40 (-1.18)	0.02 (0.23)	0.18 (2.05)			1.23 (4.90)	0.48 (4.54)	0.82
Baseline model with gap9705	REER	0.70 (1.59)	0.23 (2.51)	-0.25 (-2.42)	0.01 (0.31)	0.03 (0.71)	0.36 (1.55)		0.49
		0.23 (1.48)	0.23 (2.56)	-0.23 (-2.48)			0.44 (2.18)		0.53
		0.33 (0.89)	0.15 (1.66)	-0.10 (-1.00)			0.63 (3.06)	0.29 (2.05)	0.60
Core CPI estimate, current year	NEER	0.70 (1.49)	0.37 (1.82)	0.01 (0.13)	0.01 (0.34)	0.00 (0.09)	0.36 (1.64)		0.39
Headline CPI forecast, next year	NEER	-0.44 (-1.68)	0.24 (3.26)	0.06 (0.98)	-0.00 (-0.24)	0.02 (0.92)	1.02 (6.44)	0.37 (4.12)	0.88
		-0.53 (-2.16)	0.21 (3.40)	0.08 (1.75)			1.09 (8.41)	0.41 (5.44)	0.88
Core CPI forecast, next year	NEER	-0.41 (-1.30)	0.17 (1.79)	0.16 (2.47)	0.01 (0.39)	-0.00 (-0.11)	1.07 (5.58)	0.46 (4.51)	0.82
		-0.40 (-1.45)	0.16 (2.05)	0.15 (2.68)			1.07 (6.84)	0.45 (5.16)	0.84
Note: t-statistics in parentheses.									
Abbreviations: Δcpi = annual percentage change in consumer prices; gap = output gap; Δxr = change in the real effective exchange rate (REER), nominal effective exchange rate (NEER) or in the bilateral exchange rate (XR) (up means appreciation); ir = interest rate (dependant variable).									

3.2 Foreign exchange market intervention

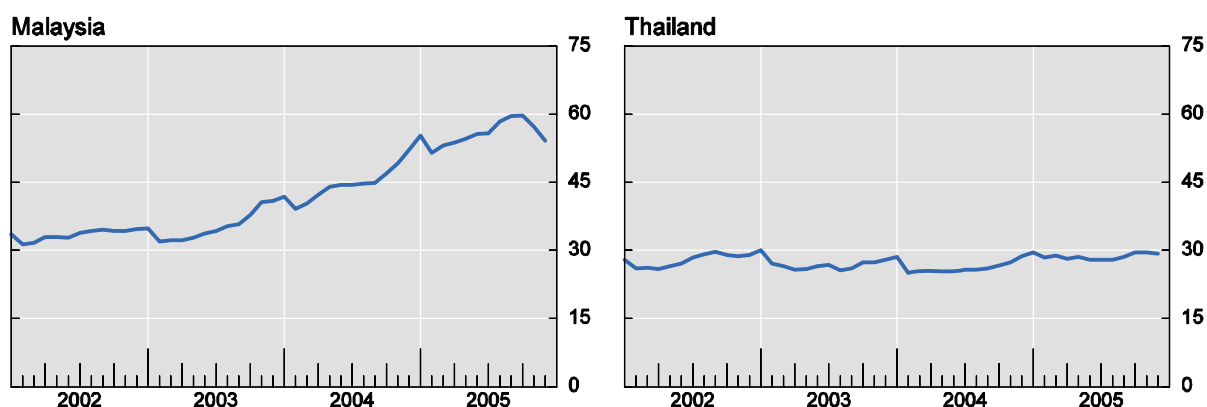
The main instrument assigned to the stabilisation of the ringgit and baht exchange rates is sterilised intervention (compare Disyatat and Galati (2005)). Its effectiveness is probably enhanced by the existence of capital controls in both countries. Moreover, these can be and have been varied in response to exchange rate pressures.

Sterilised intervention has been described as a fractional instrument (Dooley et al (2002)). That is, it does not have the power of interest rate policy. Still, in combination with capital controls, themselves leaky and partial, sterilised intervention may afford considerable leverage over the exchange rate.

As noted, Malaysia has used sterilised intervention to set the level of the exchange rate into July 2005, and perhaps to influence its level and volatility since then. Consistent with the difference in their exchange regimes, the Malaysian authorities have evidently used this instrument with greater vigour (Graph 7). Foreign exchange reserves rose in Malaysia to about 60% of GDP in the third quarter of 2005 before falling back toward 50% since. Foreign exchange reserves have fluctuated around 30% of GDP in Thailand. Short-term capital inflows were particularly strong in the fourth quarter of 2004 and third quarter of 2005.

Graph 7

Foreign exchange reserves as a share of GDP¹

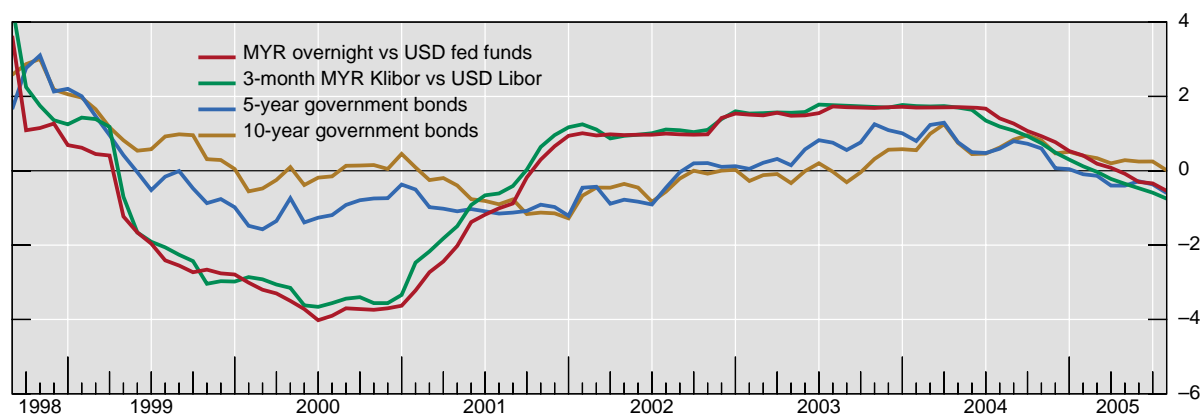


¹ In per cent.

Sources: IMF; national data.

Intervention as a fractional instrument gains force from capital controls. Their effectiveness is evident in both cases, though more so in the case of Malaysia. The offshore market for ringgit was successfully shut down in September 1998, and only in 2005 did a non-deliverable market offshore develop any liquidity. Thus, it is not possible to test for the effectiveness of capital controls by measuring the difference between onshore and offshore yields, whether derived from deliverable or non-deliverable forwards (Ma et al (2004)). Given the fixed exchange rate, however, it is possible to test for the effectiveness of the capital controls by measuring the difference between ringgit and dollar yields at various maturities. Examining these interest rate differentials, Malaysia's capital controls appear effective in the sense of permitting short-term ringgit interest rates to be set at very different levels than short-term US dollar interest rates (Graph 8). Moreover, the difference extends out the maturity spectrum, albeit to a lesser extent. Anyone who claims that Malaysia's fixed exchange rate meant that it was importing its monetary policy from the Federal Reserve needs to explain the 600 basis point range in the gap between US dollar and ringgit money market yields over the period of the fixed exchange rate.

Graph 8

Interest rate differentials for Malaysia¹

¹ Malaysian ringgit rates minus US dollar rates; monthly averages.

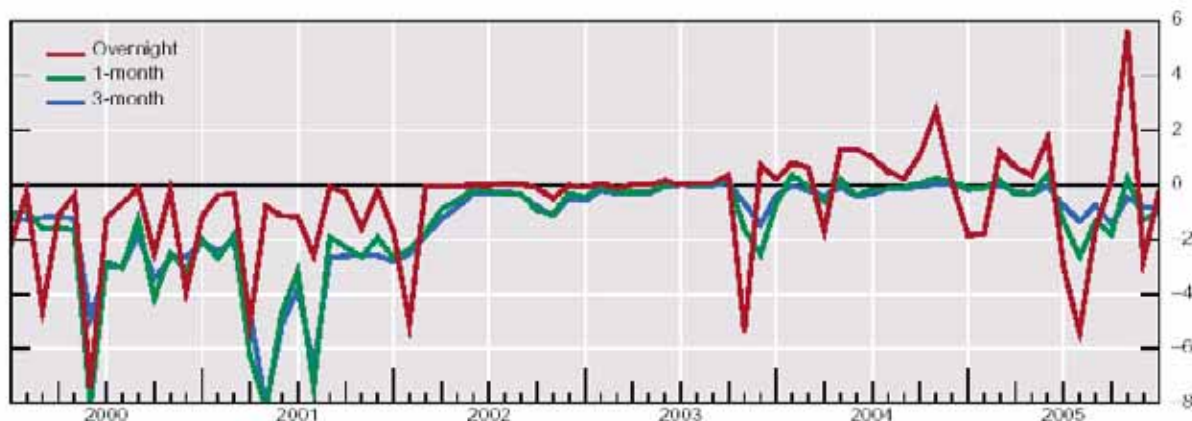
Source: National data.

In the case of the Thai baht, the sizeable although variable differences between on- and offshore baht interest rates signal effective capital controls. This holds whether offshore swap-implied rates are compared to their onshore counterparts (Graph 9a) or onshore interbank rates (Graph 9b). From 1999 into the first half of 2003, the evidence is consistent with an effective control on *outward* arbitrage, since offshore swaps often traded at levels implying higher offshore interest rates, but hardly ever with lower offshore rates. With strong capital inflows and chronic pressure for appreciation during much of 2002 and 2003, there was incipient pressure for offshore rates to fall below those onshore, but arbitrage kept the rates in line. In other words, into the third quarter of 2003, the Bank of Thailand oversaw an asymmetric regime, with effective constraints on lending baht to nonresidents but no measure preventing the flow of baht held by nonresidents into Thailand. In September and October 2003, however, the Bank of Thailand made its capital controls symmetric by limiting onshore financial institutions from borrowing more than 50 million baht from non-residents (Bank of Thailand (2003a,b)).⁶ Since then, overnight differentials have shown more symmetry. In particular, non-resident demand for offshore exposure to the baht has often pushed the offshore *overnight* rate below its onshore counterpart. That the quite liquid offshore swap market at the *one month* tenor has not shown the same symmetry in its relationship to the onshore market suggests that the controls on inflows may not be as effective as their counterpart controls on outflows.

⁶ The October 2003 *Inflation Report*, pp 30-31, noted: "In July and August, overnight interbank was relatively low compared with 1-day repurchase rate as a result of shift of borrowing by financial institutions from the interbank market to swap market. A more attractive rate in the swap market was due to a large amount of available baht funds offered by foreign investors justified by the expectation of baht appreciation. However, after implementation of measures to curb short-term capital flows in September, by limiting financial institutions to borrow baht from non-residents without underlying trade or investment not exceeding 50 million baht per entity, volume of transactions in the swap, interbank, and repo markets were restored, resulting in a better liquidity balance in the money market. Subsequently, all types of [onshore] short-term money market rates moved in a narrow range". Such measures to curb short-term capital flows are dubbed "moral suasion" by Watanagase (2005b). Note that offshore rates fell further below domestic interbank rates in Graph 9b than they fell below domestic swap rates in Graph 9b in the lead-up to the capital controls being made symmetric.

Graph 9a

Interest rates differentials for Thailand¹

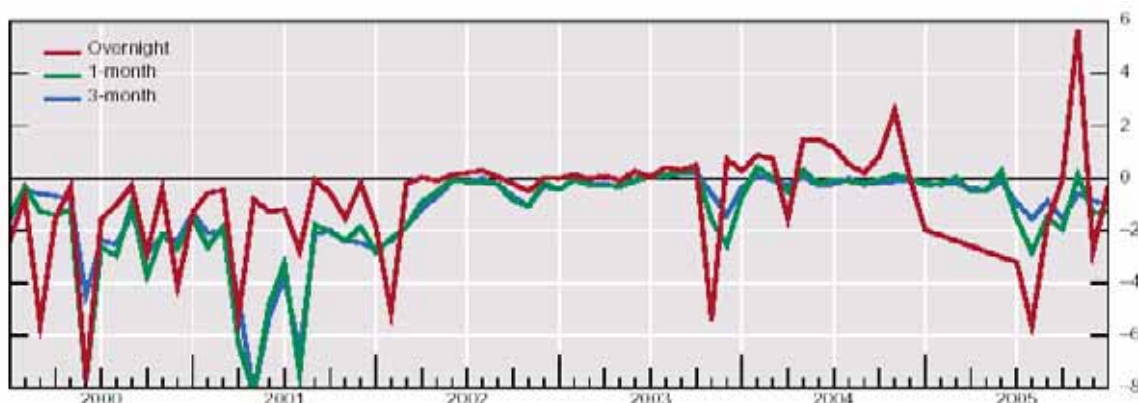


¹ Onshore rates minus offshore rates implied by forex swaps; monthly averages.

Sources: Bank of Thailand; CEIC; Reuters.

Graph 9b

Interest rates differentials for Thailand¹



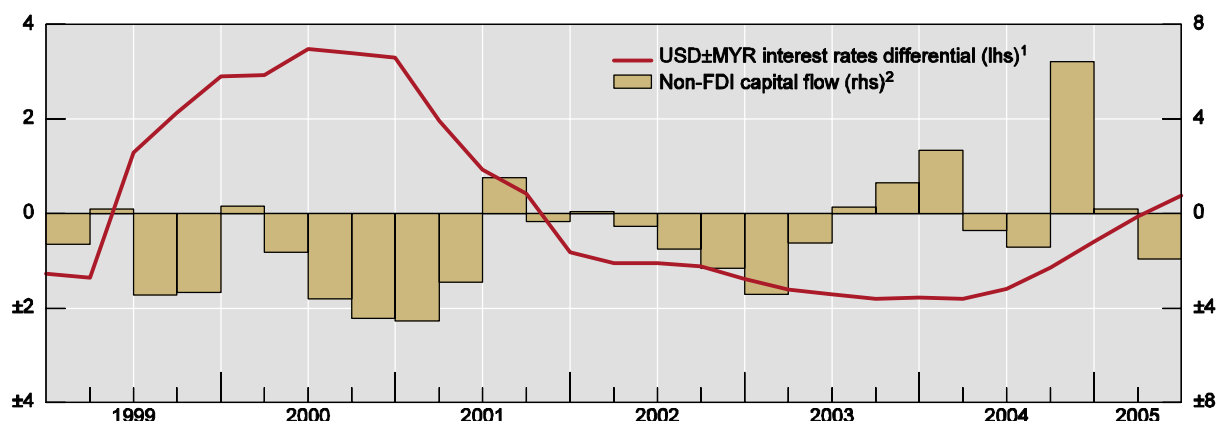
¹ BIBOR rates minus offshore rates implied by forex swaps; monthly averages.

Sources: Bank of Thailand; Bloomberg; CEIC; Reuters.

While capital controls were sufficiently robust to afford Malaysia an independent monetary policy during a period of a pegged exchange rate, these controls were leaky. In 1999-2000, the previous period when US dollar short-term interest rates climbed above those on Malaysian ringgit, Bank Negara reported declines in reserves notwithstanding a robust current account surplus (Graph 10). More recently, as ringgit short-term interest rates have fallen below those on the US dollar, Bank Negara Malaysia is again reporting declines in reserve holdings. Once again, market analysts, who might have previously viewed reserve holdings as excessive, have expressed concern about the potential for capital outflows (Le Mesurier and Tan (2005)). In any case, it would be a misapprehension to suppose that reserves are only acquired and never sold off.

Graph 10

Net capital flows into Malaysia



¹ Three-month money market rates, quarterly averages. ² Change in reserve minus net current account, net FDI and net international debt securities flows; in billions of US dollars.

Sources: Datastream; national data; BIS.

In both cases, restraints on cross-border flows of capital may impede financial market development. For instance, some foreign investors in Thai government bonds report finding it difficult to manage their transactions in such a manner as not to run afoul of the 2003 constraints on holding onshore cash balances in baht. If this experience is general among foreign investors in Thai bonds, development of a more diverse investor base in them may have been discouraged. Restraints on cross-border capital flows also seem to work against diversity in the currency swap market, in which multi-year payment streams in local currency are exchanged for multi-year payment streams in US dollars. Globally, just over half of currency swap transactions occur between counterparties in different countries (BIS (2005, table E20)). In contrast, the currency swap markets in ringgit and the baht appear to be mostly confined to exchanges among residents (Table 3). For the Korean won and Singapore dollar, despite remaining restrictions on onshore-offshore transactions, it is evident that the cross-border transactions are the more dynamic piece of the rapidly growing markets for currency swaps.

Table 3

**Foreign exchange transactions
in the ringgit, baht, won and Singapore dollar**

	April 2001				April 2004			
	MYR ¹	THB	KRW	SGD	MYR ¹	THB	KRW	SGD
Global spot transactions	252	530	5,731	2,756	351	1,333	10,510	5,177
Over-the-counter derivatives transactions in local currency ²	675	1,077	3,319	9,214	662	1,627	8,769	7,167
Currency swaps ³	...	11	46	18	11	246	342	54
Local	...	10	37	11	11	236	240	12
Cross-border	...	1	9	7	0	9	98	31

Source: BIS (2002, 2005), Tables E1, E20, E26, E28.

Notes: ¹ For the Malaysian ringgit, transactions include only those reported for the Malaysian market in local currency. ² Net of local but not cross-border double-counting. ³ Owing to incomplete counterparty breakdown, local and cross-border components may fall short of the currency swap totals.

3.3 Other instruments

In response to risks to financial stability, each central bank is capable of constraining the extension of credit either in relation to the borrower's income (a flow measure) or in relation to the value of asset to be financed (a stock measure). It is worthwhile to consider these concerns and the policy responses given the global debate over the appropriate response to financial imbalances (Borio and White (2004), Disyatat (2005), Borio (2006), White (2006,a,b). Before the 1997-98 financial crisis, Bank Negara Malaysia restrained competition in underwriting standards in extending mortgage credit by setting a maximum loan-to-value ratio for mortgages. More recently, the Bank of Thailand, as described below, limited the extension of credit on bank and non-bank credit cards in relation to the income of the cardholder.

In addition to such macroprudential goals and instruments comes the choice of operating instruments to serve the goal of market development. Any central bank generally enjoys a degree of freedom in choosing in which instruments to operate, and this choice can be exercised in a manner that serves the developmental goal. Below, Bank Negara Malaysia's proposal to shift from direct borrowing to repurchase operations offers an example of choice of instrument in the service of market development, in this case bond market development. Of course, market development in turn serves monetary policy by improving the transmission of the policy interest rates to related yields.

3.3.1 Credit policies for systemic stability and consumer protection: the Bank of Thailand on credit cards

The Bank of Thailand perceived excesses in the market for credit card loans and used regulatory policies to limit these excesses (Devakula (2004)). Bank and non-bank issuers of credit cards were seen as pushing credit at high and ill disclosed rates of interest (nearly 30% for credit cards and over 50% for personal loans) on low-income households with little practice in managing debt. The response can be seen as a change in the groundrules that came at early stage of the debt build-up. Policies to restrain competition included limits on the scale of credit lines (no more than five times monthly income), a minimum monthly income test (15,000 baht, or less than \$400), a minimum monthly repayment rate (at least 5% and later 10% of the outstanding balance) and caps on interest rates and fees (Bank of Thailand (2004a)).

That these measures were applied not only to banks but also to non-bank card issuers demonstrates that consumer protection was at issue as well as systemic stability (Watanagase (2005a)). However, the fact that the Korean government had intervened to shore up the solvency and liquidity of a non-bank credit card issuer means that a financial stability argument for the extension of the regulation beyond the banking system is not far-fetched. Indeed, the Korean experience suggests that a cycle of excess and retrenchment in consumer credit can be a source of macroeconomic instability.

3.3.2 Choice of operating instruments for market development

Central bank operations tend to bring extra liquidity to the chosen instrument(s). In general, there is a degree of freedom in monetary policy operations regarding the choice of instrument. This can be chosen for its pre-existing liquidity: before the financial crisis of 1997-98, central banks in East Asia often operated in foreign exchange swap markets because these were the most liquid parts of the money market. But the developmental perspective can

reverse the reasoning behind the choice, and the central bank can operate in the market that lacks liquidity.⁷

A developmental aim is evident in both central banks' approach to the repo market. The choice by the Bank of Thailand to operate in repo markets has tended to increase the liquidity of repos and to some extent holdings of government bonds as well. There remains an intention to induce the development of a truly private repo market, instead of having the Bank of Thailand a counterparty on one side of every repo transaction.

Bank Negara Malaysia has more recently set its sights on promoting the repo market. It announced in February 2005 that:

“To further develop the repo market, Bank Negara Malaysia will actively use repo operations as part of its monetary policy instruments⁸ to manage liquidity in the banking system.

“Bank Negara Malaysia’s repo operations would:

- Act as a catalyst to encourage market participants to actively use repos as an alternative funding instrument;
- Enhance the flexibility for market participants to use these securities in managing settlement risks and trading strategies; and
- Further strengthen the banking industry’s risk management capabilities by encouraging banks to move towards collateralised inter-bank transactions” (Bank Negara Malaysia (2005b)).

4. Goals, instruments and higher energy prices

The recent rise in energy prices has presented a challenge to both central banks. These challenges are conditioned by energy pricing policies of the government, and also by the elaboration of the central banks' monetary policy frameworks. It is worthwhile to analyse this challenge as faced by these two central banks because many of its aspects are faced by others in and outside Asia (BIS (2006)).

At the outset, it should be recognised that the energy price rise differs from cases often taken to be precedents. Whereas in earlier decades cutbacks in supply led to oil “shocks”, in the recent past supply has expanded in the face of strong demand, which was led not least by the fast-growing Asian economies. In general, commodity prices have risen because world growth has been more robust than in a generation.

The energy price rise tends to pose a particular challenge to emerging market economies. First, at medium levels of income, the energy intensity of the consumption basket tends to be higher (an Engle curve observation). Second, and in part as a consequence, the baseline of energy taxes tends to be lower in emerging markets than in more advanced countries. As a result, a given percentage increase in energy prices makes for a larger percentage change in consumer prices in emerging markets.

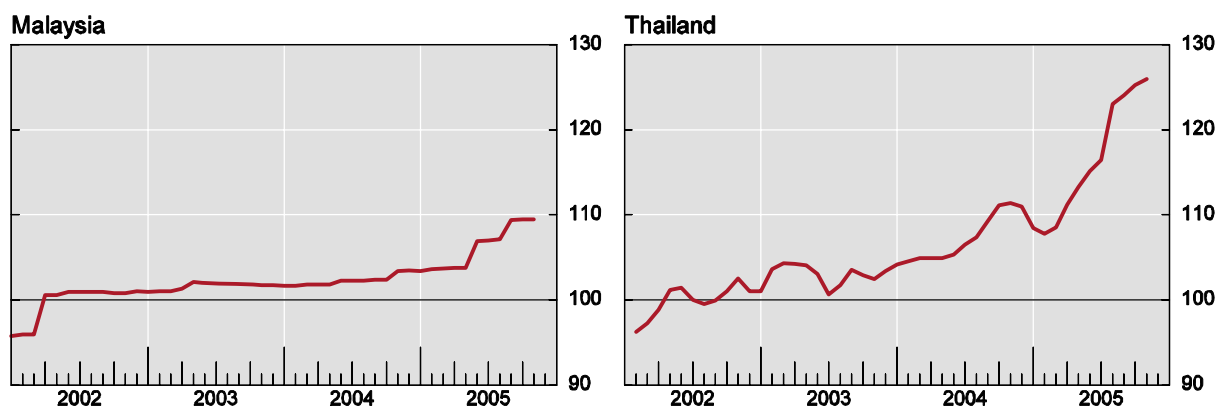
⁷ For a proposal to transform the non-monetary liabilities of the central bank into government debt in order to contribute to the development of the government bond market, see McCauley (2003, 2006).

⁸ Currently the Central Bank manages liquidity largely through direct borrowing from the interbank market. Bank Negara Malaysia also issues short-term bills for purpose of mopping up excess liquidity in the market” [footnote in original].

From the standpoint of the central bank response to this challenge, an important conditioning factor is the government's energy pricing policy. Malaysia, as an energy exporting country, has built-in capacity to shield its domestic economy from energy price rises. That is, it can divert some of the fiscal windfall from higher energy prices to holding down energy prices, constrained at the extreme by the possibility of turning fishermen into diesel fuel exporters. And indeed the Malaysian government has limited the pass-through of higher energy prices, even as prices have been raised several times. A couple of years ago, a litre of petrol sold for MYR 1.12 and after several 10 cent rises, it reached MYR 1.62 (45 US cents). In contrast, the government in Thailand at first sought to hold down petrol and diesel prices, but late in 2004 passed through much of the extra costs to petrol consumers. Early in 2005 the same was done with the price of diesel as well. Pressure remains on the pricing of the natural gas sold to the electric generating company, but it is fair to say that much of the energy price rise has passed through. All in all, more of the inflationary impulse of higher energy prices in Malaysia has been fiscalised, and the pressure on domestic prices from the higher international price of energy has been higher in Thailand than in Malaysia (Graph 11). In this respect, the Bank of Thailand has had a harder job.

Graph 11

Energy-related CPI¹



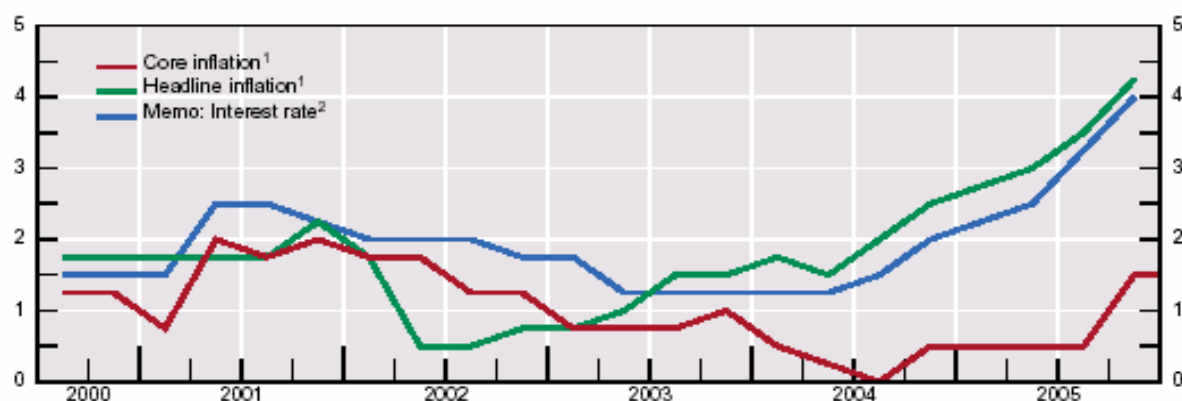
¹ CPI on transport and communications; 2002 = 100.

Source: CEIC.

Given any upward pressure on inflation, however, advocates of inflation targeting would suggest that the less elaborated monetary policy framework would make Bank Negara's job harder. They would argue that without a clear specification of the inflation target, price pressures might more readily translate into inflation expectations.

In another respect, however, the Bank of Thailand's interpretation of inflation targeting could have made its job difficult. As part of its elaboration of inflation targeting, it had committed to a core measure of inflation that discounted much of the initial pressure on inflation from higher energy prices. Thus, when it started to raise interest rates in the middle of 2004, many market participants were surprised: at less than 1%, the core measure was near the bottom of the 0-3.5% band (Graph 4). Moreover, the country sustained several adverse developments ranging from tsunami - implying lower demand for tourism - to avian flu to unrest in the southern provinces. These were seen as easing the pressure on the labour market and capacity. Thus, low Bank of Thailand estimates of core inflation for the current year left many observers wondering when the central bank started raising the policy rate in mid-2004 (Graph 12).

Graph 12
Inflation estimates for Thailand

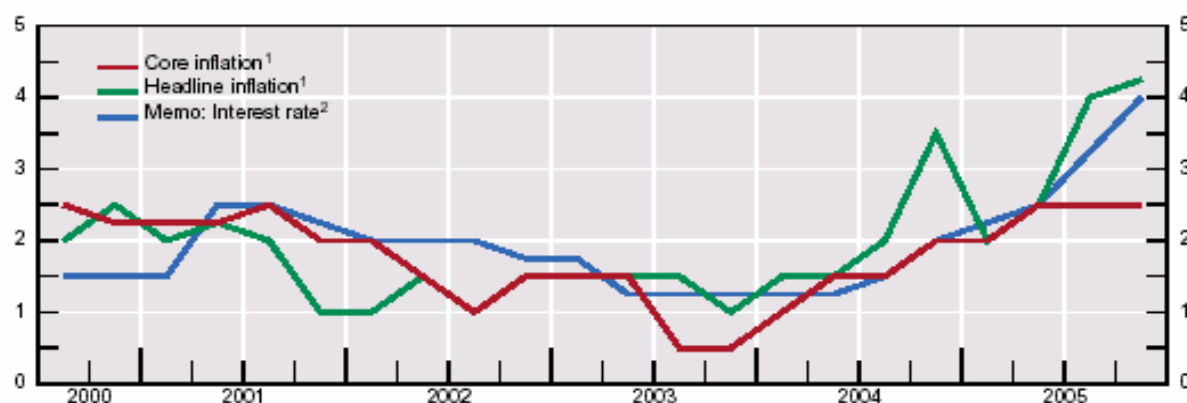


¹ Estimates made for the current year; annual change; in per cent. ² 14-day repurchase rate; in per cent.

Sources: Bank of Thailand, *Inflation Reports*.

What looked to some like indecision regarding the objective can be seen in retrospect as avoiding a trap in the core measure. Such a measure intends to exclude volatile prices, but energy prices showed a trend as well as volatility around it. More broadly, what is the appropriate response if the rapid growth of Asian economies was holding down the prices of manufactures (China) and cheapening some previously non-traded services (India), while pushing up commodity prices? It is not obvious that the right answer is to pay attention to the prices being held down while ignoring those being pushed up. In the specific case of Thailand, the central bank also had to consider the sustainability of the early fiscalisation of higher energy prices. One could argue that the Bank of Thailand was simply appropriately forward-looking in its view on the core rate. On this view, the headline rate required a response only insofar as it informed a forecast of the future core inflation rate. Certainly, the timing and vigour of the policy tightening looks easier to understand when juxtaposed to inflation forecasts for eight quarters ahead (Graph 13).⁹ As an alternative, one could argue that the Bank of Thailand appropriately gave some weight to headline inflation.

Graph 13
Inflation forecast for Thailand



¹ Forecast made for the following year; end-year forecast; annual change; in per cent. ² 14-day repurchase rate; in per cent.

Sources: Bank of Thailand, *Inflation Reports*.

⁹ Note that the Bank of Thailand forecast for targeted inflation deviates from the centre of the target band by more than the forecasts of the four industrial country economies as reported in Edey (2006).

On this second reading, the broader lesson that may be taken is that the elaboration of a monetary framework probably cannot be a once-and-for-all act. Events undermine the presumptions of any elaboration: recall the instability of the relationship between monetary aggregates and nominal output. Steve Grenville's (2001) question of whether inflation targeting can be viewed as the end of monetary history, seconded by Genberg's (2002) question of whether it can be viewed as the holy grail of monetary policy, remains.

5. Independence

Do the central banks enjoy the independence necessary to meet their objectives? To recap McCauley (2001), one can distinguish legal, behavioural and balance sheet independence. In large part, the argument in that earlier paper was destructive: the readily available Asian data did not support the linkage demonstrated for industrial countries and/or emerging market economies in general between legal or behavioural independence, on the one hand, and good inflation performance on the other. Indeed, the contrary hypothesis received stronger support on several measures of independence.

The introduction of the notion of balance sheet independence, however, attempted to contribute more constructively to the discussion of central bank independence. One aspect of balance sheet independence had been incorporated into legal measures of independence, namely, whether the treasury could compel the central bank to buy its paper. And the European System of Central Banks has, as a defining feature, prohibited direct purchases of government paper by a participating central bank. But balance sheet independence can be compromised in many other ways.

5.1 Legal independence

The acts of the two central banks date to very different times. The Central Bank of Malaysia Act 1958 was drawn up in peacetime and drew inspiration from, among other sources, the legislation of the Reserve Bank of Australia. This Act was revised in 1994. The Bank of Thailand's Act of 1942 dates back to a time when checks and balances seemed more a hindrance than a promoter of national development. Thus, the Bank's independence and accountability might be well served by a revision of the act. Among other changes, both monetary and financial stability policymaking might benefit if the governor were appointed for a fixed term, rather than serving at the pleasure of the cabinet.

5.2 Behavioural independence

The legal position of the Bank of Thailand's governor is reflected in one of the measures of behavioural independence, namely the turnover of the governor (Cukierman (1992) and Cukierman and Webb (1995)). In fact, no governor has served to retirement age in the history of the Bank of Thailand, save one whose time to retirement was only months in the first place.

The tenure of the governor is in practice twice as long in Malaysia as in Thailand (see Annex). On average, the Bank Negara Malaysia governor has served 6.6 years, while her counterpart in Thailand has served only 3.2 years. Thus the current governor in Malaysia, who is the longest-serving governor in a major ASEAN country, has not reached the average tenure, while the recently departed governor in Thailand had exceeded the average.

Another measure of behavioural independence is whether the governor is replaced within six months of a change in government. The Malaysian governor remained in office after the change in prime minister in October 2003. In the case of Thailand, unprecedented enlargement of the parliamentary majority of the prime minister early in 2005 led to questions

about the tenure of the economic team. While strictly speaking there was no change of government in 2005 in Thailand, it was noteworthy that the central bank governor remained in office for six months after the election. After the coup d'état in September 2006, Governor Devakula became Deputy Prime Minister and Finance Minister; this shift shows that central bank turnover in the wake of political change is not always prejudicial to central bank independence. In this case, the shift is seen as bringing forward legal change: "changes to the Bank of Thailand Act and Currency Act are underway ... to give the Bank of Thailand more independence while securing an appropriate system of checks and balances" (Watanagase (2006)).

The bank supervisory responsibilities of Bank Negara Malaysia and the Bank of Thailand may bolster their behavioural independence.¹⁰ Their ability to respond to asset inflation and credit excesses with prudential policies rather than just interest rate hikes may shield the central bank from political pressure. For example, protecting banks by setting lower loan-to-value ratios in mortgage lending is an easier sell than targeting real estate wealth with higher interest rates. Finally, the political act of splitting off supervision can easily be interpreted as a weakening of the central bank, rather than a focusing of its mandate, perhaps implying less behavioural independence.

5.3 Balance sheet independence

Balance sheet independence is defined as a central bank having control over its balance sheet and not taking on essentially fiscal assets. A lack of such independence may not immediately threaten the autonomy of monetary policy. By risking a decapitalisation of the central bank, however, a lack of balance sheet independence can put the central bank into the awkward position of needing yearly budgetary transfers or a one-time recapitalisation. Even in the presence of legal independence, there is likely to be a price to pay at the time the ministry of finance makes a payment to the central bank.

It is the rule rather than an exception for a central bank to experience a compromise of its balance sheet independence in the response to a major financial crisis. Taking the economies most affected by the Asian financial crisis of 1997-98, for instance, all of them follow the rule.

Bank Indonesia suffered a loss of balance sheet independence when there was not a prompt fiscal take-out of its discount window advances to failed banks during the 1997-98 crisis. When the 2004 revised central bank act provided for some fiscal recognition of the problem, Bank Indonesia lost the goal independence that it had previously enjoyed (Indonesia (2004), p 6). Rather than being able to set the inflation target, Bank Indonesia now is tasked with meeting the target set by the Ministry of Finance. Some outside observers might find this division of labour familiar and arguably better the status quo ex ante. For the present purposes, however, the important point is that the loss of balance sheet independence led to the loss of goal independence.

¹⁰ Consistent with the Bank of England's gaining its independence in monetary policymaking while losing its responsibility for bank supervision, some would argue that the vesting of this responsibility in a separate agency sharpens the central bank's mandate and prevents conflicts of interest and risks to reputation arising from the exercise of that responsibility. The arguments to the contrary, however, may be stronger for an emerging market economy than an advanced one. While a large, advanced country may have sufficient pool of talent to have separate bureaucracies compete for financially trained personnel, this is likely to prove more problematic in a small or emerging economy. To the extent that a central bank has built up credibility, moreover, splitting off supervision will create a need to build up credibility in the new agency.

For its part, the Bank of Korea found itself once again discounting loans to small and medium-sized enterprises at below-market interest rates. This is a quasi-fiscal operation that had been wound down before the crisis.

Our two central banks were not spared, though their compromises of balance sheet independence vary in scale and resolution. Bank Negara Malaysia capitalised Danamodal, an instrument to recapitalise the banks. It sold bonds and invested in several distressed banks. It is winding down and Bank Negara Malaysia stands to recover its investment.

The Bank of Thailand provided assistance to distressed financial institutions in the midst of the crisis through the Financial Institutions Development Fund. The Bank of Thailand owns the FIDF, staffs and in effect funds it by serving as its counterparty in regular short-term fund-raising through the repo market. Sales of assets of failed financial institutions have left a substantial negative equity position. There have been several rounds of the government assuming the burden in whole or part. In one round, the government undertook to pay interest coupons on bonds sold to recapitalise the FIDF, while the Bank of Thailand undertook to pay the corpus of the bond out of profits on management of the foreign exchange reserves. Given that the foreign exchange reserves are financed at the margin largely by interest-bearing debt, such profits are far from assured, however. The FIDF may be wound up within the next several years.

Challenges to central bank balance sheet independence continue, however. It is understandable that a variety of adverse developments, ranging from an outbreak of avian flu, to ethnopolitical conflict in the southern provinces, to a tidal wave, would lead to pressure on the central bank to do something. Still, discounting bank loans to private businesses at subsidised interest rates must be recognised as mixing fiscal policy, in the form of the allocation of seigniorage, with monetary policy.

In sum, the response to the financial crisis of 1997-98 unsurprisingly posed challenges of varying types and intensity to the central banks of the most affected economies. Seven years on, much progress has been made in restoring balance sheet independence.

6. Conclusions

The monetary policies of Malaysia and Thailand offer points of comparison and contrast. Both seek to stabilise the rate of inflation, with Malaysia operating without and Thailand operating within an explicit inflation targeting framework. The latter assigns a pre-eminent position to a core measure of inflation, but the record suggests that the Bank of Thailand has recognised the trend element of higher energy prices and thus pre-emptively moved against the risk of higher inflation notwithstanding a series of adverse developments on the demand and the supply side. Both central banks seek to stabilise the exchange rate, with Malaysia to date having given more weight to the bilateral exchange rate against the dollar and Thailand attempting to stabilise the effective exchange rate. In both cases, a short-term interest rate serves as an operating target, with liquidity-draining operations the modal means to hit the target. Malaysia has recently chosen the overnight interest rate, while Thailand has since the financial crisis of 1997-98 opted for the two-week repo rate. In both cases, sterilised intervention supported by restrictions on cross-border money market and foreign exchange transactions are assigned to the goal of stabilising the exchange rate. In both cases, the central bank embraces broader goals of macrofinancial stabilisation and assigns credit policies to this goal. In addition, in both cases the central bank embraces a developmental role in the financial markets. With regard to governance, both central banks enjoy considerable behavioural independence, and the public interest might be well served by increased legal independence in Thailand.

**Annex:
Governors of the central banks of Malaysia and Thailand**

Malaysia		
No	Name	Period in office
1	Tan Sri W H Wilcock	January 1959 - July 1962
2	Tun Ismail bin Mohamed Ali	July 1962 - July 1980
3	Tan Sri Abdul Aziz bin Taha	July 1980 - June 1985
4	Tan Sri Dato' Jaffar bin Hussein	June 1985 - May 1994
5	Tan Sri Dato' Ahmad bin Mohd Don	May 1994 - August 1998
6	Tan Sri Dato' Seri Ali Abul Hassan bin Sulaiman	September 1998 - April 2000
7	Tan Sri Dato' Sri Dr Zeti Akhtar Aziz	May 2000 - current

Thailand

No	Name	Period in office
1	H H Prince Vivadhanajaya	27 November 1942 - 16 October 1946
2	Mr Serm Vinicchayakul	17 October 1946 - 24 November 1947
3	Mr Leng Srisomwongse	25 November 1947 - 2 September 1948
4	H H Prince Vivadhanajaya	3 September 1948 - 2 December 1948
5	Mr Leng Srisomwongse	3 December 1948 - 3 August 1949
6	M L Dej Snidvongs	4 August 1949 - 29 February 1952
7	Mr. Serm Vinicchayakul	1 March 1952 - 24 July 1955
8	Mr Kasem Sriphayak	25 July 1955 - 23 July 1958
9	Mr Jote Guna-Kasem	24 July 1958 - 3 May 1959
10	Mr Puey Ungphakorn	11 June 1959 - 15 August 1971
11	Mr Bisudhi Nimmanhaemin	16 August 1971 - 23 May 1975
12	Mr Snoh Unakul	24 May 1975 - 31 October 1979
13	Mr Nukul Prachuabmoh	1 November 1979 - 13 September 1984
14	Mr Kamchorn Sathirakul	14 September 1984 - 5 March 1990
15	Mr Chavalit Thanachanan	6 March 1990 - 30 September 1990
16	Mr Vijit Supinit	1 October 1990 - 1 July 1996
17	Mr Rerngchai Marakanond	13 July 1996 - 28 July 1997
18	Mr Chaiyawat Wibulswasdi	31 July 1997 - 4 May 1998
19	M R Chatu Mongol Sonakul	7 May 1998 - 30 May 2001
20	M R Pridiyathorn Devakula	31 May 2001 - 6 October 2006
21	Ms Tarisa Watanagase	8 November 2006 - current

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