Thank you very much, Khun Paiboon. I would like to thank the Bank of Thailand and the BIS for inviting me to speak at this very important and interesting conference. I would, however, start off with a disclaimer: the views that I'm about to express do not reflect the views of the Central Bank of Malaysia. Second, I would like to congratulate Joseph for a very interesting and excellent paper. In particular, the paper has contributed to increasing the depth and breadth of knowledge on the issue of rapid balance sheet expansion of Central Banks, and also provided a greater understanding of the various factors driving current account imbalances, in particular with the observation that external financial policy is a very important determinant driving current account imbalances in emerging economies.

I think the challenge for practitioners in managing a managed float exchange-rate regime and reserves accumulation is to what extent do we allow the exchange rate to move reflecting changes in the structural terms of trade and fundamental improvements in the competitiveness of the economy, and as a cushion to absorb the influx of very large short-term capital flows into the country. Estimates of appropriate exchange-rate levels to reflect changes in economic and financial factors are very difficult to derive indeed, and are wide ranging. A few years ago the IMF showed us various estimates of what should be the appropriate exchange rate of the Ringgit. That was before the global financial crisis. And it ranged from an undervaluation of 5% to 15%. Some models showed even a broader range. So it's indeed really not an easy task to determine where you pitch the level of exchange the rate – to what degree do you say that it is reflecting terms-of-trade adjustments, or to what extent is it short-term capital flows, and how much do you allow the exchange rate to reflect this? We are aware that short-term capital can flow out at very short notice and such movements can cause disruptive misalignments of the exchange rate.

So the issue facing policymakers is one of regularly fine-tuning the policy mix of reserves accumulation and changes in the magnitude of exchange rate movements, and the use of macro-prudential policies, as an addition to the toolkit to manage the impact of balance sheet expansion and the implications for the macroeconomy.

In this regard, the policy risks that we faced in Asia have to a large degree been successful managed, but that does not mean that we are going to be successful in the future. The issue pointed out this morning by the BIS is that one needs to constantly and regularly analyze risk in the medium to longer term – I think it’s an important reminder to all of us. I think one needs to constantly review and reassess the policy mix and the risks that might emerge.

So on this issue of managing the impact of capital flows and the expansion of balance sheets of central banks, Andrew asked me to share some of Malaysia's experiences. And if you will forgive me, I will run through some of these charts fairly quickly, because I have quite a number to cover.

As shown in the charts, three important episodes of very large movements of capital flows in Malaysia took place over the period. As you are probably all aware, Malaysia adopted a fixed

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1 Special advisor to Bank Negara Malaysia.
exchange rate regime in September 1998 at the height of the Asian financial crisis. In July 2005, we moved to a managed float regime. The interesting part is that you see episodes of huge opportunistic financial flows. Before we moved to a managed float, there was widespread speculation about possible change in the exchange rate in regime. Our reserves went up by almost 50% over six months following large capital inflows. After we moved to a managed float regime, the exchange rate did not strengthen as much as the market had expected. Initially, there were more inflows, but the capital flows reversed shortly, and we lost 25% of our reserves in a matter of six months.

Intervention therefore had to go two ways, or else we would have experienced very large fluctuations and misalignments in the exchange rate. That was the first episode of large and volatile capital flows after the Asian financial crisis. The second episode was during the global financial crisis of 2008/09. During the early part of the crisis, reserves rose as inflows were large. Then, in the latter part of 2008 and early 2009, huge outflows took place. And the third episode of very large volatile capital flows was the recent European sovereign debt crisis.

The challenge for small countries like Malaysia is that the forex market is small and does not have the breadth and depth of more developed markets. So capital flows can have large and significant impact on exchange rate movements over very short periods of time – over 6 months, reserves can rise by 50%, and then over the next 6 months decline 25%. Such volatile and large flows can have a significant impact on the exchange rate and create sharp domestic price distortions in many sectors of the economy.

I think the challenge here is how do we manage the balance of exchange rate change and reserves accumulation to avoid significant changes in relative prices of goods and assets that could in turn be very disruptive and cause macroeconomic imbalances in the real and financial sectors. As you know, exports of manufactured goods account for 75% of Malaysia’s exports. The impact on exchange rates will have to be managed in such a way that there are not large changes in relative prices, so that economic agents are able to manage their trade, investment, and exchange rate exposures.

If we break down capital flows, in the case of Malaysia we find that, over the years, initially the trade balance was the key determinant. Now it is capital flows that are the key determinant of changes in reserve accumulation. The current account surplus was driven by strong commodity exports in the early period, while in the later period the surplus in the capital account has been driven by sharp movements in short-term capital flows.

What is interesting in our experience is that if we strip out the commodities and look at the underlying terms of trade, we see that the trade and current accounts are broadly in balance. This shows that very large volatile portfolio flows, both into bonds and into the equities market, have become predominant in determining reserves accumulation and exchange rate movements.

What is significant is that in managing the exchange rate over time we initially started the managed float with a limited degree of volatility, and movements were relatively narrow. But as the market adapted to a floating exchange rate regime, and as the foreign exchange market gained in terms of breadth and liquidity, we allowed the exchange rate to move in a broader range. You can thus see in the chart the broader range of ringgit flexibility over time.

Similarly, the volume of forex transactions has risen very significantly. What is important is that, when we examine the bid/offer spread, we see that with the greater liquidity and larger volume of forex transactions, the bid/offer spread for the ringgit against the US dollar has narrowed very significantly over the period. The useful lesson we have experienced in managing exchange rate and developing the foreign exchange market is the need to promote a greater volume of forex transactions in a single market and to encourage a greater number of participants.
I would like to jump to another policy response which has been widely promoted and recommended by the IMF – that emerging countries should develop domestic demand policies to balance growth and help reduce the current account surplus. In Malaysia’s case, consumption as a share of GNP rose from 61% to 66% by 2010. So domestic demand, especially consumption, has become a very important driver of growth, as well as helping to rebalance the current account. In the case of Malaysia, the picture is that private investment has not recovered to its pre-Asian-crisis levels. The lower level of investment to some extent explains the current account surplus. In this sense savings could not be utilized in full to fund domestic investment. So is this a case of too much saving or too little investment? Interesting in Malaysia’s case is that Malaysian corporates have invested significantly across Asia in the past few years. So the rebalancing of the current account surplus takes the form of long-term capital outflows. We have seen a sharp increase in overseas investments by Malaysian corporates around the region – from the banks to the telcos to the plantation companies. These investments in the Asian region have been very sizable indeed. Part of the reason Malaysian corporates have expanded to other countries in the region is that we have a very small domestic market compared with the larger markets of Indonesia, Thailand, Vietnam and China. So outward investment is one way we see the rebalancing taking place.

We are aware that managing the cost of sterilization and generating sufficient returns on assets has been a great challenge during this period of very low interest rates for major reserve currencies. And of course we used various instruments to try and manage down the costs of sterilization and also try to balance the returns on reserves with a wider spread of investments, while ensuring that there is sufficient liquidity and safety in instruments we hold. We have thus diversified among different asset classes and across different currencies, and moved down the credit curve. We have also diversified geographically.

The chart shows the various instruments we used to sterilize inflows. The risks we all face managing the balance sheet are similar – currency risk, interest rate risk, credit risk, market risk and liquidity risk. The problem today is that market movements tend to be highly correlated, even among different asset classes and across regional and global markets. Markets are more highly correlated today than before. The traditional wisdom in asset management is that if you diversify your asset classes you'll have a more balanced and stable portfolio. Today, financial markets are highly correlated.

Thus, the challenge is managing the impact of the financial gains and losses in the balance sheets and financial statements of central banks. What we try to do is: in periods of positive returns and financial gains we transfer as much of the gains as possible to the Exchange Rate Fluctuation Reserves, Revaluation Reserve and Contingency Reserve, so that in times of losses there is a buffer to offset negative changes.

I would like to conclude that a completely free-floating exchange rate regime can result in very large and volatile movements in the exchange rate – and can cause great misalignments. So intervention to smooth out large volatilities due to large volatile short-term capital inflows and outflows is helpful in terms of building confidence among businesses and investments in the real sector.

Furthermore, domestic markets need to be developed – in particular financial markets, as well as the foreign exchange markets, to improve intermediation between capital outflows and inflows, and also to enhance liquidity.

Our experience reflects that when we moved from a fixed exchange rate to a managed float, the adoption of a gradual and paced approach allowing greater flexibility in the managed float over time proved useful. The challenge however remains: how much do we balance allowing the exchange rate to move in a manner that appropriately reflects changes in economic fundamentals, with allowing it to change according to short-term capital flows influences? Important, as well, is that macro-prudential measures can and should be used to manage distortions arising in the market – in particular, asset inflation in certain sectors, such as the
property sector. These measures have been used in Singapore and Hong Kong. We have used them very selectively in Malaysia.

When we look at the trend appreciation of the Ringgit and the positive current account surplus, we see that both have largely been driven by improving terms of trade for commodities in the earlier years of the float, and in recent years by capital flows as well. In assessing whether there have been significant misalignments of exchange rate and macro-imbalances in the economy, we find comfort in the fact that domestic inflation has remained low and output has been pretty close to potential, rather than there being a case of excess demand. Looking at the monetary aggregates and the financial sector, we see limited evidence of excessive credit growth. Nor have monetary aggregates expanded at levels inconsistent with the level of economic activity. Similarly, we see limited signs of over-valuation in the equity market, although there have been some price movements in the property market.

With that, I conclude my presentation. Thank you very much for your patience.