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SPEECH BY MR LIM HNG KIANG, MINISTER FOR HEALTH AND SECOND MINISTER FOR FINANCE AT THE CONFERENCE DINNER OF THE FAR EASTERN MEETING OF THE ECONOMETRIC SOCIETY, ON FRIDAY, 2 JULY 1999 AT 7.50 PM, AT THE MANDARIN, SINGAPORE



**ECONOMIC FORECASTING:** 

EXPERIENCES DURING THE ASIAN CRISIS

Introduction

Distinguished guests, ladies and gentlemen. The Econometric Society held its last Far Eastern Meeting two years ago in Hong Kong. In these two years, Asia's economic landscape has changed dramatically. An isolated banking and currency crisis in Thailand soon became a torrent against East Asian currencies and asset markets. The Asian crisis shocked most economic observers and analysts. Even those who could credibly claimed to have foreseen the crisis were alarmed by the severity and extent of financial contagion.

Today is the second anniversary of the devaluation of the Thai baht on 2 July 1997, which marked the start of the crisis. Yet, the causes and solutions to the crisis are still not well understood. Indeed, the Asian crisis will provide much fertile ground for economists and econometricians to practise their art for many years to come. Some of you may be currently engaged in developing special models, or variants of existing ones, to accommodate the particular features of the Asian crisis.

#### Failed the Asian Crisis Test?

- Has economic forecasting, and econometric modelling, failed the test of the Asian crisis? The critics would say yes. I would be more sympathetic. The Asian crisis marked a very sharp break from past experiences. As such, no model derived from historical relationships would have been able to foretell the event. The severity of the crisis was exacerbated by political uncertainty and a sharp loss of investor confidence. Econometric models cannot quantify the herd psychology of investors, nor predict social and political upheavals.
- In any case, you are in good company. It was not only econometricians who made forecast errors. Politicians were caught off-guard by the rapid development of the crisis. Market practitioners, who had a direct financial stake in the accuracy of their modelling techniques, were also caught. For example, in September 1997, about three months after the devaluation of the Thai baht, market participants were still expecting the Indonesian economy to grow by 6 1/2% in 1998. The actual growth figure turned out to be closer to minus 14%. Most market participants were expecting the Rupiah to trade at about 3000 to the US dollar in a year's time; it was trading at 11,000 to 12,000 in September 1998.
- The inability of econometric models to foresee the onset or severity of the Asian crisis is understandable. The greater challenge is to make econometric models relevant and effective in the wake of globalisation and rapid financial flows. We see early signs that established economic relationships are breaking down. The economic performance of the two largest economies in the world, the US and Japan, seems to defy conventional economic theory.
- 6 In the US, analysts including the Federal Open Market Committee have consistently underpredicted real GDP growth, and overpredicted inflation. Expectations that inflation would rise with the steadily declining unemployment rate now the lowest in three decades were proven wrong. Growth, on the other hand, has been above potential for several years running, led by the strong performance in productivity.
- In contrast, the Japanese economy in the last two years has underperformed even the most pessimistic forecasts. Successive fiscal and monetary easing have offered little respite from recession and deflation following the bursting of the asset bubble. Japan has shown signs of recovery only recently, and these signs are still tentative. Economic theorists will argue that institutional factors in Japan, such as banking sector problems and structural rigidities of the labour market, have negated expansionary fiscal and monetary policy. However, there is little consensus on how to incorporate these institutional factors into producing better economic forecasts.

# Forecasting the Recovery

- 8 This is indeed a tough challenge for the economics and econometric profession. Let me say, however, that the pressure is more benign in a recovery compared to a recession in this regard, we should be relieved. There are signs of recovery in the region, although we should guard against excessive euphoria.
- Stock markets in the region have rallied, buoyed by optimism over continued strong US growth and easier liquidity conditions. Indeed, stock prices of some of the better performing economies, such as Korea and Singapore, have exceeded their pre-crisis levels. Currencies have also appreciated, and volatility in financial markets has fallen sharply. Interest rates have fallen to pre-crisis levels in several countries, including Thailand, Hong Kong and Korea.
- The real sector, although lagging the financial markets, has also shown signs of recovery. After the severe contraction in the first half of 1998, production and exports have picked up. In the external sector, most Asian economies have also experienced a healthy build-up of foreign reserves, from their current account surpluses and a renewal of capital inflows. This has relieved the credit crunch situation and allowed governments to pursue expansionary fiscal policies. Most of the economies are expected to return to positive growth rates by the second half of this year.
- However, the pace of recovery will vary from country to country. Korea, Malaysia and Thailand are probably best placed for a sustained pick-up in economic activity this year. They have moved the furthest on financial sector restructuring, although Thailand's efforts have been somewhat set back by the slower rate of bank recapitalisation. Restructuring in Indonesia have made little progress due to its socio-political difficulties although investor confidence has been greatly boosted by the smooth conduct of the election process and we are optimistic that the restructuring efforts will accelerate from here.
- Hong Kong and China, which have made political commitments not to devalue their currencies, have to rely on internal price adjustments to restore competitiveness. Short-term rigidities in wages and prices inevitably had led to sharp contractions in domestic demand. But because of their substantial foreign reserves, they have also been able to pursue expansionary fiscal policies to stimulate domestic demand.
- Because of Singapore's close trade links with the rest of the region, we were also affected by the crisis. Our exports had lost competitiveness, as our neighbours' currencies depreciated sharply against the Singapore dollar. The collapse in demand from the region affected our manufacturing, commerce and finance sectors. Real GDP growth in 1998 was 1.5% compared to 8% in the previous year. Labour market retrenchments shot up and the unemployment rate reached a high of 4.6% at end-98. Nevertheless, Singapore was less badly hit than the countries in the region, because of strong economic fundamentals. We did not suffer some of the structural problems like over-borrowing among corporates or weak banks, which turned the turmoil in currency markets into a major economic and financial crisis in some of the other countries.

- The government's response was to help to relieve the pain of the adjustment needed to cope with the external shock. We implemented a major business cost-cutting package. Wage costs were cut by 15%, in part through a reduction in the employers' contributions to the CPF - the national savings scheme - and variable bonuses that companies had built into workers' pay in previous years.
- The economy already seems to be bottoming out, with the first quarter's GDP growth coming in at 1.2%. This was led by a pick-up in the electronics industry. Exports also increased in April and May, after falling for seven months. The official GDP growth forecast was raised to 0 2%, from -1 to 1% previously, and indications are that we may exceed this on present trends. However, there is a need to continue with the measures taken, to facilitate the consolidation of the recovery.
- Thus far, the recovery in the region has been supported by favourable external factors, including low global interest rates, a steady yen and strong US economic growth. However, some of the Asian economies continue to be vulnerable to external shocks, especially a hike in US interest rates. A sharp rise in interest rates could precipitate a stock market correction in the US, which undoubtedly would result in lower economic activity, through the wealth effect working in reverse. Although it is difficult to quantify these effects, there is little doubt that recovery in Asian economies would at least be jolted by such a correction. In addition, Asian economies are also vulnerable to a slowdown in exports to Japan and Europe. If Japan is unable to sustain its growth momentum in the first quarter, and Europe remains sluggish, the recoveries in some Asian economies will be anaemic and possibly even suffer a relapse.

The Value of Economic Forecasting in Post-Crisis Asia

- We have noted the risks in the global economic outlook. Let us return to answer the question: what is the value of economic forecasting in economic policy in a post-crisis Asia? Most of you would agree that, notwithstanding the recent poor track records, making economic forecasts using models is a very useful exercise. Econometric models are useful in predicting the direction of economic variables, and in identifying their driving factors. Models can also help us create different forecast scenarios coinciding with different assumptions of some of the risk factors I mentioned above. This will help alert policymakers to the possible changes in government policy that may be needed. It may be too much, however, to expect econometric models to provide accurate, point estimates of economic variables. At a time of heightened uncertainty in the economic environment, constructing a range of forecasts may be more useful than point predictions.
- Econometric models are also important tools in policymaking. Behind each macroeconomic policy prescription is a certain view of the structure of the economy and how it would respond to policy measures. The value of a model is that it has a gigantic memory and is able to keep track of the relationships among all the key variables in the economy. This allows the model to forecast the likely response of the economy to the policy prescription in a coherent and logically consistent As Alan Blinder, former Vice-Chairman of the Fed Reserve pointed out, ...some kind of a model - however informal - is necessary to do policy, for otherwise, how can you even begin to estimate the effects of changes in policy instruments". Econometric models allow us to overcome the limitations of the human

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mind and obtain a more complex representation of the economy.

No captain of a ship, no matter how skilful and experienced he is can steer a ship towards its destination without a good map and a compass. At the very least, he would need to know his bearings by observing the sun, the moon and the stars. For policy makers, models are like the maps and compass to the captain of a ship. The better the model, the more successful the policy maker is likely to be, in steering and guiding the economy safely through the treacherous waters to reach its destination. As the world economy grows in size and complexity, there is a need for more good models, not less.

# Economic Modelling in MAS

- Let me share with you the role of economic modelling in the Monetary Authority of Singapore. Given our openness to trade and capital flows, Singapore's monetary policy is centred on the exchange rate as an intermediate target. The objective is to create the right conditions for non-inflationary growth. During quarterly policy reviews, we use our SINGMOD model which has been in operation since the early 1990s -- to simulate the path of the economy corresponding to different exchange rate assumptions. This provides us with valuable insights into the trade-offs inherent in every policy decision and helps us to decide on the optimal policy path.
- However, we do not regard models as "black boxes" or oracles to be used in a mechanistic fashion. Model output needs to be supplemented with sectoral analysis, survey data, market information and our own judgement. We also have to constantly review our model assumptions and estimates to keep the model up to date. As Keynes observed, "The specialist in the manufacture of models will not be successful unless he is constantly correcting his judgement by intimate and messy acquaintance with the facts to which his model has to be applied."
- Recognising the important role that macro-models can play in policymaking, the MAS has committed resources to building a new econometric model. The MMS, or Monetary Model of Singapore, will take advantage of the new developments in the field of econometric modelling, especially with regard to the modelling of forward-looking behaviour in financial markets, and in estimation techniques. The model will also incorporate a more systematic link between agents' behaviour in the short-run and in the long run, when they have had the time to fully adjust to shocks.
- The Economics Department of the MAS will organise a conference to launch and publicise this new model, once development and testing work has been completed.

#### Concl usi on

Events in the last two years are a humbling experience to economists, modellers, as well as policymakers. Federal Reserve Chairman Alan Greespan candidly admitted, "We policymakers have been engaged in a lot of on-the-job training in recent years. The remarkable American economy, whose roots are still not conclusively known, and the Asian crises that caught us by surprise, among other humbling experiences, have made policymakers particularly sensitive to how fast the Page 5

world can shift beneath our feet."

Macroeconomic forecasting has faced earlier tests before the Asian crisis. Earlier generations of economic theorists and econometricians in the 1970's were equally, if not more, confounded by stagflation, which was then an unprecedented economic phenomenon. That experience stimulated much work on the modelling of supply-side influences on economic growth and inflation. Hopefully, the Asian crisis will also provide a similar spur to developments in areas that we do not as yet have a good feel for. This may include the modelling of financial market behaviour, and the role of institutional and socio-political factors in the economy.

I hope that economic forecasting and modelling, with its rigour of thought and analysis, will be able to provide valuable guidance to policy makers in this rapidly changing world.

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