

# **Monetary policy operating procedures in Singapore**

Monetary Authority of Singapore

## **Introduction**

The Monetary Authority of Singapore (MAS) is responsible for the formulation and implementation of monetary and exchange rate policies in Singapore. The centrepiece of monetary management rests on the exchange rate with monetary policy playing a complementary role. The policy emphasis on the exchange rate stems from the openness and small size of the Singapore economy. A vast network of international financial linkages exists, overlaid on a large external trade and services sector. As a result, capital mobility is high so that the trend in domestic interest rates is largely determined by external interest rates. There is therefore little scope for completely independent monetary policy and Singapore does not target money supply or interest rates.

## **Overview of exchange rate and monetary management**

Exchange rate policy is formulated with the primary objective of maintaining domestic price stability in the context of sustainable, non-inflationary economic growth. Due to Singapore's small domestic economy which is highly dependent on the external sector, the exchange rate is considered the more important instrument to achieve this policy objective. Singapore's total merchandise trade as a percentage of GDP exceeds 200%, a level virtually without parallel in the world. The import content of expenditure and exports is also very high at 60–70%. Given that Singapore is a price taker in global trade, the high import content means that changes in world prices or in the exchange rate have a powerful direct influence on price levels in the economy. The trend appreciation of the Singapore dollar (S\$) over the last decade has helped to limit imported inflation in Singapore.

Domestic cost pressures, on the other hand, reflect the stance of fiscal and monetary policies. The other main influence on domestic inflation has been labour supply. With the Singapore economy enjoying full employment over the last decade, tightness of the labour market can be alleviated through immigration policies. Nevertheless, exchange rate policy has helped to regulate and rein in aggregate demand and dampen wage inflation.

The exchange rate is not used for export competitiveness reasons because the high import content of exports makes the incremental gain in export competitiveness small compared with most countries. Over the longer term, offsetting wage increases in response to rising consumer prices and a tightening of the labour market would raise unit labour costs.

Money supply and interest rates have a relatively modest impact on inflation and the level of economic activity in Singapore, given the greater contribution of external demand to growth than that of domestic demand. Unlike the larger economies where interest rates have a significant impact on investment, Singapore's economy is dominated by foreign multinational companies with foreign sources of funds, thus limiting the importance of the domestic cost of borrowing. Moreover, given a small economic base and the absence of exchange controls, large and rapid movements of capital can occur whenever there are changes in the differential between domestic and foreign interest rates or rates of return. This makes it difficult to target either the money supply or interest rates. Domestic interest rates are largely determined by foreign rates and market expectations of the future strength of the Singapore dollar, while changes in the money supply are mainly accounted for by the net flow of funds from abroad.

In the implementation of exchange rate policy, the Singapore dollar is monitored in terms of a basket of currencies of Singapore's major trading partners and allowed to float within a broad band. The long-term objective is to influence the trade-weighted exchange rate of the S\$ within the band, so as to achieve a low and stable rate of consumer price inflation. The basket of exchange rates that is monitored reflects the range of sources of imported inflation and of competitors in export markets. With a floating exchange rate, MAS can directly influence the value of the S\$ only by intervening in the market itself. For this reason, large foreign reserves and the readiness to use them for intervention are

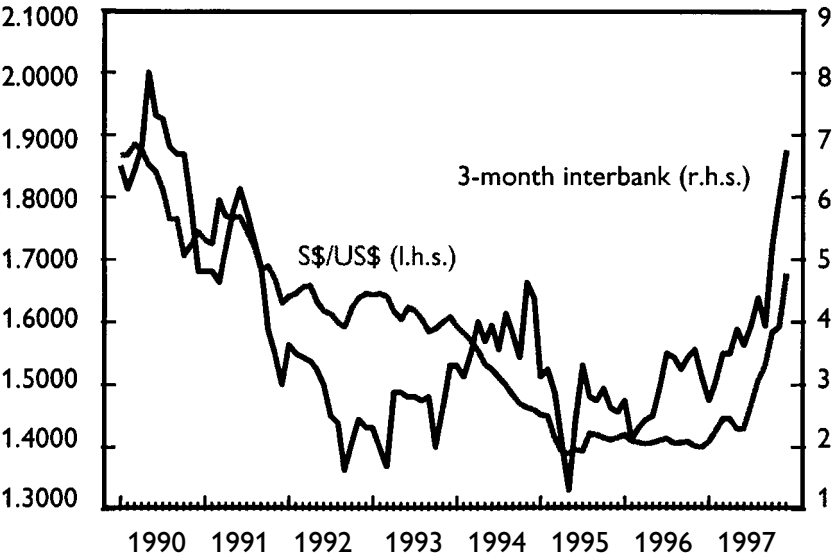
necessary. Ironically, having such large reserves serves to deter speculators and makes it less likely that significant amounts will be needed to defend the currency.

In the short term, MAS may intervene in the market to smooth out volatility in the exchange rate. This is necessary as the long-term credibility of Singapore's exchange rate policy is influenced to a significant extent by short-term fluctuations in the exchange rate. Extreme short-term volatility in the exchange rate, if left unchecked, can cause more market attention to be focused on the currency and impair confidence in the currency in the long term, with potential adverse consequences for the economy.

The use of exchange rate policy, however, does not totally obviate the role of monetary policy. Regulating the level of liquidity in the banking system alongside exchange rate policy is still needed to foster stable money market conditions and promote steady and non-inflationary growth. MAS also uses interest rates to support its foreign exchange intervention. Interest rates were thus allowed to fall to dampen the strength of the S\$ in periods of strong capital inflows and vice versa (Chart 1).

Chart 1

**S\$/US\$ exchange rate and three-month interbank rate, 1990-97**



## **Monetary policy operating procedures**

In the early 1970s, MAS relied to a large extent on varying the minimum reserve requirement of banks to conduct monetary policy. The minimum ratio was revised several times in the 1970s to help manage the economy and curb inflation. The ratio was increased from 3.5% to 5% in August 1972 and then to 9% in March 1973 to drain liquidity and curb high credit growth for equity market activities. Interest rates were also raised through the cartel system which existed before July 1975 and resulted in minimum lending rates being fixed by MAS in conjunction with the Association of Banks of Singapore. At a time when financial markets in Singapore were still immature, these measures effectively reined in credit growth and inflation. Given that quantum jumps were irregular and infrequent, these instruments, however, were not really flexible enough for coping with fast changing market conditions. Hence, as money and foreign exchange markets developed, MAS started to rely more on market operations in conducting monetary policy.

A system of discount houses dealing in Treasury bills, commercial paper and interbank deposits was sufficient for some time. The pool of liquidity between banks and the monetary authority served to smoothen the interest rate effects of oversupply or excess demand. But like most passive instruments of monetary policy, the burden was on the banks to identify any surpluses or shortages of funds in the banking system and access MAS for liquidity indirectly through the discount houses. Although these systems and instruments had their merits, their shortcomings became increasingly obvious as money markets became more active. Instances where liquidity was not homogeneously distributed across banks, or where the majority of banks was not aware of significant shortages or surpluses in the system until they caused interest rates to rise or fall significantly (e.g. when government fiscal operations resulted in significant withdrawals or additions of funds through a single or a few banks), tended to result in marked intraday volatility of interest rates.

Reserve requirements and passive instruments have remained useful in MAS's arsenal of monetary policy instruments until today, but money market operations conducted at MAS's initiative are now more effective in ensuring stable market conditions. A more proactive stance in deciding the amounts and timing of money market operations can be taken: over time, such operations have therefore become more dominant

as a policy implementation tool. With Singapore firmly plugged into world financial markets and given free capital mobility, the foreign exchange and money markets which developed in tandem to accommodate these flows have provided MAS with a natural medium for monetary intervention. Since the 1980s, MAS has used foreign exchange swaps as the main instrument to regulate the level of liquidity in the banking system, complemented by uncollateralised borrowing from and lending to banks.

Markets for these instruments developed spontaneously to meet demand, but MAS's participation in these markets has probably had the effect of reinforcing their depth and liquidity. The rapid growth of the S\$ money and foreign exchange markets provided MAS with more liquid means to effect monetary policy than did the traditional instruments (Table 1).

During the course of a day, banks' cash balances with MAS are affected by various transactions among the banks, MAS and the public sector. The transactions which affect domestic liquidity conditions include changes in banks' cash holdings, the net amount of Treasury bills and other Government securities issued, financial transactions of the Government, foreign exchange transactions, etc. In the day-to-day

Table 1  
**Estimated size of Singapore money market**  
In millions of S\$

End of Period	Interbank market*	Bills discounted or purchased	Treasury bills outstanding	Total
1987	9,271	2,175	2,780	14,226
1988	8,833	2,693	2,360	13,886
1989	15,166	3,010	1,900	20,070
1990	18,438	3,416	2,070	23,924
1991	12,058	4,134	3,420	19,662
1992	11,936	4,100	4,940	20,976
1993	17,402	4,305	4,990	26,696
1994	28,411	4,301	5,000	37,712
1995	30,927	4,668	5,750	41,345
1996	33,555	5,765	5,990	45,310

\* Amounts due from banks in Singapore.

Source: MAS Monthly Statistical Bulletin.

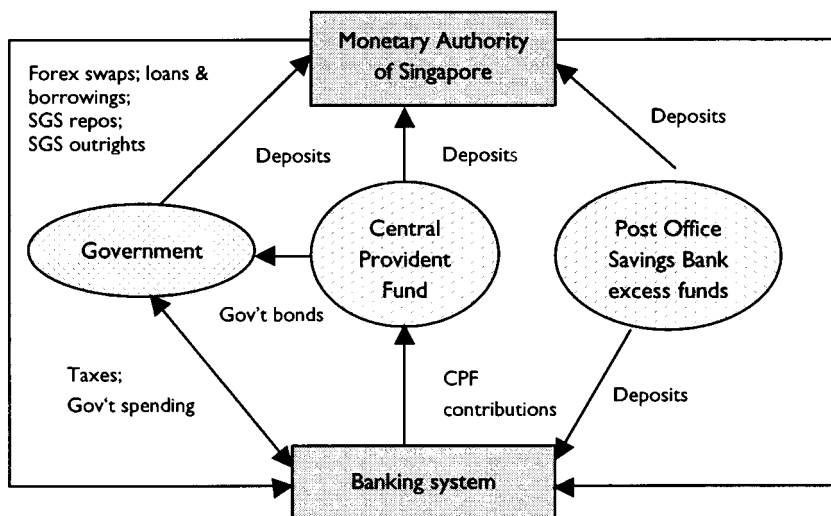
monetary management, MAS monitors money market rates closely as an indication of orderly market conditions. It helps smooth out large fluctuations via the addition/withdrawal of funds via foreign exchange swaps and loans/borrowings. Generally, MAS is in a position of supplying funds to the market as prudent fiscal management by the Government usually leads to a transfer of public sector surpluses from the banking system to MAS. (Chart 2).

Foreign exchange swaps for same day value are transacted in the morning to allow sufficient time for settlement while borrowings and loans can be done throughout the day. Uncollateralised loans are usually transacted on an overnight or short-term basis, while term loans are less frequent. The volume of loans transacted is subject to credit lines. Of course, sound banking supervision to ensure that banks operating domestically are sound will enhance the use of this instrument. The interest rate which is most immediately influenced by MAS's money market operations is the overnight interbank rate. Changes in this rate will feed through to other interbank rates, with the one-month rates still relatively sensitive, while longer-term rates are less so. There are no specific targets for the money supply or interest rates. On a longer-term basis, MAS seeks to maintain money market conditions that complement exchange rate policy in order to sustain non-inflationary economic growth.

The Singapore Government securities market is small because the Government runs budget surpluses and does not need to borrow from the market. The total outstanding amount of Government securities issued to the market as of end-1997 was only S\$ 21.8 billion, compared with a stock of M3 money of S\$ 152 billion. Nevertheless, it has sufficient liveliness to allow MAS to use auctions (on behalf of the Government) and secondary market trading and repurchase operations to add or withdraw liquidity.

Although monetary policy is implemented mainly through money market operations, MAS still relies on direct credit controls where appropriate. For example, in May 1996, in response to surging residential property prices propelled by the availability of easy credit, MAS imposed a limit on financing residential properties of 80% of the cost of a property, compared with the common practice of 100% financing. The measure succeeded in slowing the rapid increase in property prices and prevented the formation of what could have been a property asset

Chart 2  
**Flow of funds in Singapore's monetary system**



bubble. As of early 1998, property price declines in Singapore in the wake of turmoil in financial markets had been relatively small and non-performing property loans of the banking sector had remained modest.

### **Transparency and signalling**

There is no single rate such as a discount or repo rate which MAS changes to signal its policy intentions. Although it is common knowledge that MAS manages the S\$ exchange rate based on a trade-weighted basket, neither the weights in the basket nor the targeted trade-weighted band are made public. However, the general thrust of MAS's intentions with regard to monetary and exchange rate policy is disseminated to the market through occasional policy pronouncements by senior central bank officials. Comments of Government ministers are also scrutinised by market participants, although such statements may have been unplanned or off-the-cuff answers to questions. Otherwise,

banks and other financial institutions would normally monitor movements in exchange and interest rates to draw conclusions about whether MAS is changing its policy. There is no speculative market build-up in the run-up to meetings where changes in policy are announced, e.g. the FOMC meetings in the United States or the Bundesbank Council meetings in Germany.

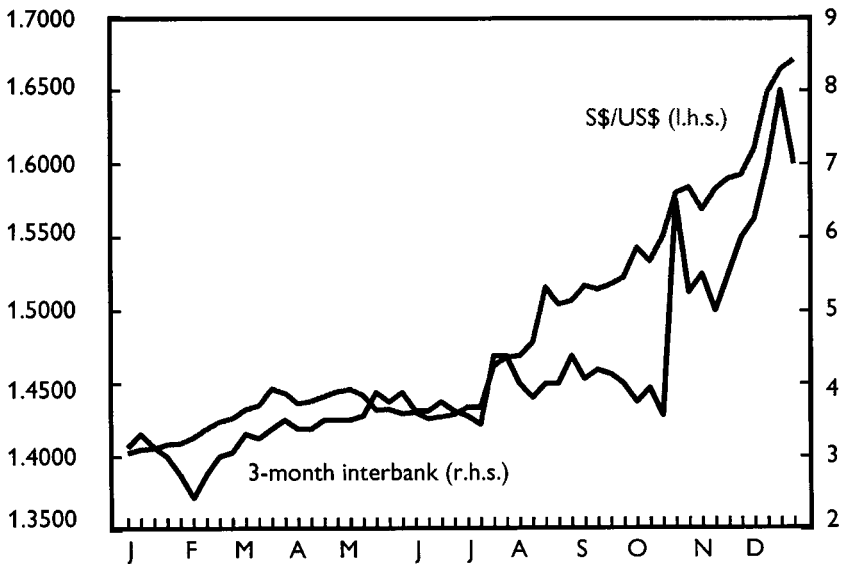
Implementing policy revisions gradually through market mechanisms as opposed to announcing quantum changes in key variables allows to gauge the effectiveness of policy changes and, if necessary, fine-tune the stance of policy. This would not be possible if a target exchange or interest rate were to be made transparent to the market. Any deviation from the targeted rate would then have to be explained satisfactorily to the market for the central bank to maintain its credibility. If the official target were to be disputed by the market, the debate would be entirely public. Holding up a target disputed by the market is to invite being shot at in the markets, as “notorious” leveraged funds have demonstrated. Hence, it is also a moot point whether the announcement of a targeted rate to the market would actually help in policy implementation. A difficult period was encountered for several months in 1993, when interbank interest rates in Singapore sank to zero and the S\$ exchange rate surged due to massive capital inflows in the run-up to the Singapore Telecom initial public offering of shares. Allowing a still stronger exchange rate would not have been appropriate policy-wise, but it was unlikely that the market would have heeded official calls for a weaker S\$. The low-key style of policy implementation has served MAS well thus far, and there has been no pressure from the market for more transparency in revealing MAS's policy intentions.

## **Recent developments in monetary management**

In the second half of 1997, amidst the financial market turmoil in Asia, the S\$ foreign exchange and money markets were not spared the volatility brought about by the significant depreciation of the currencies in the region. Like other Asian currencies, the S\$ weakened, falling against the US\$ by 14.8% between end-June and end-December 1997. Singapore dollar interest rates also rose, with the three-month interbank rate climbing from  $3\frac{5}{8}\%$  to 7% over the same period (Chart 3).

Chart 3

**S\$/US\$ exchange rate and three-month interbank rate, 1997**



Throughout the period of high volatility, MAS's intervention operations in the foreign exchange and money markets have continued to be aimed at promoting monetary and market stability. Apart from some short-lived spikes, interest rates have risen gradually in response to the downward pressure on the S\$ exchange rate. MAS maintained its policy stance of ensuring adequate but not excessive liquidity in the money market.

Notwithstanding market opinion which prescribed a large S\$ depreciation given the negative spill-overs from other Asian economies and the need to preserve export competitiveness, the S\$ depreciated only to a limited extent as a fitting response to changes in the external environment. The Government addressed the issue of cost competitiveness at a fundamental level, instituting a package of cost and tax cutting measures. This combination of basic re-examination of Singapore's cost position and adjustments to the exchange rate was

similar to that used during the recession in the mid-1980s and, as an approach towards confronting economic stress, again proved reliable.

MAS's modus operandi in the currency markets remained unchanged and proved effective. The low-key intervention operations succeeded despite, or perhaps because of, the non-transparent procedure. While the intervention process seems indeterminate, the pledge to maintain confidence in the S\$ is clear. The Chairman of MAS, who is also Deputy Prime Minister, actively reaffirmed the commitment to support the domestic currency against speculation and unwarranted depreciation in the context of Singapore's strong fundamentals.

## **Conclusion**

With an exchange rate-centred monetary policy, MAS's operations in the money market have been aimed at ensuring adequate but not excessive liquidity in the banking system, rather than signalling MAS's intentions with respect to interest rate policy to the market. In periods of intense exchange rate pressure MAS has been prepared to allow interest rates to move significantly in response to market flows. The Singapore Government's prudent fiscal policies and commitment to preserving low inflation have enabled MAS to concentrate on price stability and the pursuit of sustained non-inflationary growth.

In implementing exchange rate and monetary policies, the progressive shift from administrative means to market operations has allowed MAS to react promptly to economic and financial developments so as to steer the economy in the desired direction. Given the potential destabilising effects of sudden large capital flows as shown by recent history, one cannot overemphasise the importance of having the latitude to act promptly and on a sufficiently large scale, together with a sound banking system.