5.0 Conclusion

The paper focuses on one principle issue: the impact of real exchange rate uncertainties on exports. The findings of this paper show that real exchange rate uncertainties (as represented by standard deviation) have a negative impact on real exports.

Table 36: Summary of Findings

	Standard Deviation
Commodities Equation	
Short-run effect	-0.0610*
Long-run effect	-0.0695*
Minerals Equation	
Short-run effect	-0.0208
Long-run effect	-0.0040
Manufactures Equation	
Short-run effect	-0.0910***
Long-run effect	-0.0413*
Exports Equation	
Short-run effect	-0.0370**
Long-run effect	-0.1267*

Where *significant at 80% confidence level
**significant at 95% confidence level
***significant at 99% confidence level

The responsiveness of exports to RER uncertainties varies from 0.02% to 0.13% depending on the categories of exports. From Table 36, minerals are the least responsive and the insignificant standard deviation variable concludes that RER uncertainties have zero impact on the exports of minerals. The insignificance could be due to the contract agreements whereby quantity and prices have already been predetermined. Therefore, the fluctuations of the nominal exchange rates would have an insignificant impact on the volume of exported minerals.

Commodities and manufactured exports are relatively more responsive to RER uncertainties. However, for manufactured exports, RER uncertainties have a

slightly greater impact in the short-run than in the long-run. In the long-run, firms would have insulated themselves from the exchange rate volatility through hedging activities. Hence, the impact of RER uncertainties is likely to be muted in the long-run.

Nonetheless, the findings of this study suggest that RER uncertainties have a negative impact on the production schedule of risk adverse agents. RER uncertainties manifested through large and unpredictable fluctuations of the nominal exchange rate makes it difficult for agents to plan and anticipate the changes in the cost of production. This could result in production falling below the potential level as risk adverse agents become overly conservative in planning the future production schedule.

5.1 Policy Implications

Before making any policy recommendations, the sources of nominal exchange rate volatility, which have implications on RER uncertainties would first have to be identified. Shocks which causes uncertainties could be due to external and domestic factors. Speculation in the currency market might fuel gyrations in exchange rates. The destablising speculation would tend to accentuate the deviations of the exchange rate movements from its long-run equilibrium value. On the other hand, domestic imbalances could also cause the exchange rates to diverge from its long-run value. For example, movements of the domestic prices and costs that diverge from world levels or the productivity differential between the tradable and non-tradable goods sector compared with partner countries. As a result, the country's ability to compete internationally is

at risk and the efficiency of domestic resource allocation is impaired by the distortions in the structure of relative prices.

However, this paper does not attempt to identity the sources of RER volatility. RER volatility was predetermined (an exogenous factor) and therefore, this section would attempt to address both external and internal disturbances. Since findings show that RER uncertainties dampened trade, policies should be designed to stablise or minimise the movements of the RER.

5.2 Is Pegging the Best Option?

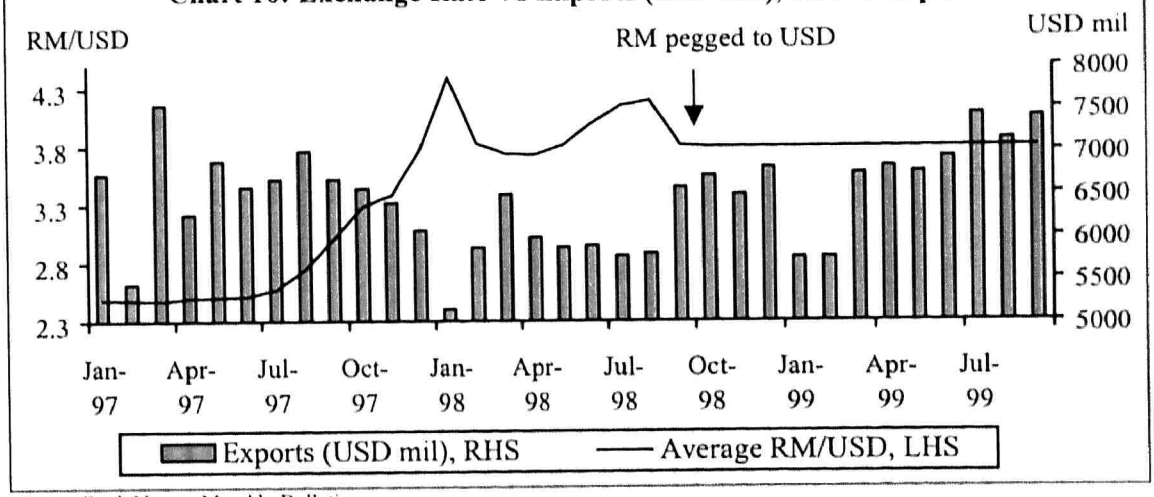
Is pegging the best option? This was the question many economists asked when the Malaysian government implemented exchange rate controls. Evidence shows that pegging provided exchange rate stability in the tradable sector and hence increased export earnings (See Chart 10). Maintaining the peg to the US dollar at the current rate have generated a robust response of exports.

Advocators of fixed exchange rate argued that the pegged regime foster investment by reducing policy uncertainties and lower interest rates. Though there is a strong link between fixed exchange rates and low inflation, the elimination of the adjustment mechanism can increase protectionist pressures, distort price signals in the economy and prevent the efficient allocation of resources across all sectors.

Furthermore, a study conducted by the International Monetary Fund (IMF) found that while an export-led recovery (complemented with fiscal stimulus)

was desirable during such circumstances, there were significant risks in allowing the undervaluation to persist beyond the point of providing an additional boost to exports. Given the openness of the Malaysia's economy, the risk it faces would be the surge in demand for Malaysia's exports could lead to economy-wide price pressures.

Chart 10: Exchange Rate Vs Exports (USD mil), Jan 97-Sep 99



Source: Bank Negara Monthly Bulletins

Although from Chart 10, it is clear that the volatility of the Ringgit had affected exports in January to October 1998, the competitiveness gains from the undervalued currencies tend to be short-lived and the absence of exchange rate adjustments could exacerbate domestic price pressures. Therefore, the failure to adjust the peg at first signs of strong and broad-based recovery in the export sector could potentially lead to an erosion in competitiveness through the adjustments in domestic prices. In addition, presistent undervaluation of the Ringgit could also invite complacent behaviour with long-term implications, as incentives to improve competitiveness through productivity-enhancing measures remain weak.

While pegging provides stability to the exchange rate, there are many long-term risks associated with the pegged regime. Although, it is evident that Malaysian exporters have benefited from the stable exchange rate, the government should not forget to address the structural shortcomings that have also contributed to the misalignment of exchange rates. Given that the competitive edge from an undervalued exchange rate cannot be sustained for long, a policy of addressing these structural flaws is needed to improve Malaysia's long-tem export competitiveness. The policy would include investment programmes and training in new technologies and incentives to shift to the production of higher value-added products. Therefore, the government should continue to provide incentives for upgrading in job knowledge (which ultimately translates to higher productivity), and promote research and development and the use of advanced technologies.

The other risk pertaining to the pegged exchange rate regime is that it is subjected to the market participants' perception of Bank Negara's commitment in defending the policy. Under the fixed exchange rate regime, Bank Negara's objective is clear and this offers little room for maneouvering. Imperfect capital mobility or asset substitutability may give some space for pursuing other objectives, but not on the prolonged basis. In practice, discretion may be exercised in choosing when, or by how much, to adjust the peg from time to time.

Resistance to adjustments after shocks to the equilibrium of the nominal exchange rate forces adjustments to take place through domestic output and price performance. In 1985-86, Malaysia experienced an adverse terms-of-trade

(t-o-t) shock which exerted downward pressure on the Ringgit. To resist this pressure, interest rates were raised, aggravating the adverse output consequences of the terms-of-trade shock. In 1993-94, Malaysia experienced strong capital inflows. These strong inflows have put an upward pressure on the exchange rate. Despite recognising that inflows could lead to an overheating of the economy, interest rates were allowed to fall sharply in order to maintain exchange rate stability. According to the IMF, these episodes suggest that a monetary policy framework based on very limited exchange rate flexibility may accentuate rather than dampen the cyclical output and inflationary effects of the types of shocks to which Malaysia is exposed.

5.3 Alternatives

Are there any alternatives in minimising the fluctuations of the exchange rate? There are indirect methods in creating a stable exchange rate environment. On of the ways would be ensuring that there is minimal domestic disturbances and domestic prices are stable. The IMF has suggested 3 alternative approaches: monetary targeting, inflation targeting and nominal income targeting.

5.4 Monetary Targeting

The monetary aggregate is a traditional anchor for a monetary policy. The ultimate target implicit in this framework is nominal spending or income. For this policy to work, the 3 conditions must first be satisfied:

- A predictable relationship between money and nominal income growth.

- A stable relationship between adjustments in monetary policy instruments and money growth. Otherwise, achieving the desired rate of monetary expansion will be very uncertain.
- A non lagged relationship between monetary growth and nominal income growth.

Evidence on the suitability of monetary aggregates as intermediate targets is mixed. Dekle and Pradhan (1997) found that demand for narrow money as well as broad money in Malaysia was stable over the long term, but also that real interest rates only exerted a significant influence over narrow money growth. In addition, the authors did not find clear evidence that money growth led to nominal income growth. The empirical evidence support BNM's use of the monetary aggregates as policy indicators rather than immediate targets. A greater attention has been paid to market interest rates and money market liquidity conditions as policy indicators.

5.5 Inflation Targeting

In the process of implementing inflation targeting, the authorities would have to specify:

- A target range for inflation. The centre of the range should correspond with the authorities' desired long-term average inflation rate and should take into account measurement biases in the price index. In determining the width of the range there is a need to strike a balance between influencing people's expectations and providing policy accountability and discipline.

- A time horizon. An important implication of inflation targeting at the 1-2 year horizon is that the direct, but temporary effects of exchange rate movements on inflation would not invoke a policy response.
- A forecasting framework. A framework that links adjustments in the medium-term policy stance and inflation developments.

The most challenging part of the implementation of inflation targeting is the technical aspect of measuring the degree of excess supply and excess demand in the economy. Coe and McDermott (1997) found that excess demand is the most important explanator of inflationary developments in Malaysia. Therefore, if the growth potential output is uncertain that makes the inflation targeting strategy less meaningful.

5.6 Nominal Income Targeting

Though this strategy is less forward looking than the inflation targeting strategy, it solves the problem of having to measure the growth of potential output of the economy. In contrast with inflation targeting policy which responses to deviations of forecast inflation from the target, nominal income target policy responds to deviations of actual nominal income from target inflation plus trend activity growth.[11]

[11] A common criticism of nominal income targeting is that national income statistics are only available after a significant delay and this could hamper policy adjustments. Therefore, targeting could be based on a combination of the consumer price index (CPI) and industrial production, or nominal retail sales, or some other more timely proxy for nominal income.

Nominal income targeting may be preferred to inflation targeting if there is considerable uncertainty in determining the level of potential output. It is argued that nominal income targeting may lead to greater inflation and output variation on average than inflation targeting as it is less forward looking. However, it is more robust than inflation targeting simply because less serious errors are made in estimating potential output than growth rate of potential output.

The 4 approaches discussed in the previous sections are avenues of creating a stable exchange rate environment. The first one curbs the exchange rate movement directly while the remaining 3 emphasise on price stability as indirect means of dealing with real exchange rate uncertainties. From the discussions, it is obvious that maintaining price stability improves the predictability of the economic environment hence making it easier for the producers to plan their production schedule.

5.7 Areas for Further Improvement

The study focuses on the impact of RER uncertainties on exports. RER uncertainty is measured by the standard deviation of the RER of the current year from the previous year. This could be an area to improve on as yearly deviations may underestimate the impact of RER uncertainty on exports.

Nominal exchange rate fluctuations smooth out during the year resulting in the underestimation of the RER volatility. Therefore, quarterly deviations would have been more useful.

Another weakness pertains to the measurement of RER. The method of measuring RER is crucial as the outcome of the results depend to the method of calculation the RER. In this study, the average nominal exchange rate is used in the construction of RER. There are studies which use the spot rates or forward rates in the calculation of RER. The different methods would have different implications on the results. At the micro level, a firm may engage in hedging activities, hence the usage of average nominal exchange rate for that particular period may not be reflective of the actual situation faced by the firm.

Another area of improvement would be this study does not take into consideration the price pass-through effect. The pass-through effect happens when producers mark-up prices of exported goods following the depreciation of the domestic exchange rate. Producers can afford to do so as the prices after mark-ups are still cheaper than before the depreciation of the exchange rate. The study does not segregate the effect of mark-ups on the value of exports. This may have an implication on the deflated exports as mark-ups may have distorted the nominal export earnings.

Despite, these weaknesses, the conclusion that RER uncertainties have a negative impact on real exports cannot be dismissed. Findings indicate that the authorities need to make policy-induced changes more predictable.

5.8 Major Contributions

Recent export data was used in this paper and unlike other studies done on this area, this paper examines the relationship between real exchange rate (RER) volatility and exports of different classes (commodities, minerals and manufactures). Therefore, different results were derived whereby the sensitivity of each classes of exports towards RER volatility can be identified. In this case, manufactured exports were found to be relatively more sensitive to the volatility of RER than overall exports in the short-run. However, in the long run, the overall exports were more sensitive to the RER volatility than the manufactured exports.

The paper also treats the calculation of RER differently whereby weights have been assigned according to the country's trade settlement. This method of calculation has enhanced the accuracy of the analysis (considering that 70% of Malaysia's trade is settled in US dollars) and hence minimises the risks of underestimating or overestimating the impact of RER volatility on exports. The weights assigned changes according to the period as the US is now a more significant trading partner compared with the UK in the 1950s.

In short, the paper dispels inconclusive arguments pertaining to the relationship between RER uncertainty and export since it has proven that there is inverse relationship between the two. Hence, the empirical results have drawn attention to the importance of maintaining RER stability especially a country like Malaysia which trade is 1.84 times larger than its GDP.