An Empirical Analysis of Singapore's Monetary and Exchange Rate Policies in the 1990s

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1. Introduction

"If the nations of Asia are to survive the current turmoil in their financial markets, we're going to have to take bold actions, individually and collectively. The first order of business is to put our fiscal and monetary houses in order. This may mean acknowledging bad bank debts, hiking interest rates in order to slow currency speculations, and reducing budget and trade deficits. It will mean requiring our banks and companies to adopt the standards of transparency in financial reporting that the new global economy and financial markets demand".[1]

Prime Minister Goh Chok Tong of Singapore views of the currency crisis facing Southeast Asia are that "the Market is not an enemy. It is a faceless disciplinarian. But unfortunately the disciplinarian has now over reacted. So, it has to be calmed".[2] The need for an entity to calm the markets when needed may have been a reason for the establishment of the Monetary Authority of Singapore (MAS) in 1971. Starting the late 1960s the government of Singapore aimed to develop the country into a financial center. Up to then, the various functions related to banking and finance had been performed by a number of government departments and agencies – an arrangement which had worked well until the government felt it necessary to bring these bodies under a unified direction and to encourage the development of professional expertise. The MAS was thus establishment to perform

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□ Nanyang Business School, Central Banking Policies Research Unit, Singapore.
[1] Ramos (1997).
[2] *The Straight Times* (1998b).

all the functions of a central bank except issuing currency, which in Singapore is done by the Board of Commissioners of Currency.

As a statutory board, the MAS is owned and controlled by the government, and the Minister of Finance chairs its Board of Directors.[3] As the central bank of the Republic of Singapore, the main objectives of the MAS are to conduct monetary and exchange rate policies appropriate for stable and non-inflationary economic growth; to maintain conditions conducive to a sound financial services sector; to act as banker to, and financial agent of, the government; to foster sound working relationships with other central banks, international financial institutions, and public and private institutions in Singapore.

Through its control over monetary policy instruments and its various other powers, the MAS has played a key role in the financial development of Singapore. To stimulate the growth of Singapore as a financial center, the MAS has implemented various policies such as encouraging the entry of international institutions to engage in offshore banking and removing exchange controls. It has also promoted new financial activities by encouraging the establishment of specialized institutions – merchant banks, money brokers and financial futures dealers, for example. Moreover, it has encouraged the introduction of new financial instruments such as the Singapore dollar NCD, as well as floating rate and fixed rate certificates of deposit. Fiscal measures such as tax incentives have also been implemented to stimulate offshore operations in banking, finance and insurance. The results have been gradual but impressive: by 1994, for example, Singapore became the world's fourth largest foreign exchange trading center despite its small size.

As far as monetary policy is concerned, the MAS, over time, has used traditional tools such as open market operations, discount rate and liquidity requirements/reserve ratios, as well as moral suasion to regulate the economy. However, the choice and effectiveness of monetary policy instruments in Singapore should, and have been substantially shaped by the structure and circumstances of the economy and the country: Singapore's small land area and population have limited the range of production possibilities and the size of the domestic market – there is a need to import even the most basic materials and

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[3] In late December 1997, Deputy Prime Minister Lee Hsien Loong took over the chairmanship of the MAS.

the country is dependent on export in order to pay for these materials. The result is an open trade policy with very few trade restrictions, leaving Singapore vulnerable to changes either in world prices or exchange rates as its small size limits any influence on world prices. Hence, it is crucial for Singapore to keep its import and export prices as stable as possible.

As dread, uncertainty and just plain panic sweeps through Asian markets, Singapore's serenity speaks volumes. How could this vulnerable little island be "happy"?[4] PM Goh says he is "quite happy to let the market decide" Singapore's exchange rates, and he shrugs off the recent turmoil as a "hiccup".[5] The openness of the Singapore economy, however, does mean that domestic monetary instruments like money supply and interest rates may not have as much of a direct influence on domestic inflation as the exchange rate. In addition, the lack of control on capital flows, a small economic base and a high savings rate have all encouraged Singapore's government and private sector to diversify their asset holdings across countries and currencies to spread the risk. This makes it difficult to target either the money supply or the interest rates in Singapore. As a result, MAS seems destined to try to influence the exchange rate and leave the achievement of domestic objectives to other policies like fiscal policy.

1.1. Exchange rate policy

In principle, the purpose of such policy is to achieve an optimum exchange rate which is neither too high so as to hinder exporters, nor too low so as to increase import prices and hence the cost of living. To do so, the MAS manages the exchange rate of the Singapore dollar based on a trade-weighted basket of currencies of major trading partners and competitors. The basket of exchange rates reflects the sources of imported CPI inflation and competitors in export markets. There is no official peg for the value of the currency and MAS can only influence the value of the Singapore dollar by intervening in the exchange market itself.

Ng (1996) believes that "the role of the MAS in the process of liquidity cushioning by banks is to ensure that the money market to-

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[4] Newsweek (1997, p. 28).
[5] Ibidem.

gether with the foreign exchange market operates smoothly within a tolerable band of fluctuations. If there appears to be disorderly conditions in the money market or foreign exchange market, the MAS will intervene to restore order in the markets by using the monetary instruments at its disposal".[6] The Singapore dollar tends to appreciate because the deposition of government budget surpluses with MAS[7] and the institutional arrangement of the Central Provident Fund (CPF)[8] have the effect of reducing liquidity. Interventions by MAS to buy foreign exchange (largely US dollars) in exchange for new Singapore dollars created by bank reserves is crucial as it re-injects liquidity into the system. This enables the Singapore dollar to float within an undisclosed target band.

The success of Singapore has been the subject of many studies. Khan (1981) analyzed the demand for money in Singapore and found it quite similar to those of other developed countries. He also obtained empirical evidence that the demand functions for narrow money were stabler and hence should be incorporated in predicting money demand. He further ran some simple simulations to "highlight the difference it makes in the setting of monetary policy when proper attention is paid to the underlying dynamics of the system".[9] This is especially useful if the government is interested in how the money demand would change over time and hence, the usefulness of monetary policy.

Abeysinghe and Lee (1992) tried to determine if the Singapore's strong currency policy has pushed the Singapore dollar out of its

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[6] Ng (1996, p. 261).

[7] It has been the Singapore government's philosophy to incur budget surpluses with the aim of building up huge amounts of external reserves to prepare for rainy days. The fiscal discipline adhered to closely has resulted in annual budget surpluses throughout the last three decades with the exception of 1987. In addition, statutory boards and government-linked corporations also generate huge surpluses and profits, which are appropriated by the government to be placed as government deposits with the MAS. Such appropriations, therefore, represent another net withdrawal of funds from the financial system. For further clarification, see Ng (1996, p. 259).

[8] Under the CPF scheme, each employee and his employers have to contribute on a monthly basis a certain percentage (20% effective July 1994) of the employee's monthly salary to the CPF board, with the primary purpose of providing security for old age. The contributions are then placed immediately with the MAS as advanced deposits for the purchase of government securities. This implies constant withdrawals of private sector funds from the financial system, leading to a "substantial" amount of liquidity drain (Ng 1996, p. 258).

[9] Khan (1981, p. 5).

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long-run equilibrium path. They did so by looking at the relationship between Singapore dollar and its purchasing power parity, as well as through examining bilateral nominal exchange rates of Singapore with Malaysia, US, UK, Japan and West Germany. They concluded that only the Singapore-US rate was in agreement with the Purchasing Power Parity (PPP) theorem, but even then, the policy makers seemed to only look at the Consumer Price Index (CPI) in targeting the exchange rate rather than the Wholesale Price Index (WPI). Assuming that PPP is the long run equilibrium, they showed that Singapore's strong dollar policy had not created a disequilibrium exchange rate. However, the adjustment towards PPP had taken place more so through price adjustments than exchange rate adjustments.

Simkin (1984) tried to determine if monetarist theory had any impact on Singapore. He performed several simple monetarist tests. One interesting test was that of money supply and the exchange rate. He found that to control the exchange rate, money stocks had to be manipulated to ensure adequate liquidity so as to promote stable growth of real income. This result is, in fact, consistent with the findings of the current study.

The purpose of this paper is to re-examine the conflict between monetary stability and exchange rate objectives as done by other researchers almost two decades ago.[10] We aim to find out which policy goal the MAS should be/has indeed been more interested in.

2. Methodology and data

In this Section, we introduce a simple model of the exchange rates, similar to one used by Branson (1981) to illustrate the conflict between exchange rate policy and monetary stability.

The basic long-run money market equilibrium model,

$$M/P = m\{r,y\} \tag{1}$$

in which r is the interest rate as determined by the marginal product of capital,[11] y is the level of real income fixed by the general equilib-

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[10] For example, see Branson (1981) and Sumi (1980)

[11] This neoclassical inverse relationship, arrived at on the basis on the substitutability in consumption and production between capital and labor (and other factors of production), has been subject of debate in production theory. Robinson (1970,

rium of the economy, M is the money stock and P is the deflator, assuming a closed economy one can conclude that the rate of inflation equals the growth rate of the money supply. The real world is, however, more complicated, and Singapore is certainly not a closed economy. We thus need to consider an open economy with either one or two commodities first, followed by the inclusion of exchange rate expectations scheme to complete the picture.

2.1. Small, open economy with one-commodity

If there is only one traded commodity and expectations of exchange rates are static, two other relationships are needed to complement the basic model: the PPP equation

$$P = eP^* \qquad (2)$$

and the open-interest arbitrage condition

$$r = r^* \qquad (3)$$

where P^* is the world price level, e is the home-country exchange rate (units of home currency per unit of foreign exchange) and r^* is the world interest rate.

Assuming that P^* and r^* are exogenous, y is determined by aggregate supply conditions, and M is controlled by home monetary authorities, equations (2) and (3) may be converted into an exchange rate equation of the form

$$M = eP^*m\{r^*,y\}. \qquad (4A)$$

Taking natural log on both sides of (4A) yields

$$\ln(e) = \ln(M) - \ln(P^*) - \ln(m\{r^*,y\}). \qquad (4B)$$

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p. 309), for example, showed that "there is no meaning to be given to a 'quantity of capital' apart from the rate of profit, so that the contention that the 'marginal product of capital' determines the rate of profit (interest) is meaningless". Cf. also Pasinetti (1966). Neoclassical economists have defended the traditional theory (Burmeister and Turnovsky 1972) and counter-attacked the alternative capital theory (Hahn 1992). While we acknowledge that with the exception of the one-commodity model, the inverse relationship between the marginal product of capital and the rate of interest is no longer firmly established, and warn other researchers to take note of this fact, we continue with Branson's model nevertheless. For more detailed analysis, see Kurz and Salvadori (1995, chapter 14).

This equation, similar to the one developed by Frenkel (1980), suggests a monetary approach to exchange rate determination. Combining natural log of (2) with equation (4B) results in

$$\ln(P) = \ln(e) + \ln(P^*) = \ln(M) - \ln(m\{r^*,y\}). \qquad (5)$$

As noted by Branson, a policy to stabilise the domestic price level would require $de/e = -dP^*/P^*$ and $dM/M = dm/m$. If P^* is constant, any policy that set $dM/M=dm/m$ as y and r^* vary would hold both e and P constant. If P^* varies, as in the case of Singapore, variations in e would hold P constant.

Money market equilibrium requirements will provide the pressure on e to offset variation in P^* as shown in (4). With variations in M offsetting movements in m, all the change in the excess demand for money will come from P^*, i.e. an increase in P^* will raise demand for domestic nominal balances: market participants will start to sell foreign assets to acquire domestic money, causing exchange rate to fall. This fall in e will just offset the rise in P^*, hence stabilising P.

So, if the monetary objective is to stabilise the domestic price level, P, the solution would be to vary the nominal money stock, M. This would offset deviations in real money demand which have resulted from movements in r^* and y, and would allow the exchange rate to fluctuate in order to offset the variation in P^*.

Regardless of what the monetary objectives are, one point is clear from equation (4): steady money growth is not likely to stabilise either the price level or the exchange rate in an open economy. If the nominal money stock were 'stable', that is $dM/M = 0$, the above stabilisation process would not have been possible since there would be variation in real money demand due to the movements of the exogenous variables r^* and y.

2.2. Two-commodity model

The previous one-commodity model is satisfactory if the objective is to stabilise the domestic price level. When the targets are relative prices of traded and non-traded goods, or exports and imports, we have to consider at least a two-commodity model in which a more suitable money-market equilibrium is

$$M/P^\alpha (eP^*)^{1-\alpha} = m\{r^*,q\} = M/Q, \qquad (6)$$

where P is the export price, eP^* the import price, income is derived from production of the exportable q, and the domestic CPI is $Q = P^\alpha (eP^*)^{1-\alpha}$. Variation in Q is given by

$$[dQ/Q = \alpha dP/P + (1 - \alpha)\, de/e + dP^*/P^*]. \tag{7}$$

Monetary authorities' target for real exchange rate (eP^*/P), may be expressed as

$$dP/P = \theta\,[de/e + dP^*/P^*], \tag{8}$$

and the resulting variation in Q becomes

$$dQ/Q = [1 - \alpha\,(1 - \theta)][de/e + dP^*/P^*]. \tag{9}$$

Together with (6), the monetary variation that will achieve this movement in Q would be

$$dM/M = [1 - \alpha\,(1 - \theta)][de/e + dP^*/P^*] + dm/m. \tag{10}$$

This equation describes the movement in the money stock that will achieve the desired movement in relative price P/eP^*, granted exogenous variation in r^*, P^* and q. Given the fluctuation in r^*, P^*, q and M, excess demand for money will be eliminated by movement in e. The main idea is that in an open economy, stabilisation of the money stock will not stabilise the domestic price level or the real exchange rate as P^*, r^*, q, or y vary. Whichever model is selected, one is forced to choose between monetary stability or exchange rate objectives.

2.3. Inclusion of exchange rate expectations

Dornbusch (1976) combined equations (1) and (2) to get

$$M/eP^* = m\{r,y\}. \tag{11}$$

The existence of risk-neutral speculation will transform the open arbitrage condition (3) into

$$r = r^* + ee, \tag{12}$$

where ee is the expected rate of change in the exchange rate. If we assume that the exchange rate will adjust to its long run equilibrium value

$$e', ee = \theta\,(e' - e). \tag{13}$$

Combining (11) – (13), we have the money-market equilibrium condition

$$M = eP^*m[y, r^* + \theta\,(e' - e)]. \tag{14}$$

Using subscripts to denote partial derivatives, and indexing the initial values of e, P^* and m to unity, the movement in e is given by

$$de = \{dM - dP^* - [m_y\, dy + m_r\, (dr^* + \theta de')]\}/(1 - \theta m_r). \tag{15}$$

This is the same as equation (4B) except for the addition of the expectations 'multiplier' which is less than unity, since $m_r < 0$. Therefore, the inclusion of exchange rate expectations does not change the results in any significant way.

3. Empirical evidence

The data we use to test the model is collected from the *International Financial Statistics*, on an annual basis from 1979 to 1996 with 1990 as the base year (IMF). Interest rates are money market rates and prices of exports are indexed. We assume the foreign country to be the United States, hence, all foreign variables reflect US data.

We begin by estimating the money demand function before looking at the estimates of the price equations.

3.1. Money demand

Equation (1) is the standard money demand function which is frequently estimated in the form

$$\ln(M/P)_t = \alpha_0 + \alpha_1 \ln(y)_t + \alpha_2\, r_t + \varepsilon_t, {}^{[12]} \tag{16}$$

where ε_t is a random disturbance term, α_1 is the income-elasticity of demand for real balances, α_2 is the 'semi-elasticity' with respect to the interest rate, M refers to M2, r is the interest rate, y the real gross domestic product and P the GDP deflator.

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[12] Sumi (1980).

The value of DW test as reported in Table 1 suggests possible serial correlation. Breusch-Godfrey Serial Correlation LM Test results further reject the null hypothesis of no auto-correlation at 5% level of significance (F = 4.211 with probability 0.082; Obs R^2 = 4.252 with probability of 0.053). After correcting for serial correlation, the results (with t-ratios in parentheses) are more satisfactory. The estimates show that money demand for Singapore is normal since the coefficient of interest rate is negative and that of income is positive. It is evident that income elasticity has dropped from near unity for the period 1967-78 to 0.41 for the period 1979-96. In addition, the interest rate coefficient shows that variation in interest rate will change the demand for money by only 0.0011% instead of 4% over the earlier period.

TABLE 1

DEMAND FOR MONEY

	α_0	α_1	α_2	R^2	DW	AR(1)
1967-78[a]	0.35 (0.9)	0.94 (26.0)	-0.04 (-2.8)	0.988	1.23	
1979-96 no correction for auto-correlation	-16.251 (-4.414)	1.712 (209.212)	-0.013 (-61.219)	0.992	0.971	
After correction for auto-correlation	14.321 (0.1212)	0.4109 (3.453)	-0.0011 (-7.921)	0.997	1.812	0.9831 (912.189)

[a] From Sumi (1980).
Source: Data collected from *International Financial Statistics Yearbook*.

3.2. *Price and exchange rate*

The home-currency price of imports is given by a PPP equation in which the world price is exogenous,

$$P^m = eP^*, \text{ or } \ln(P^m) = \ln(e) + \ln(P^*). \tag{17}$$

Comparing this equation with (2) reveals that this is only an import-price version. Assuming that the price of goods produced at home, WPI, depends on the money stock and the import price,

$$\ln(P) = \alpha_0 + \alpha_1 \ln(M) + \alpha_2 \ln(P^m), \tag{18}$$

where P is the WPI. Moreover, assuming that the export price index, P^x, depends on movements in the WPI and on world prices which have been converted into home-currency,

$$\ln(P^x) = \beta_0 + \beta_1 \ln(P) + \beta_2 \ln(eP^*). \tag{19}$$

Equations (18) and (19) were estimated by Sumi for the period 1973.I to 1979.II. We have further tested this for the period 1979 to 1996. Additionally, we have tried a number of lag specifications on both equations and have reported the results in Tables 2 and 3.

TABLE 2

ESTIMATES OF THE WPI EQUATION

Equations		α_0	α_1	α_2	R^2	DW
(18-1)	No lags	6.312 (3.654)	-0.321 (-197.021)	0.612 (9.411)	0.671	1.112
(18-2)	2-period average	6.201 (3.981)	-0.401 (-192.211)	0.698 (9.910)	0.701	1.298
(18-3)	3-period average	6.195 (3.912)	-0.413 (-166.208)	0.731 (10.101)	0.733	1.363
(18-4)	4-period average	6.808 (3.979)	-0.141 (-173.705)	0.819 (11.653)	0.801	1.615

Source: *International Financial Statistics Yearbook*.

TABLE 3

EXPORT PRICE EQUATION

	β_0	β_1	β_2	β_3	R^2	DW
Before Koyck transformation	5.215 (10.056)	0.389 (7.656)	-0.669 (15.401)		0.517	1.002
After Koyck transformation	3.013 (0.819)	0.096 (2.009)	-0.408 (-0.897)	0.018 (503.602)	0.798	3.110

Source: *International Financial Statistics Yearbook*.

3.2.1. *WPI index equation*

This equation is found to be stationary at 5% level of significance. Moving-averages of up to four time periods are used in this equation

to find the best fit. After examining the results, it is clear that the effects of both money stock and import price are significant. M1-version of this equation was tested as well, but M2 yielded better results and is thus reported.

We noticed an interesting phenomenon with regard to this equation: the coefficient of money stock, α_1, has a negative sign, and this is against conventional wisdom. Normally, the money stock moves in the same direction as the price level. One possible reason to explain this is an initial liquidity drain within the system as the MAS tries to re-inject into the economy through exchange rate intervention by purchasing US dollars. This has the effect of raising the money stock while reducing the domestic price level at the same time.

In addition, even though the Durbin-Watson statistics may not be quite satisfactory, as the lags increase from zero to three time periods, the effect of money stock increases. This could be due to policy time lags. Moreover, both R^2 and DW improved as the number of lags increased. Hence, it is safe to conclude that domestic prices are affected by import prices, and this is the same conclusion Sumi reached for the much earlier period.

3.2.2. Export price equation

We found equation (19) to be stationary at the 5% level of significance. After having tried various lags of moving-averages so as to find the best fit, we concluded that the best fit is for the regression which incorporates a Koyck partial-adjustment process:

$$\ln(P^x)_t = \beta_0 + \beta_1 \ln(P)_t + \beta_2 \ln(eP^*)_t + \beta_3 (P^x)_{t-1}. \tag{20}$$

As shown in Table 3, the elasticity of the export price index with respect to WPI is 0.096, and with respect to world prices, it is −0.408. Both equations (19) and (20) show a negative relationship between the price of exports and world prices. In (20), for example, for every unit increase in world prices, Singapore export prices fall by about 0.408. This means that exchange rate policy has indeed been effective in keeping domestic prices low by preventing imported inflation. However, is this price reduction sufficient enough such that exports are not adversely affected by the strong Singapore dollar? We will address this next.

3.3. Effects of managed floating

Lee (1984) found that Singapore was able to perform well during the devaluation of the UK pound and the subsequent flotation and two devaluations of the US dollar. He postulated that Singapore was able to maintain export competitiveness in the 1970s and 1980s by influencing its inflation rate so as to control appreciation. He concluded that the danger of appreciating Singapore dollar hampering exports had been overstated.

It is true that Singapore relies heavily on its exports, but it also imports virtually all of the raw material necessary for production. The negative effects of currency appreciation on exports may indeed be more than offset by the positive effects on imports. We aim to test this hypothesis here. To show the competitiveness of Singapore's export sector, we use the Nominal Effective Exchange Rate (NEER) to determine Real Effective Exchange Rate (REER). Thus REER = NEER (P_d/P_f), where P_d is CPI of Singapore and P_f is foreign consumer prices (CPI for the US). If domestic inflation rate is less than the foreign inflation, then REER is less than NEER and the negative effect of Singapore dollar's appreciation on export competitiveness would be lessened.

Figure 1 shows that over the years, there has not been much loss of export competitiveness. In fact, after 1990, REER is actually less than NEER, and the gap had started to narrow well before 1990. We thus concur with Lee's analysis; the appreciation of the exchange rate does not appear to have reduced the competitiveness of Singapore's exports.

4. Conclusions and discussion

The results of our empirical study show that the money demand function seems to fit Singapore's context, and all prices are significantly sensitive to the exchange rate over the period 1979-93. These conclusions coincide with those of Branson's and Simkin's. These results have two implications: first, we should include the exchange rate in the deflator for the money stock. This was important in our derivation of the exchange rate equations earlier. Next implication is that

the movements of exchange rate do affect the domestic price level and the terms of trade. This may explains MAS's focus on exchange rates rather than other monetary objectives.

FIGURE 1

NOMINAL AND REAL EFFECTIVE EXCHANGE RATES
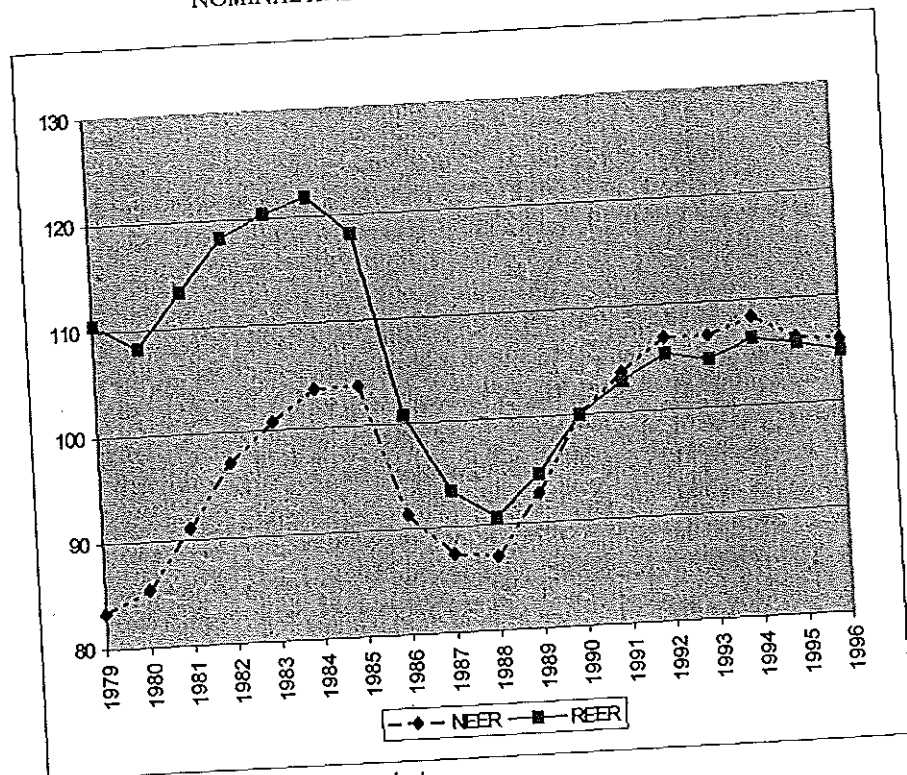
Source: International Financial Statistics Yearbook.

We also found that the domestic price level has an unconventional negative relationship with the money stock. We guessed this to be the result of MAS's efforts on improving Singapore's liquidity situation. When MAS re-injects liquidity into the system, the money stock increases while domestic price level falls due to the abatement of imported inflation.

Yet another interesting result was that the export price has a negative relationship with world prices. This fact suggests that the ex-

change rate policy has been effective in preventing imported inflation in Singapore.

Other Southeast Asian countries, China, Vietnam, and Malaysia, for example, have been doing well recently, and one day keeping the Singapore dollar strong may no longer be the only viable policy. Moreover, some studies have shown that any recent inflation in Singapore has been more due to the domestic sector (asset inflation, for instance) rather than overseas factors. Perhaps the MAS should focus on other policies such as wage control and fiscal policies to keep the costs of production low and to maintain the competitiveness of Singapore's exports.

Well, it has indeed! That Singapore is keeping its balance is no surprise. For 20 years, most of Southeast Asia grew as if the good times would never end. But not Singapore: its planners always took account, sometimes obsessively, of the dangers over the horizon. Now the troubles have arrived, the preparations are in place. It is a Singaporean trait to look for trouble before it finds you. While other governments from Kuala Lumpur to Hong Kong watched soaring property prices benignly until this summer, Singapore took action. In early 1996 the government ordered banks to reduce their real-estate loans, slapped a 100% capital-gains tax on anyone selling property within three years of purchase and reduced the amount of land available to private developers.

Singapore also avoided the crippling current-account deficits that have plagued Thailand, Malaysia and Indonesia. During the years of easy foreign money, these bigger neighbors raced to finance self-indulgent projects, from the world's tallest buildings to a national aerospace industry. All the while, Singapore stuck to yet another pre-occupation: efficiency. The tiny island has long boasted Southeast Asia's best telecommunications, port, airport and rapid transit. During fat times and lean, the government has concentrated relentlessly on improving these basics.

Then there is the national religion in Singapore: strategic planning. In the early 1980s Singapore Inc. began abandoning lower-end manufacturing (televisions, VCRs) for more "value-added" electronic products. While the financial markets were sinking in recent months, US demand for made-in-Singapore silicon wafers, semiconductors, disk drives and laser-disk players began to perk.

Naturally, Singapore cannot escape all the troubles of its neighborhood. Its banks have lent aggressively in Southeast Asia, and its

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