7. Managing Capital Flows

Chair

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7.1 Managing Capital Flows: An Asian Perspective

<u>Keynote Speaker</u>
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Dean & Chief Executive Officer, Asian Development Bank Institute
Japan

In the past 2 years or so, many emerging market economies have been attracting a lot of capital inflows. As a result, many of them, including those in Asia, have imposed capital controls.

There is a need to understand this recent phenomenon. For many emerging market economies, capital flow issues and capital controls are very important policy issues. Policymakers of emerging economies need to develop a framework for managing capital flows that is consistent with both macroeconomic and financial sector stability.

Capital inflows offer significant benefits to economies such as:

- Greater economic opportunities
- Cushion against shocks
- To expand investment
- Smooth consumption
- Diversify risks

At the same time, capital inflows generate the following risks to economies:

- Loss of macroeconomic stability
- Damage to financial system stability
- Risk of sudden capital flow reversals

In addition, the pro-cyclicality of global capital flows (eg when the economy is growing, capital inflows reinforce growth) to emerging and developing economies can aggravate these risks.

Looking at the past experiences of large capital inflow episodes, about 15% of the large capital inflows over the past 20 years ended in a crisis. 15% is a relatively large number, and in the case of emerging Asia, this ratio is more than 15%. The Asian financial crisis of 1997-98 is one such example. Before 1997, many Asian economies attracted a lot of capital inflows, but capital later flew out of the economies of Thailand, Malaysia, Indonesia, Korea and Hong Kong.

Hence, the objectives of emerging Asia's authorities should be to manage the risks of capital inflows well such that the benefits of capital inflows can be enjoyed, while achieving both macroeconomic and financial stability.

Capital Flows in Emerging Asia

Over the past several decades, capital inflows into emerging Asia have been on the rise. Figure 7.1.1 shows both gross capital inflows (top panel) and net capital inflows (bottom panel), in USD (left panel) and as a share of GDP (right panel).

Cross Total Inflows - Emerging Asia

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Figure 7.1.1 Capital Inflows to Emerging Asia

Notes: Emerging Asia: China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, and Thailand Source: CEIC accessed on 15 April 15 2011

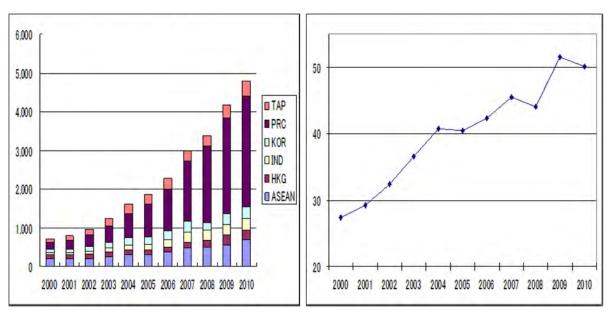
Up until the global financial crisis, there was a massive surge in capital inflows to emerging Asian economies. When the Lehman crisis struck in September 2008, it shocked the world and capital inflows shrank. However, capital inflows are observed to return, and this is supported by the increase in reserve accumulation (see Figure 7.1.2) which has been very rapid, and a sign that many Asian economies are resisting currency appreciation pressure.

Effective exchange rates were under pressure, in particular in many ASEAN economies (see Figure 7.1.3). Capital inflow issues have been quite significant policy issues for ASEAN economies and some non-ASEAN economies.

Figure 7.1.2 Foreign Exchange Reserves, Emerging Asia

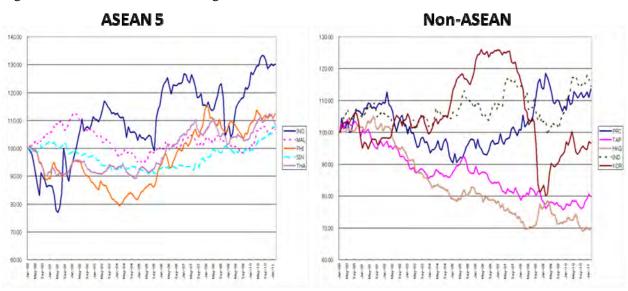
Billion US\$

Percent of GDP



Notes: Emerging Asia: Cambodia, China, Hong Kong, India, Indonesia, Korea, Leo PDR, Malaysia, Myanmar, Philippines, Singapore, Taipei, China, Thailand, and Viet Nam Source: World Bank dalabank accessed on 14 April 2011, CEIC accessed on 14 April 2011; Bloomberg accessed on 15 April 2011

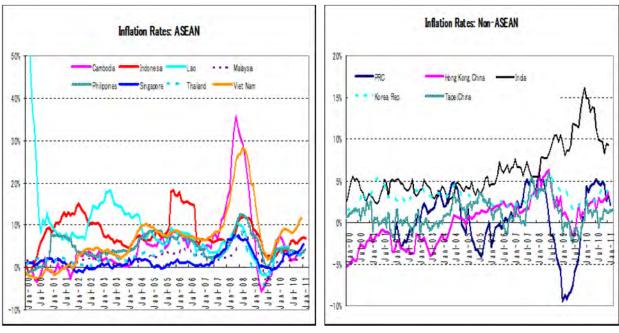
Figure 7.1.3 Real Effective Exchange Rate



Source: Bank for International Settlements (815) accessed on 14 April 2011

Inflation rates were volatile but generally low in the last decade, except in 2008 (see Figure 7.1.4). However, inflation has been rising in recent months and inflation issues are becoming a much more prominent problem for many emerging Asian economies.

Figure 7.1.4 Inflation Rates



Source: CEIC eccessed on 11 April 2011

Asset prices in some major economies have been rising, and the property price index has been on the rise in some economies, most significantly Hong Kong. Capital inflows have had significant impacts over the asset prices for the past 15 years or so.

Policy Challenges & Implications

The past surges in capital inflows, in particular before 1997, are still fresh in the minds of many policymakers in emerging Asia. After the global financial crisis, foreign capital has started to return to emerging Asia, because of record low interest rates adopted by the US and a few other advanced economies; these are the push factors of capital inflows. The pull factors on the part of emerging Asia are the robust economic recovery, robust economic growth and tightening of monetary policy. Both push and pull factors contribute to a surge in capital inflows. Capital inflows are not simply limited to emerging Asia, but are common to many emerging economies which have been growing faster than advanced economies, including Latin America and some other regions.

Advanced economies' policymakers often suggest that the 'best' policy mix would be to allow full exchange rate flexibility, capital account openness, and low-inflationary monetary policy. According to them, the fact that emerging economies try to stabilize the exchange rates in the face of capital inflows would cause undervaluation of the exchange rates, thus resulting in more capital flows flowing to the economy and creating an upward pressure on the exchange rate. Hence, the best way to deal with this issue is to allow sufficient appreciation of the exchange rates. According to them, capital controls are not good.

The Impossible Trinity or Trilemma hypothesis in international finance suggests that the economy should pick one of the corners of the Triangle: a fixed exchange rate, absence of capital controls, an independent monetary policy. In the case of Hong Kong, Hong Kong has a fixed exchange rate arrangement with full capital account openness but no monetary policy independence. Hence, there are economies which do not follow this hypothesis.

The policy mix suggested by advanced economy policymakers may be appropriate for advanced economies with deep, liquid and broad financial markets, but such a policy mix will create problems for emerging economies:

- Highly volatile exchange rate. The foreign exchange market for many emerging market
 economies is not that deep. As such, huge capital inflows would cause exchange rate
 changes to be very significant, if the exchange rate is allowed to be fully flexible. For many
 emerging economies, particularly small emerging economies, the degree of industrial
 diversification will be limited and these exchange rate swings could have significant impact
 on industrial activity.
- Inability in responding to capital flows. The financial markets of emerging economies are less developed, and much shallower than advanced economies' financial markets. Thus, the financial markets do not have sufficient resilience to respond to large flows of capital.

Thus, over the past 2 years of so, capital controls were imposed by many emerging economies, but not by advanced economies. This is because the latter have sufficiently large and resilient financial markets, and so they can cope with large capital inflows and outflows.

Emerging economies' realistic policy responses to inflow surges should be multifold:

- Structural measures. Structural measures, by definition, take time to be effective.
 - ➤ Develop and deepen financial markets. Emerging economies should make any effort to develop and deepen their financial markets, but this takes time.
 - ➤ Liberalize imports and capital outflows. It should be noted that while liberalizing capital outflows is a useful policy tool, it may serve to increase capital inflows as investors know that they withdraw their capital easily.
- Macroeconomic measures.
 - ➤ Sterilize foreign market intervention. Central banks can intervene in the market and accumulate foreign exchange: this is what many emerging economies have been doing.
 - ➤ Ease monetary policy. This is a good policy to stem capital inflows, but should only be adopted if the economy is not in an inflationary phase.
 - ➤ Tighten fiscal policy. This approach should be adopted if the economy is experiencing overheating.
 - Allow exchange rate appreciation. If capital flows are permanent and driven by fundamentals, the best response should include exchange rate appreciation. Currency appreciation has the benefit of discouraging speculative capital inflows and allowing the central bank to pursue independent monetary policy to contain inflation, asset price increases and financial vulnerabilities. However, the loss of international price competitiveness is a major concern, when only one economy allows currency appreciation. This suggests a need for coordination on exchange rates.
- Macroprudential measures.
 - ➤ Tighten macroprudential supervision and regulation over domestic markets.
 - > Control short-term capital inflows.

Capital inflows can come through many different channels. Managing or controlling capital inflows can be a useful policy tool from the perspective of managing the financial system stability and overall macroeconomic stability.

There are some who doubt the effectiveness of capital inflow controls. In the literature, there is some consensus that market-based controls are better than non-market based ones. In particular, market-based (temporary, selective and price-based) controls like the Chilean unremunerated reserve requirements are less distortionary and can lengthen the maturity of inflows without much impact on overall inflows. As long as capital inflows are short-term, such a policy will reduce short-term capital inflows, but overall capital inflows may not change. Such controls have the benefit of limiting short-term capital inflows, with little impact on overall capital inflows. The exchange market implications are the same because the same amount of capital goes into the economy, but yet the risk of sudden capital flows can be avoided.

There are other controls like investor-based controls (such as the ones that China and India are taking). These are not market-based controls, but these have the benefit of limiting total volume of inflows, and they could be more effective because they target particular investors, and it is clear which form of investment the authorities are controlling. Essentially, the total volume of inflows is limited as it is easier to monitor who is investing than how inflows are coming.

There are similar ways of controlling capital inflows but whatever method is adopted, authorities' administrative capacity is essential for capital controls to be effective. Effectiveness of capital controls tends to weaken over time as agents in the markets find ways to circumvent them. Moreover, one economy's capital controls can potentially affect others' capital inflows, suggesting a need for coordinated action.

IMF now views capital controls as a useful policy instrument to manage capital inflows. However, IMF recommends the use of macroeconomic policies and prudential policies first as primary policy tools to respond to capital inflows. If all policy tools have been exhausted, capital controls are used as a last resort.

However, whilst capital controls may not be completely effective, they need not be a last resort policy instrument. Capital controls could be a useful addition, and can be used as a combination together with other policy instruments.

There is a huge scope for regional coordination. Regional financial monitoring is very important. In addition, coordinated capital inflow controls would be very useful because if one economy's capital inflow controls are very successful, then that economy may be driving capital to other economies without such capital controls. To be effective, coordinated capital controls are desirable. Furthermore, exchange rate policy coordination would be useful because if say, all Asian economies allow the exchange rate to appreciate, it is much easier to use currency appreciation as a policy tool. If exchange rate policy coordination is embarked on, financial safety nets would be needed.

Conclusion

Given the robust growth prospects in the region relative to the US and Europe, emerging Asia continues to attract capital inflows and, as a result, face significant challenges in macroeconomic

management and financial sector reform. To manage macroeconomic and financial conditions, a careful approach would be needed. The advanced economy view of adopting a freely flexible exchange rate and an open capital account may not be suitable for emerging market economies. Whilst the IMF agrees that capital controls would be useful, it recommends it as a last resort policy tool. However, capital controls could be considered as a very legitimate policy tool together with macroeconomic and prudential tools. A combination of policies would be useful in addressing the issue of huge capital inflows, and a regional approach is recommended.

7.2 Managing Capital Flows: Thailand's Experience

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Before the 2008 crisis, there was approximately US\$10 trillion of money flowing in the world economy each year, and about 10% of this has been flowing to emerging markets, including economies such as Thailand.

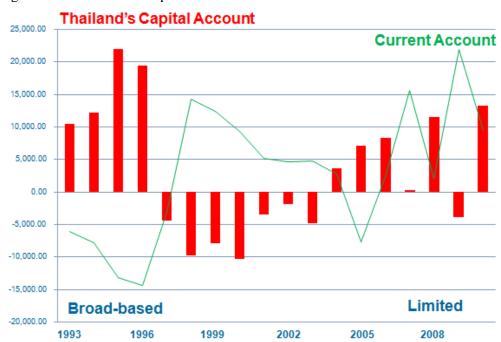


Figure 7.2.1 Thailand's Capital Account

From Figure 7.2.1, Thailand has twice faced the challenges of managing capital inflows. Before 1997, capital inflows to Thailand were about \$20 billion for 2 years, in 1995 and 1996. The inflows could be described as broad based since the capital flowed to all sectors of the economy, including the banks, real estate other parts of the economy. Thereafter, Thailand experienced a big crisis. After the crisis, there was a period of capital outflow; hence, there was no concern about managing capital flow at that time.

In 2005, new inflow of capital came to Thailand, and since then, Thailand has been actively participating in managing the capital inflows such as imposing capital controls. However, unlike the broad based capital inflows experienced in the 1990s, this time, most of the inflows entering Thailand are quality flows which did not enter via the banks or the money markets to try to speculate on the Thai baht and gain foreign exchange appreciation as in the past. The capital inflows are totally different in nature to the 1990s. However, Thailand is now entering into a new phase where it is experiencing a broad based capital inflow that will create the same vulnerabilities like those in 1997.

The viewpoint on the capital has been changing. The crisis in 1997 has led to a shifting viewpoint concerning capital flow. In the past, Thailand tried to actively attract capital flows from other countries. Since the Asian financial crisis, Thailand has become more skeptical of capital inflows. The attitude towards capital inflows is more of whether it will bring vulnerabilities, whether it will lead to another crisis, and how should it best be managed. This is the viewpoint shared by many emerging economies.

Main Points of Concern

Basically, there are 4 points of concern about inflows:

- Pressure on exchange rate and export competitiveness.
- Too much liquidity easy money/easy credit culture which will lead to overheating and asset price bubbles
- Over-leverage and accumulation of financial fragility in the financial system will lead to a deterioration of asset quality
- Possibility of massive outflows which can lead to complication in macroeconomic management and crisis

However, in the last 5 to 6 years, the focus is on the exchange rate. All the economies that have been imposing controls tried to stem the appreciation to prevent the exchange rate from appreciating too fast and hurting exporters. This leads to the policy question of how economies should deal with these two types of capital flows into a limited market:

- Massive/broad based inflows
- Speculative inflows

From Thailand's experience, capital controls will not help much. Policy options include:

- Reserve accumulation
- Allow some appreciation along with regional currencies
- Capital control measures
- Macroprudential measures

The policy response that Thailand adopted is paced appreciation. The exchange rate can't be allowed to appreciate too fast so the appreciation is controlled. Over the long run, appreciation is achieved, but time is bought for the exporter to adjust. In the process of carrying out this policy response, Thailand discovered that resisting the market is very difficult. When the regional currency is appreciating, to compete against the trend is extremely difficult and costly.

First, the economy has to decide on the exchange rate regime it wants to adopt:

- Heavily managed. Thailand can choose to be like China, which tightly manages the
 exchange rate to help exports. However, Thailand cannot be like China, as it will be very
 costly for Thailand and may even cause Thailand to end up in a crisis after the accumulation
 of appreciation.
- Freely floating. Another alternative is for Thailand to adopt a floating exchange rate regime like Australia and New Zealand, where the exchange rate appreciation will adequately address the capital inflow issue. However, such a regime may cause the exchange rates to become too volatile, considering that Australian and New Zealand exchange rates sometimes move by 20% a year.

Thus, Thailand will probably adopt a mix of the two extremes, and manage some appreciation and some volatility.

Reserve Accumulation & Appreciation with Regional Currencies

Figure 7.2.2 illustrates Thailand's reserve accumulation, which is the result of policies. Reserves have been accumulated in Thailand from 1997, from US\$30 billion. Now, Thailand has almost US\$200 billion, and each year a lot of money has been accumulated. This has been very costly to the central banks. Every billion bought means a loss later on. The time bought for the exporter is expenses to the economy.

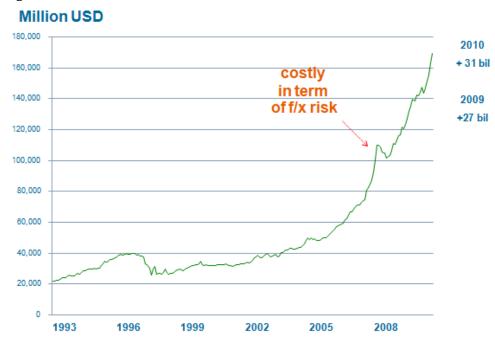


Figure 7.2.2 Thailand's Reserve Accumulation

Foreign exchange rate intervention is not the cure to capital inflows. It only aids in stemming exchange rate appreciation. Moreover, it is extremely difficult to interfere with the market as the problem is not with Thailand. The problem is with the USD and the large current account deficit of the US. The USD tends to depreciate in normal times but during times of crisis, it appreciates and thereafter depreciates again. A depreciation in USD will cause the currency in the region to appreciate. The Thai baht has to appreciate along with the region. As a result, despite the money spent, the Thai baht still appreciated. The cost involved makes it impossible for Thailand to manage the exchange rate tightly.

Capital Controls

There are those who think that capital controls are a cheap and easy way out in terms of dealing with inflows. This is a very dangerous view. Thailand has plenty of experiences in administering capital controls. Apart from imposing investment, maturity of investment and account limits, the Chilean type of capital control and liberalization of outflow was also utilized. All of these have added complications with limited effectiveness, and it also undermined the

long-term goal of Thailand to become a more open economy. Other examples include Brazil's 6% tax on short-term capital inflows and Thailand's 30% reserve requirement 4-5 years ago; these measures did not stop the currencies from appreciating. Capital controls are not effective measures, with little or no benefits to economies in the long-term.

In addition, Thailand's experience is that the party who in fact speculates on the economy is not the foreigner, but rather, the local exporter and importer. No matter how stringent the capital controls, it will be unable to prevent them from attacking their own currencies.

Macroprudential Measures

Singapore, Hong Kong, China and other economies have been experiencing a rise in housing prices in the last year or two. This led to macroprudential measures being imposed on the sector. Thailand too, saw a rise in property prices. To manage this, Thailand imposed loan-to-value in the real estate market and regulated the credit cards to prevent the build-up of vulnerabilities in the system. The lesson from the 1997 Asian crisis is that crisis will be allowed to happen when one allows vulnerabilities to accumulate.

To avoid landing the economy in a crisis, capital flows, vulnerabilities and the balance sheets of every part of the economy have to be managed well. In fact, this lesson was learnt from Australia. Australia too had capital inflows before 1997, and outflows after 1997. However, Australia was not impacted by the Asian financial crisis.

As such, the key to survival is the strong overall balance sheet of the economy and the proper management of the banking sector. Hence, in 2008, all the balance sheets of Thailand looked very clean. That is exactly why when Thailand entered into the sub-prime crisis, the economy came out of it very easily and no crisis happened in Thailand.

In summary, the appropriate policy mix should be: reserve accumulation, some appreciation along with regional currencies and macroprudential measures (to take care of competitiveness and vulnerabilities).

7.3 Managing Capital Flows: The Case of Singapore

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Trends in Capital Flows (1990 to 2010)

The overall balance of payments is generally positive and on an uptrend (see the dark blue line in Figure 7.3.1). It is driven by the current account surplus that is represented by the pink line, but offset somewhat by the persistent export of capital abroad. However, after the global financial crisis, there has been an upsurge in the overall balance.

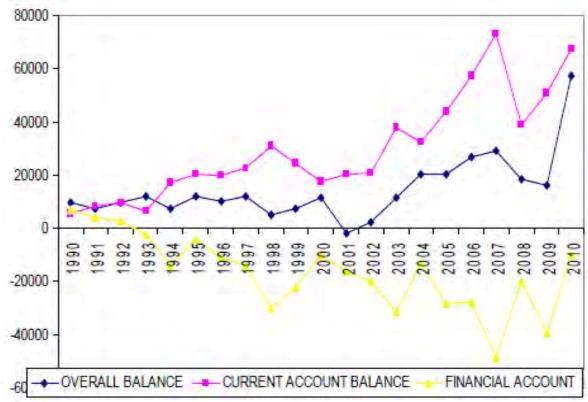
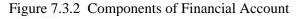


Figure 7.3.1 Overall Balance of Payments

It is very important to differentiate amongst the various types of capital flows. Figure 7.3.2 shows the components of the financial account. Net positive FDI (represented by the pink line) has been consistently offset by net outflows in portfolio and other investment accounts.

Figure 7.3.3 depicts the gross flows. From the figure, strong FDI inflows are observed to be trending up, and did not reverse during the global financial crisis (while the non-reversal of the FDI flows is not just specific to Singapore, country risk factors do play a role in keeping the capital in the country). These type of flows are stable and very beneficial for the economy. In contrast, the inflows to equity (pink line) and debt (yellow line) markets reversed during the crisis. Equity and debt flows have a tendency to be volatile and tend to accentuate the crisis. It is

thus good for Singapore that the magnitude of these flows is small compared to the FDI flows. Bank lending (light blue line), as expected, is the most volatile flow as it is not mitigated by price changes. However, bank lending is offset by large outflows, thereby reducing net flows.



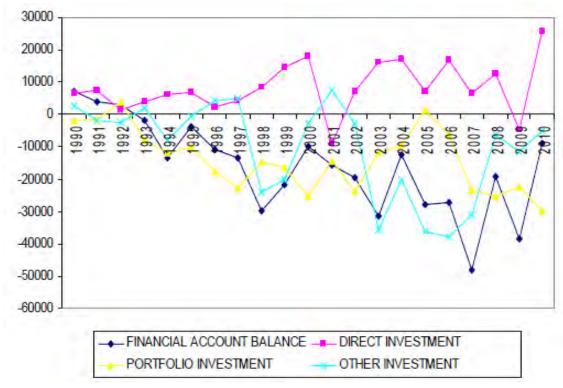
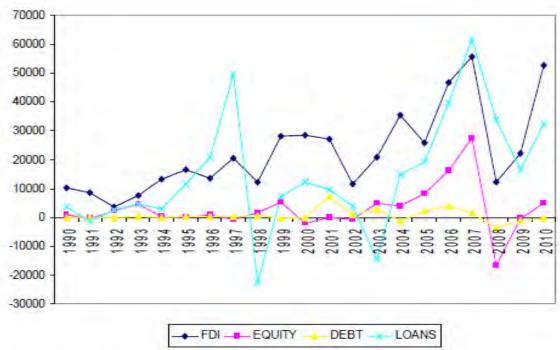


Figure 7.3.3 Gross Capital Inflows



What factors serve to attract beneficial long-term FDI flows while inhibiting volatile speculative flows for Singapore? It is the overall package of policies:

- Strong economic fundamentals.
- Prudent policy management both on the fiscal/monetary side. Some studies have shown that, when it comes to capital reversals, the country risk factor is quite important. If the economy gets its fundamentals right, the reversal should be less.
- Credible exchange rate policy aligned with underlying fundamentals. Whether it is a flexible exchange rate or one that is heavily managed, the important thing is for the exchange rate to reflect underlying fundamentals. That will remove the incentive for speculators to speculate against the currency. In addition, given the huge volumes of capital flows, it is important to have some flexibility in the exchange rate.
- Having the latitude to react promptly and on a sufficiently large scale to economic/financial developments. Whatever an economy does, it will still be hit by capital flow volatility. Hence, it is necessary to have some latitude to react promptly and sufficiently to changing economic and financial developments.
- This is linked to careful monitoring and having sufficient reserves.

Framework for Monetary Management

The Monetary Authority of Singapore's (MAS) stated objective is to ensure low inflation as a sound basis for sustained economic growth. The unique feature in Singapore is that the exchange rate, instead of interest rate, is used as the monetary policy tool. The reason behind the use of the exchange rate has to do with the extreme openness of the Singapore economy to both trade and capital flows; so that the interest rate does not have as much leverage as the exchange rate.

The Singapore dollar is monitored against a trade-weighted (both goods-trade and services-trade) basket of currencies, and is allowed to float within a prescribed policy band. Such an exchange rate regime is known as a Basket-Band-Crawl (BBC) regime.

Under a managed float system, it is important to have sufficiently large foreign reserves, ready for use to defend the currency. More importantly, there is a need for the market participants to be convinced of the commitment of MAS to enforce the policy. That way, participants will try to keep within the band themselves. That in turn reduces the need for frequent intervention operations.

Singapore's experience shows that the intermediate exchange rate regime can be viable if it is supported by consistent economic policies and strong institutions. The BBC is quite flexible, and allows the exchange rate to accommodate shocks arising from capital flows. The band can be widened when there is a lot of volatility or uncertainty in the market. When the volatility subsides, the band is narrowed again.

The center of the band, the trade weighted index, can be realigned and its slope of crawl can also be changed. This is advantageous in aligning the Singapore dollar with changing economic fundamentals. This contributes to the credibility of the system and helps in lessening the severity of the crisis.

Significant capital inflows tend to increase money base and appreciate the Singapore dollar. Foreign exchange intervention carried out to dampen excessive volatility by selling the Singapore dollar would also lead to a rise in the monetary base unless sterilization is carried out. However, MAS is generally in the position to supply funds to, rather than withdraw funds from, the market due to the two channels that drain substantial liquidity out of the system:

- Prudent fiscal management. MAS is usually in receipt of public sector surpluses.
- Net positive contributions to CPF (government administered compulsory savings scheme). There are inflows and outflows from this fund, but on a net basis, it is usually a positive contribution to the fund.

Whether sterilization is carried out or not depends on the balance after the other factors have been taken into consideration. If there is a need for sterilization, it will be more like a partial kind of sterilization.

MAS carries out money market operations, and in most cases, it channels funds back into the system to ensure that there is sufficient, but not excessive, domestic liquidity and also to keep the domestic interest rates stable.

Monetary Developments during the Global Financial Crisis

At the wake of the global financial crisis, MAS adopted a neutral stance by flattening the policy band (from an appreciating band) in October 2008 and re-centered the band downwards in April 2009. From April 2010, MAS repeatedly tightened its monetary policy as the economy rebound, either by re-centering upwards or increasing the slope of the band (see Figure 7.3.4). When there was a lot of volatility in October 2010, the band was widened. We see that there are a few degrees of freedom with this kind of system.

Figure 7.3.5 illustrates why Singapore is not able to use interest rates as its monetary policy tool. There is a very close relationship between the domestic banking system and the substantially larger offshore Asian dollar market. The domestic interest rates are in essence determined by the world money markets. Figure 7.3.5 shows the interest rates co-moving together over time. When the global interest rates were pushed down by central banks in response to the credit crisis (blue line), Singapore's interest rate (red one) fell accordingly.

Broad money M2 fell sharply when the crisis hit in 2008 following the contraction in output and rise in reserve balances (see Figure 7.3.6). For precautionary purposes, banks increased their reserve balances. Although capital inflows rose in 2009, this did not lead to a corresponding rise in money base and M2. M2 stabilized in 2009 as the economy recovered.

However, Singapore could not avoid asset price surges. House prices and stock prices have generally been rising. Swings in asset prices are partly due to the rise and fall of foreign investor interest in these asset markets. Macroprudential policies are very important in tackling this aspect, and one of the measures the government took was to release more land.

Figure 7.3.4 Exchange Rate Policy Stance Index January 1999=100

Figure 7.3.5 Interest Rates

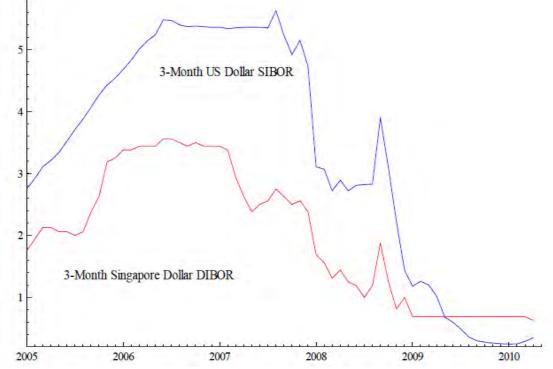
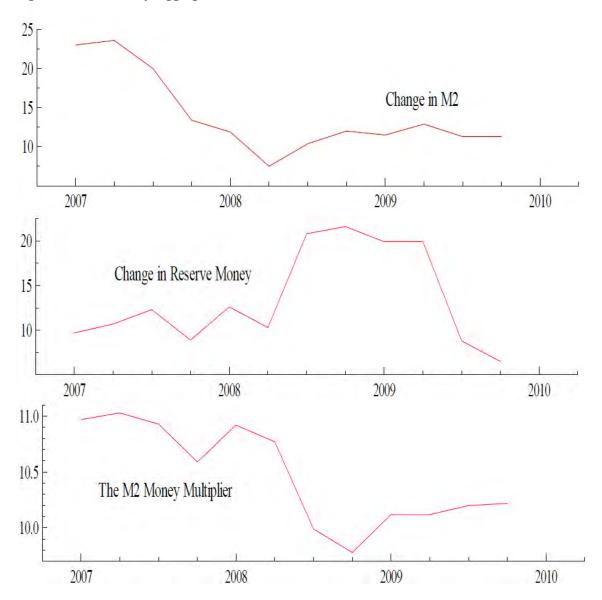


Figure 7.3.6 Monetary Aggregates



To conclude, generally sound economic environments do attract beneficial FDI flows, and a flexible exchange rate system as well as the latitude to react promptly to developments help. Very importantly, monetary policy needs to work in tandem with other policies (fiscal, financial, as well as macro prudential policies) in the economy.

7.4 Macroeconomic Stability & External Shocks

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Chinese Taipei's Economy Overview

Chinese Taipei is a small, open economy which relies heavily on its external sectors, tradables and non-tradables. The importance of the trade sector is often identified as its only source of growth, which is largely a mistake (see Figure 7.4.1). Figure 7.4.1, shows a substantial trade surplus over the years, which adds to the accumulation of Chinese Taipei's foreign reserves.

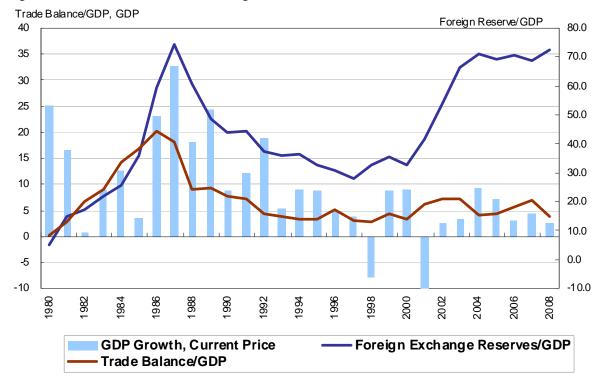
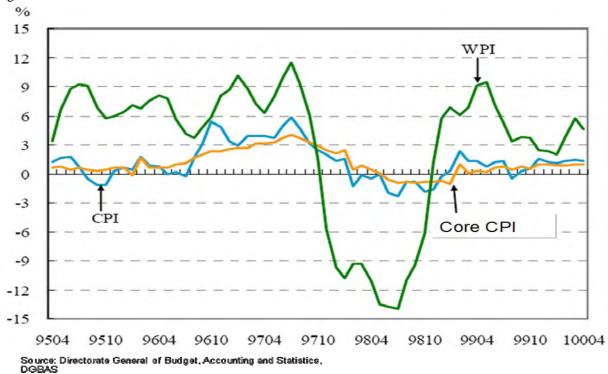


Figure 7.4.1 Trade Balance/GDP, Foreign Reserve/GDP

Chinese Taipei's external sector activities went beyond the export of goods and services. Taipei is also a recipient of substantial foreign investments, as well as a major foreign investor in the region itself.

Chinese Taipei is not as open as Singapore and Hong Kong, but has more global linkage than perhaps most of the economies in the region. TaiEx is Chinese Taipei's capital market exchange, and almost every major movement of TaiEx is linked with international incidents. In fact, its movements are almost identical to that of NASDAQ. Chinese Taipei is extremely internationalized in terms of capital flows, with very limited capital control. As such, whatever happens in the financial crisis is actually more important to Chinese Taipei than to many other economies in the region.

Figure 7.4.2 Inflation



Chinese Taipei has a very enviable economy because its GDP growth is somewhere above world average yet its inflation is somewhere below world average. With regards to inflation, there is a divergence between the wholesale price index (WPI) and the consumer price index (CPI). The main reason behind that is because Chinese Taipei practices very stringent utility control in terms of public utility price control. The inflationary price, despite the WPI fluctuations, does not really get translated to the inflationary data. Price is controlled, and is often upward sticky instead of downward sticky.

Global Financial Reform & Implications

Key recommendations made by IMF and central bankers around the world on the measures that can be taken to attempt to control financial flows are:

- Coverage of regulation
- Macroprudential analysis
- Capital adequacy and accounting
- Risk management of financial institutions
- Remuneration

Implications & Discussions

While the economy is fairly open, most of our financial markets and financial institutions are not as developed as that of the US or Western Europe possess. This is an ongoing challenge. To deal with such a challenge, prospective authorities can increase international cooperation, or cross-border supervisions in order to improve the overall robustness of our economy.

7.5 Comments & Discussion

The speakers are asked their views of the choices they would make if the economy is faced with a huge amount of capital inflow

- Outlive the bubble by passively accumulating foreign exchange reserves to control the monetary consequences; if direct sterilized intervention is not effective then put credit quotas on the domestic banks.
- Try to choke it off with exchange rate appreciation of the domestic currency.
- Use capital controls to prevent it from coming in

According to Professor Kawai, if the volume of inflow is very large and persistent, that could pose a problem for the recipient economy. All three responses are possible, but for emerging economies, a sharp currency appreciation is perhaps a bit too much. Given the size of capital inflows to many emerging market economies, if the authorities allowed complete flexibility and thus appreciation, the degree of currency appreciation will be very significant.

Dr Kobsak also commented on this question. Whether the inflow or outflow is the problem, the main problem with the capital flow is the vulnerabilities it has generated. Capital flow in and out all the time, and if they do not create vulnerabilities, or accumulate enough vulnerability in the system, it is acceptable. Mitigation measures depend on the issues created by the inflows. If the problem is the appreciation of the currency, then intervene. What is important is not to introduce unorthodox capital controls which may cost more to clean up. Basically, put the right measure on the target. Eliminate the chance of it accumulating into a crisis, and then the economy will be left with a good balance sheet.

Following the responses to the question, a member of the audience commented that central banks with a lot of money need not necessarily be able to prevent their currency from appreciating or depreciating because speculators tend to be sharper than central bankers. MAS, with lots of holdings in USD, also made losses when the USD exchange rate depreciated.

To this, Professor Kawai agreed that speculative pressure is often difficult to resist, in particular when there is an undervaluation pressure in the underlying relative to the fundamentals. Worse, if there is an undervaluation and capital inflows at the same time, what the central bank should do is a very challenging issue. That is the situation that China is facing, that is the situation that many economies faced and some of them eventually ended up with very sharp exchange rate adjustments. Professor Kawai suggested that economies should reduce undervaluation and overvaluation during times of peace and avoid such situations. However, it certainly does not mean that the economy should adopt a free flexible exchange rate regime. From that perspective, he has always been impressed by the way the MAS has been managing the exchange rate. At the time of the Asian financial crisis, there was no crisis in Singapore although there was some impact this time around. Singapore has been managing the exchange rate very well, even though Singapore has no purely flexible exchange rate arrangement.

Associate Professor Chow also agreed with the comment that, when reserves are all held in the USD, that is kind of precarious given the current situation. While central banks are all trying to diversify their reserves, they are facing some difficulty because whether a currency is selected as the reserve is tied to how much this currency is also being used in its other functions, such as, as

a vehicle of currency in trade, or as a unit of account and so on. It will take a long time for the USD to be replaced by another currency as a key currency.