

Lessons from Asia's Experiences with Sudden Capital Flows

Final Report

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INTRODUCTION

Economic growth in many Asian countries has coincided with economic liberalization, especially in the financial sector. As capital inflows to the region increased, Asian countries have been able to take advantage of them as a source of growth. Doing so, however, has also rendered these countries more vulnerable to external financial shocks.

From the early years of the 21st century, low interest rates in the major developed countries, such as the United States and Japan, led to a surge in international liquidity. This excess liquidity encouraged cross-country capital flows when stock markets were stagnant in the mature markets, stimulating rapid capital inflows to the emerging markets in pursuit of higher yields. However, as speculative capital inflows increase, the risk of a potential rapid outflow happening also accumulates. When such an outflow does actually occur, countries with high dependence on international trade are likely to be among the first to become prone to upheavals in the foreign exchange markets and to their concomitant adverse effects. A financial crisis can involve especially severe turbulences in currency and asset markets, giving rise to macroeconomic instability and further contagion to other countries in the region and beyond.

Each country has to a greater or lesser extent its own monitoring system for capital flows. Since these flows are highly linked to the performance of Asian financial markets, exposure to rapid capital outflows in times of market distress is always a

possibility. Considering the often contagious nature of capital flows, it is meaningful to review the recent experiences in Asia in this particular framework and to discuss the necessity of building an appropriate regional safety net, which may somehow be designed in turn to link advantageously to a global safety net where possible. The concept represents a pre-emptive approach, comparable to the rationale that was fundamental to the creation of the Chiang Mai Initiative (CMI), adopted after the Asian Financial Crisis.

In this connection, among the questions that have been raised rather often in the region are: what would be the best policy for an individual country to deal with the situation? And what regional cooperation initiatives can possibly be introduced to best utilize capital inflows while maintaining prudent macroeconomic stability? In order to further explore such issues, the Fiscal Policy Research Institute (FPRI) proposes to conduct a study from both theoretical and empirical perspectives. In what follows, this proposal, serving as a broad guideline with policy implications for future applications, will address a major set of components relevant to the subject matter in a brief and concise manner.

1.1.Objective of the Study

The FPRI's proposal for a study on "Lessons from Asia's Experiences with Sudden Capital Flows" has the following objectives:

- 1.1.1. To review the recent experiences with rapid capital inflows and outflows of Asian countries,
- 1.1.2. To review the outcomes of rapid capital flows in macroeconomic and financial contexts and,
- 1.1.3. To identify appropriate policy measures to minimize the instability caused by rapid capital flows in the region, especially as pertain to sudden and unexpected adverse and massive capital flow reversals.

1.2. Scope of the Study

In order to achieve the above objectives of the proposed research project, a possible scope of the study can be outlined as follows:

1. **The recent experiences of rapid capital inflows and outflows in Asian countries**

Review and analyze the recent experiences with rapid capital inflows and outflows of Asian countries.

The study will discuss existing theoretical and empirical studies on capital flows, conducting a survey of the related literature and policy issues in the process. In this regard, we will determine the magnitude and types of capital inflows and outflows in the Asian countries, focusing on the ASEAN+3 and subject to data availability. All in all, the purpose of this section will be to assess the extent of volatility in recent capital flows in Asia.

2. **The outcomes of rapid capital flows in macroeconomic and financial contexts**

Review and analyze the outcomes of rapid capital flows in macroeconomic and financial contexts.

This section will integrate the key findings emerging from the review of literature. An examination of the capital-flow allocation will be conducted along with an investigation into its impacts on the financial system and on the macroeconomy. We will describe and discuss the policy framework implemented by the monetary authorities of certain countries for effectively managing the capital flows with the goals of macroeconomic and financial stability.

3. Policy measures to minimize the instability caused by rapid capital flows in the region.

Identify appropriate policy measures to minimize the instability caused by rapid capital flows in the region.

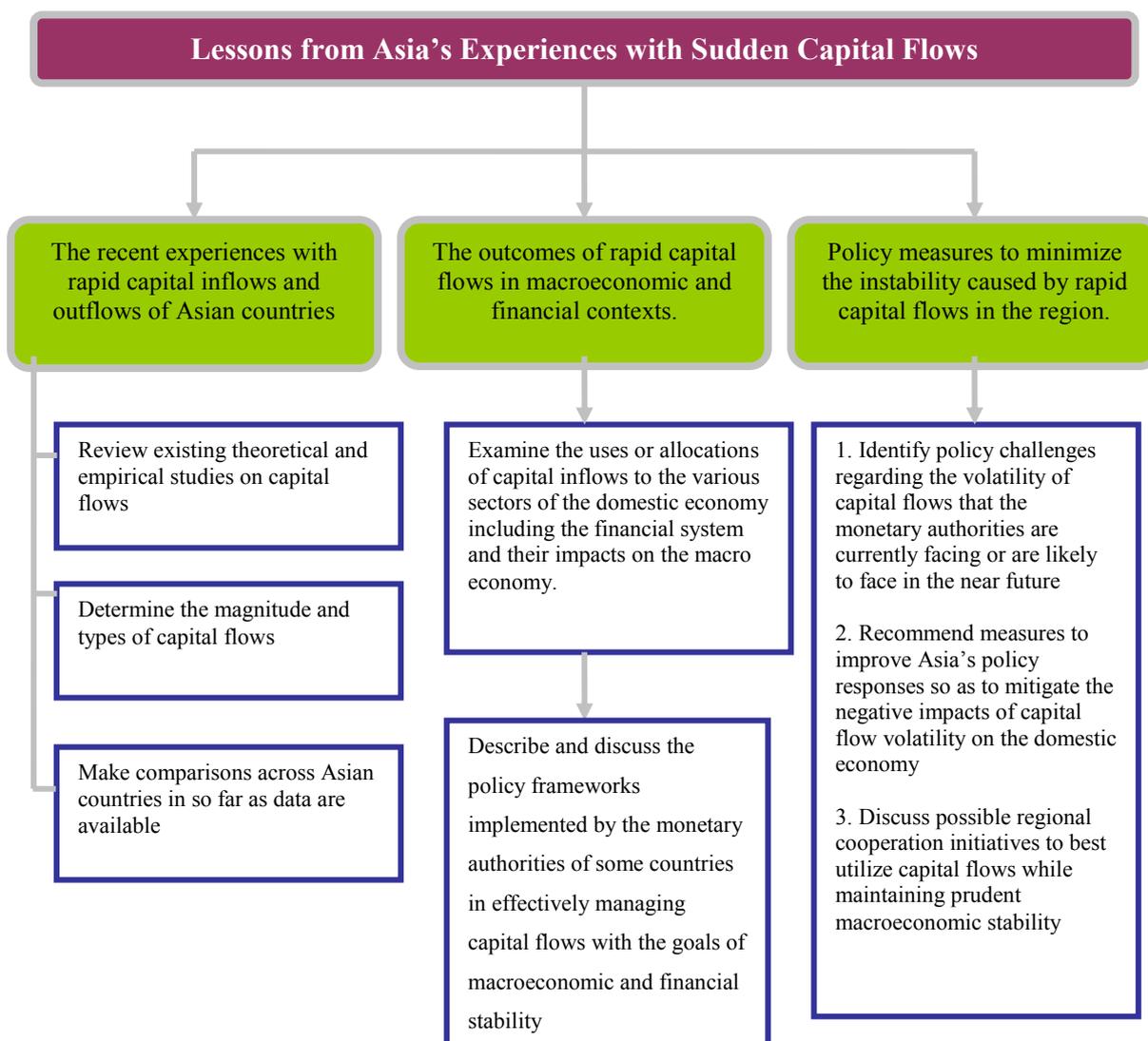
This section will gauge into the policy responses among the Asian countries in dealing with the volatility of capital flows. The policy challenges regarding the volatility of capital flows that are currently facing or are likely to face the monetary authorities of the region in the near future will also be examined.

The proposed study is determined to arrive at recommendations useful to the improvement of Asia's policy responses aimed at mitigating the negative impacts on the domestic economy as caused by the volatility in cross-border capital flows, with a particular interest in and emphasis on swift and unexpected capital flow reversals that are both massive and unfavourable in nature. In this light, we will discuss regional cooperation initiatives that can possibly be introduced to best utilize capital flows while maintaining prudent macroeconomic stability. Discussion of some of the proposals to reform the international financial architecture that can support the efforts of the emerging Asian economies to minimize, if not avoid, the negative impacts of capital flow volatility on their domestic economies will also be highlighted.

1.3.Organization of the Study

This study is organized as followed.

Figure 1.3.1: Organization of the Study



LITERATURE REVIEWS

Theoretical Perspectives and Empirical Evidence Regarding Free Capital Flows

The theoretical standard setting argued that under proper assumptions, capital moves from a country with a lower-rate of return to a country with a higher rate of return. This should lead to a more efficient allocation of resources between these two countries. An availability of free capital also helps nation to smooth consumption and investment in response to exogenous shock. In addition, capital flows along with technical know-how, should promote growth to the recipient country. And thus the free flow of capital conceptually relates to volatility reduction and growth enhancement.

Having said that, there are disagreements with respect to benefits of capital liberalization. Bhagawati (1998), Obstfeld (2009), and Rodrik and Subramanian (2009) argue against financial liberalization by using the Asian crisis, and other global crisis to question the merits of financial globalization. The review of policies shows that full capital account opening has to be taken with caution by most Asian and emerging economies.

In theory, benefits from capital liberalization stem from effective resource allocation from develop economies to less-developed economies, capital would engine to drive return and productivity. However in practice, Mohan and Kapur (2010) find the opposite results for the case of Asian economies as their saving rates have exceeded

their investment rates and so resources have gone to the reverse direction. That means the economic gains as suggested by theories are not possible. Results by Rodrik and Subramanian (2009) also support the same argument.

Most empirical works focus on measuring the benefits of capital flows by looking at contribution of capital account openness to an economic growth, and majority of which show that the empirical findings are either inconclusive or not theoretical supportive. While Quinn (1997) and Prasad, Rajan, and Subramanian (2007) finds a positive relationship between financial account liberalization and economic growth, Grilli and Milesi-Ferretti (1995) and Rodrik (1998) do not find such relationship. Prasad et al.(2003) argue that financial integration is neither a necessary nor sufficient condition for achieving an economic growth.

Not only the limited growth contributed by capital account openness, some empirical works suggest that most of developing countries with huge capital flows experience great volatility in consumption. Kose et al. (2003) show that volatility of consumption relative to income increased from the 1980s to the 1990s for group of countries that are more financially open whereas the volatility fell for developing countries with lesser degree of financially integration. To this content, Prasad et al.(2003) show that the limited risk diversification of capital account openness is associated with the volatility of capital flowing into the opened-developing markets and this explains why they tend to receive more inflows in a good time than in a bad time. In addition, the study from Dornbusch et al.(1995) find that some emerging economies face sudden stop if volatility is great.

Mohan (2004) argues that large volatility is caused by exchange rate movement and it explains why capital flows can potentially have an adverse impact of the domestic economy. Unlike the case of developed countries that have matured and well-developed financial markets with the low degree of exchange rate pass through, the developing countries, including emerging Asia, have relatively high degree of exchange

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rate pass through resulting from their specialization in labor-intensive and low-technology products with very low-profit margin and prone to intensive price competition. The exchange rate volatility thus has significant impact on employment, productivity, and consequently economic growth.

In sum, literature reviews above suggest that the capital account liberalization does not contribute to growth in developing countries. Instead it can cause significant impact and volatility that have negatively affected growth of developing countries. So capital controls come to play an important role in the situation where capital surge is abrupt and evasive to economies. Anyway, impressions regarding capital controls are mixed, for instance Johnston and Ryan, Grilli and Milesti-Ferretti (1995) find that controls essentially do not affect volume and composition of capital flows. Vinals(1996) argues that “capital controls do not facilitate the defense of exchange-rate stability in the short-run, but rather hampering it in the medium term.” Some believe that the controls give authorities some space to organize financial and investment realignments and to suppress speculative pressure. According to Ostry et.al.(2010) the rationale of imposing capital control is (i) to limit the volatility of exchange rate movement and (ii) to limit crisis vulnerability due to excessive risks stemming from foreign capital flows. Krugman(1998) suggests that temporary controls provide suffering Asian countries some times for respite, Rodrik (1998) also supports the same argument. Ostry et. al.(2010) suggests that sometimes capital controls are inevitable, any decision to impose capital controls has to be taken with caution as numbers economic repercussions are likely. They show that controls by some countries might lead others to follow and consequently causing regional contagion. And thus this issue should mutually be taken on the regional basis as the repercussion can be wide-spreading throughout region.

2.1 Capital Inflows: Policy Responses

Although capital flows to developing countries generally provide great benefits as a low-cost financing and enhance market confidence of the economies, sudden capital surges may cause troubles to the receiving economies as it may complicate macroeconomic management and risks. For instance, additional financing to the countries can discourage domestic savings, create boom in domestic demand leading overheating and a combination of accelerating inflation and a widening current account deficit through the appreciation of the exchange rate. They may also lead to asset price bubbles and increase risks in the financial sector.

To what extent the country should respond to capital surges depend on circumstances facing that country. But mostly the policy options to deal with capital surges are as follow;

Exchange Rate Adjustment

This policy option is adopted when receiving countries want to avoid the expansion of monetary aggregates due to capital inflows; it can reduce international reserve accumulation by allowing nominal exchange rate to appreciate. This policy can give the insulation to the money supply from the inflows and the autonomy of monetary policy. However, since the appreciation may cause an economic repercussion especially lost of competitiveness in tradable sector, this policy option is suitable for countries whose their exchange rates are undervalued. According to Kawai and Takagi (2010), the effectiveness of this measure depends on band of exchange rate movement. If the band is large, the large appreciation will be great vice and versa. To this regard, empirical evidence is inconclusive as Reinhart and Reinhart (1998) find that greater exchange rate flexibility could produce the deterrent effect of greater exchange rate variability on speculative flows.

Sterilized Intervention

Sterilized Intervention has been the most commonly used instrument. It involves the exchange of domestic bonds for foreign assets, often through open market operations, aiming to neutralize the increase in base money arising from purchases of foreign currency. Receiving economies may intervene to keep exchange rate at current level or to postpone an appreciation. Sterilized intervention is useful in economies that want to increase their reserves and in the economies where inflation concerns are significant. Despite of its benefits, sterilized intervention comes with cost in the case where domestic financial markets may not be able to absorb sterilization bonds, and there is a fiscal cost associated with the differential between interest paid on domestic bonds and interest earned on reserves. Reinhart and Reinhart (1998) argue that sterilization may induce another round of capital inflows as it causes domestic interest rate to increase as happened in Indonesia and Thailand in 1990s.

Fiscal Policy

Fiscal tightening involves a reduction in the absorption of resources by public sector to offset the impact from foreign transfer by private sector. According to Schadler (2008) and IMF (2007), fiscal tightening could reduce pressure on interest rates and thus decrease the incentives for interest rate-induced capital inflows, which in turn could help facilitating other capital controls measures take their courses. Although fiscal tightening itself cannot entirely contain the capital inflows, evidences show that lacking of this supported policy may reduce the effectiveness of other capital control measures like the case of Colombia in 1991. Despite of that, the implementation of fiscal tightening is subject to limitations which are; 1) fiscal policy lacks of flexibility as it requires cabinet action; 2) there is a limit to the extent that fiscal policy can be tightened and; 3) fiscal tightening might give rise to the adverse effect by signaling that authorities are implementing good macroeconomic policy and consequently attract more surge of capital flows.

Liberalization of Capital Outflows

A relaxation of capital controls on residents' outward investment can suppress the pressure from exchange rate appreciation from capital inflows without hampering country's financial openness. Most countries adopt this method as a supported measure with other measures. For instance, Chile liberalized capital outflows in conjunction with implemented URRs during early 1990s. Malaysia also did the similar thing in 2003-2008. Korea used this measure in 2005 to stem appreciation pressures by eliminating most of controls. The upper limit on Korean insurance companies' assets in foreign currency was increased to 30 percent and repatriation requirements on proceeds from resident capital transactions abroad were relaxed in 2006. Ceiling on individuals' FDI and real estate purchases were lifting in 2006 and 2008 respectively.

The impact of this measure however, has two directions. On one hand, it can reduce net inflows as some of the inflows are offset by outflows. As for case of Korea where the simultaneous implementation of both inflows and outflows liberalization resulted in slight increase in outflows, alleviating some of appreciation pressure on exchange rate in 2006-2007. On the other hand, it may invite more capital as it promises the high flexibility of capital repatriation. This is what actually happened in Malaysia and Thailand during 1990s in the previous surge of capital inflows.

Controls on Capital Inflows

In many cases, typical macroeconomic policies do not suffice to control capital inflows especially when inflows are substantially surging into the countries. Thus transitory policy toolkit is formed to take care of the problem. Controls on capital inflows take various forms as follow,

- 1) Prudential Regulation and Supervision is used to regulate risks taken by financial institutions, including risks related to cross-border financial transactions. Prudential regulations are designed to target at financial

institutions and large corporations as they are easier for the authorities to monitor and enforce. The measures include reporting or approval requirements, limits on short-term external borrowing, and limitations on foreign currency exposure. Grenville (2008) argues that limiting the role of financial institutions in intermediating inflows would help contain the adverse impact of capital surge.

- 2) Administrative measures typically seek to directly affect the volume of the relevant cross-border transactions and usually impose obligations on the banking systems. Johnston and Ryan (1994) show that capital controls are more effective in industrial countries than in developing countries since industrial countries are more bureaucratic competent and possess more administrative measures to support capital control. From the country experiences, China seems to be the country that use extensive administrative measures altogether with strong enforcement to support the gradual process of liberalization. China controls most of capital transaction especially portfolio equity and fixed- income investment. The limited transactions of which are only allow to qualified foreign institutional investors. Resident and bank investment are subject to central bank's approval while some activities are prohibited (table1) Ma and McCauley(2007) find that tight capital control in China is effective in controlling the swing of capital flows and compositions. The difference between onshore and offshore renminbi suggests that capital controls in China has ability to reduce exchange rate pressure.

- 3) Unremunerated Reserve Requirements URRs are one of the indirect controls¹ that are implemented widely across countries. Columbia

¹ Market based or indirect controls, on the other hand, discourage capital movement by making them more costly to undertake any financial transactions. Market based controls include multiple exchange rate system, explicit and implicit taxation of cross-border financial flows.

introduced control in 2007 and Thailand used URRs in 2006 as to tame down the capital inflows and suppress appreciation pressure. As mentioned earlier, URRs mandate a certain percentage of inflows to be deposited with the central bank for a given period of time. URRs are meant to be used only on a temporary basis as countries want to isolate themselves from free stream of capital flows. Thus URRs are normally lifted when the capital surge-triggered situation is relieved. According to Fischer (1998), URRs are more effective on short-term flows than on long-term flows since long-term flows are mostly driven by fundamentals. About effectiveness of URRs in controlling capital inflows, table 1 shows that on the broader sense, URRs have the following characteristics; 1) URRs reduce the volume of capital inflows in the short run, but lost effectiveness over time; 2) URRs lengthen maturity of inflows; 3) URRs are effective in raising domestic interests but not in preventing real exchange rate appreciation; and 4) URRs have large impact on small and medium-sized firms.

- 4) Tax systems are also one of the indirect controls that are normally imposed on certain investment transactions. Taxation is believed to provide for greater degree of monetary independence. Empirically, Brazil imposed tax on short-term capital transaction several times in 1993-1997. In 1995, Authorities raised tax rates on certain inflows and adopt various tax rates related to maturity of loans as well as composition. And later in 1996, additional measures were introduced. Brazil imposed taxation again in 2008-2009 (table 1). IMF(2010) conduct the effectiveness test of the control in 1990s and find that tax introduction does not have significant effect on reducing net capital flows in short-term and on exchange rate pressure. The results explain that effectiveness of taxation depends on 1) the ability of taxation in controlling targeted inflows and 2) the development of financial markets and an opportunity that investors could use to avoid the controls. For the

case of Brazil, taxation lost effectiveness due to its advanced financial markets. The active currency futures markets as well as OTC derivatives markets are used as tools for circumvention through financial engineering, leading to the need for further restrictions.

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Table 2.1.1: Controls on Capital Inflows adopted by Various Countries

Measures	Type of Capital Flow	Countries	Effectiveness		
			Reduced Net Inflows	Change the Compositions	Reduce Exchange Rate Pressure
Tax	Short-term capital inflows, loans, and fixed-income securities	Brazil (1993-1997, 2008, 2009-2010), Colombia (1993-1998)	Yes (Short Term) No	Yes (Short Term) No	No No
	Margin deposits on futures markets	Brazil (2009-2010)	No	Yes	No
Unremunerated Reserve Requirements	Banks' external borrowing later extended to non-debt flows	Chile (1991-1998)	Yes (Short Term)	Yes	No
	Banks' short-term external borrowing	Colombia (1993-1998)	Yes (Short Term)	Yes	No
	External borrowing and fixed-income portfolio flows	Thailand (2006-2008)	Yes (Short Term)	No	No
	Banks' external borrowing, portfolio inflows	Colombia (2007-2008)	No	No	No
Administrative Measures	Minimum maturity requirement on certain types of inflows	Brazil (1993-1997)	Yes (Short Term)	Yes (Short Term)	No
	Prohibitions against sale of short-term debt securities and money market instruments to non-residents, and against commercial banks' engagement in no-trade-related swap or forward transactions with non-residents	Malaysia (1994)	Yes	Yes	Yes (Short Term)
	Prohibitions of certain types of trading by domestic banks	Indonesia (2001-2006)			
	Prohibitions of all non-residents' investments in money market and derivatives market	China (2003-2009)	Yes	Yes	n/a
	Residents' Investments were subjected to prior approval from central bank	China (2003-2009)	Yes	Yes	n/a
	Limited investment granted to institutional non-residents investors	China (2003-2009), India (2002-2008)	Yes Yes	Yes Yes	n/a Yes
Prudential measures with an element of capital control	Banks' external borrowing	Croatia (2004-2008), Indonesia (1991-1997)	Yes	n/a	Yes
	Increased discount rate	Chile (1991-1998)	n/a	n/a	n/a

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Measures	Type of Capital Flow	Countries	Effectiveness		
			Reduced Net Inflows	Change the Compositions	Reduce Exchange Rate Pressure
	Restrictions on short-term external borrowing and lending in local currency	Indonesia(2001-2006), Thailand(1995-1997)	Yes	Yes	Yes
	Imposed reserve requirement on certain types of investors and transactions	Indonesia(2001-2006), Malaysia(1994), Thailand(1995-1997)	Yes Yes	Yes Yes	Yes(Short Term) No
	Uplifted of the minimum capital adequacy requirement for commercial banks	Thailand(1995-1997)	Yes	Yes	No
	Non-interest-bearing deposit or longer term holding period of investment requirement	Indonesia(2010), Malaysia (1994),	n/a Yes	n/a Yes	n/a Yes (Short Term)
	Imposition of limits on the currency derivative positions	Colombia(1993-1998), Indonesia (1991-1997), Korea (2010), Thailand (1995-1997)	No n/a Yes	Yes n/a Yes	No n/a No
	Widening of the overnight interbank money market rate corridor	Indonesia (2010)	n/a	n/a	n/a
	Ceiling on banks' net liability position	Malaysia (1994)	Yes	Yes	Yes (Short Term)
	Issuance of long term investment instruments	Indonesia (2010)	n/a	n/a	n/a
	Removal of tax incentives on gains or impose additional taxes on certain type of portfolio investment	Brazil(2009-2010), Thailand(2010)	n/a	n/a	n/a
	Increased minimum average amortization term for loans and time for reimbursement for income tax	Brazil (1993-1997)	Yes (Short Term)	Yes (Short Term)	No
	Limit usage of foreign currencies loan	Korea (2010)	n/a	n/a	n/a
	Report submission	Korea(2010), Thailand(2010)	n/a n/a	n/a n/a	n/a n/a

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Measures	Type of Capital Flow	Countries	Effectiveness		
			Reduced Net Inflows	Change the Compositions	Reduce Exchange Rate Pressure
Capital outflow liberalization	Eased or lifted of controls on one or more type of capital account transaction of residents abroad	Brazil (2005-2006), Chile (2003, 2005,2008), China(2006-2007), Korea(2005-2008), Malaysia(1994, 2003-2008), Singapore(2004) Thailand(1995-1997, 2008-2010)	Yes	n/a	Yes

Source: IMF (2010), Ariyoshi et. al.(2000), Ohta(2010), Ostry et al (2010)

2.2 Capital Outflows: Policy Responses

According to Ariyoshi et. al.(2000), motivation behind the capital outflows control is to limit downward pressure on countries' currencies. Restrictions are applied to short-term capital transactions in order to tame down the volatility of speculative flows. They serve as an alternative to the prompt adjustment of economic policies and they also are employed to insulate an economy from volatility of international financial markets. Policy options that emerging countries could do to restore capital flows are as follow;

Conduct of Monetary Policy

1) Tight Monetary Policy

This method seems to be a standard prescription for monetary authorities. Interest rates are raised to increase cost of speculative attacks, to encourage more capital inflows, and to restore confidence in the value of the currency. Most countries in Asia in the midst of crisis in 1990s for instance, Thailand, Malaysia, and Korea were prescribed by IMF to tighten monetary policy. In Thailand, the real interest rates rose to 13% in 1997 while the rest had similar experience. According to Sangsubhan and Vorawangso (2007), tight monetary policies were not able to keep exchange rate in check as confidence erodes. Instead, the high interest rates triggered liquidity shortage and consequently high NPLs. Furman and Stiglitz (1998), Lahiri and Vegh(2002), Basurto and Ghosh(2001), Kraay(2003), and Goldfajn and Gupta(2003) argue that there is a trade-off between interest rate and exchange rate during the capital crisis episode. Bergsten, Davanne and Jacquet(1999) view that domestic interest rate should not be raised since the default risk premium will be rising correspondingly as correlation between both is high during the crisis period. High interest rates, on the other hand, will induce credit crunch in private sector, worsening the situation as NPLs

rise and further damaging economies. Thus, the tight monetary policies are proved to be not quite effective in maintaining exchange rate stability especially during crisis experience in 1990s.

2) Expansionary Monetary Policy

Another school of thought views that expansionary monetary policy can reduce output collapse during the sudden stop period. According to Cavallo and Izquierdo (2009), countries are able to stimulate economy and regain confidence by adopting monetary policies during the period of sudden stop and external credit crunch. Thailand for instance, abandoned the tight monetary policy and reduced interest rate in 1998 to complement the fiscal policy in stimulating domestic demand and supply liquidity into the banking system, which in turn, promoting the real economic activity and restore investors' confidence. Note that success of policy implementation depends on to what extent is the country's level of liability dollarization. Since this will affect the balance sheet position due to exchange rate change, leading to an output loss of the economies. Cross-country evidence suggests that more liability dollarization triggers fear of floating and that make it difficult for policy maker to ease off level of interest rates. For the case where expansionary monetary policy cannot be adopted, Cavallo and Izquierdo (2009) argue that countries may consider implementing external assistance package to mitigate the impact of the sudden stop like the case of Peru².

² Peru heavily bared dollar-denominated liability in 1998. The dollarization ratio, measured as a fraction of banks' loans in foreign currency, accounted for 75 percent which made the Central bank reluctant to implement expansionary policy. Therefore series of additional measures were launched to relieve liquidity shortage in the banking system instead. The measures included 1) credit facilities in foreign currencies; 2) reduction in the average and marginal reserve requirements in foreign currency deposits; 3) reduction in the minimum liquidity requirement, and 4) risk classification exemption.

Conduct of Fiscal Policy

1) Tight Fiscal Policy

Tight fiscal policy came as a package with tight monetary policy prescribed by the IMF during the 1990s crisis. The objective of which is to reduce the government expenditure and seek more revenue to correct the current account deficit shrinkage. Countries which applied for the IMF stabilization program, i.e., Thailand, Indonesia, and South Korea had to carry this policy commitment. According to the program ³, countries had to maintain a balanced budget or small budgetary surplus on the expectation that economic growth in 1998 would be around 3%. Radelet and Sachs (1998) argue against this condition that IMF failed to make a careful analysis before prescribing one-size-fits-all policies to the crisis-hit countries in Asia without consideration of the different symptoms among these trouble countries. Countries in Asia either reversed the fiscal policies or implemented the off-budget program in 1998 afterwards as the IMF condition was not able to resolve the situation.

2) Expansionary Fiscal Policy

The rationale of which is to make the economic adjustment less painful and to mitigate the impact from international credit crunch. According to Cavallo and Izquierdo (2009), successful crisis resolution is more likely to be achieved when countries are able to stimulate the economy with expansionary fiscal altogether with monetary policies during the sudden stop period. But there are no shortcuts. Countries must be prepared to auto-finance the stimulus through a combination of fiscal savings. For the countries with lack of savings during period of economic boom may found it difficult to follow expansionary policy since expectations regard

³ The IMF stabilization program was initially announced in 1997.

output contraction are high at the time of crisis, and countries' credibility about future tax collection to compensate for current expenditure may be low. In that case, countries might seek other alternative source of funds i.e., loans to finance these fiscal expenditures.

Controls on Capital Outflows

In countries that face potential (or actual) capital flow reversals or foreign exchange constraints, controls on outflows may help stabilize the foreign exchange market and avoid external debt. It is prescribed to freeze level of foreign capital to stay at the country in order to provide a temporary respite of varying duration to the authorities. Controls on capital outflows broadly take forms of market-based (price-based) or administrative (quantity-based) like the case of controls on capital inflows. And both of them are mostly implemented altogether to slow the outflows stream. Controls aimed at dealing with currencies speculation and stabilizing foreign exchange markets against the sharply depletion of foreign exchange reserves. According to Ariyoshi et. al.(2000), capital controls measures are used in case there are limitations of using interest rate defense. Since there are market concerns about adverse effect regarding to fiscal burden and impact on the banking systems. Generally, the controls on capital outflows can include;

1) Quantity Control

Quantity controls are done over transactions that are potentially for speculations by residents as well as nonresidents In Spain (1992), the outflow controls were in the form of several compulsory, 100 percent non-interest-bearing deposit requirements on domestic banks to impose additional costs to interfere the net short position taken by speculator. The measure also included a 100 percent reserve requirement on the increments in peseta-denominated liabilities of domestic banks with their branches, subsidiaries, and parent companies. The objective of which is

to make speculative activities more costly for Spanish banks to engage in transactions that were aimed to speculate against the peseta.

In Thailand, the non-bank lending in foreign currencies must require approvals from the Bank of Thailand. For non-residents, credit facilities in form of derivatives were limited and direct loans were strictly prohibited. Resident foreign currency accounts required authorization from the Bank of Thailand except for inward funds to the country. In addition, financial institutions in Thailand were limited the foreign exchange position no less than 15 percent of its capital funds, or 5 million USD whichever is higher.

2) Exchange Control

In Thailand (1998), a two-tier currency market was created in order to segment onshore market from offshore markets through a mix of administrative and market-based measures. Thai banks were required to suspend all transactions with nonresidents that might lead to a buildup of baht positions outside the country. The repatriation of proceeds from asset sales in baht were prohibited and conversion had to be on the onshore quoted exchange rates.

In Malaysia (1998), the controls were wide-ranging. The measures included the stabilization of onshore ringgit market. All legal channels for a buildup of ringgit funds offshore were eliminated. Offshore ringgit was required to return onshore. The use of ringgit in trade payments and offshore trading of ringgit assets were prohibited, and transfers between external accounts of nonresidents and ringgit credit facilities between residents and nonresidents were prohibited. Not only transactions made by nonresidents, transfers of capital by residents were also limited, and repatriation of nonresident portfolio capital was blocked for a year. The authorities also pegged the ringgit to the U.S. dollar later, the one year-block was replaced by exit levies on the repatriation of portfolio capital.

Effectiveness of Controls on Capital Outflows

The main objective of imposing controls on capital outflows is to provide authorities respite and short breathe to cope with economic volatility in the countries. Thus, effectiveness of capital controls should be carefully designed to ensure that the measures are wide –ranging and can deal with all potential speculative activities and circumvention efforts. In addition, timing has to be right. Policy measures should not be too short-lived since the credibility might be questioned, on the other hand they should not be imposed too long since investor confidence might be hampered. Among the three countries in scope of study, Ariyoshi et. al.(2000) point that Malaysia was success in eliminating potential sources of access to ringgit by nonresidents effectively eliminated the offshore ringgit market and together with the restrictions on nonresidents' repatriation of portfolio capital and on residents' outward investments. The wide-ranging policy altogether with supported macroeconomic and financial policies, the controls helped to stabilize the exchange rate and contain capital outflows. For the case of Spain and Thailand, although the controls succeeded in curtailing local currency funds by speculators and ceasing speculative pressures for a moments, too soon capital controls leaking invited more currency attacks and resulted in currency float in 1992 for Spain and in 1998 for Thailand.

In conclusion Ariyoshi et. al. (2000) suggest that main factors to contribute to effectiveness of capital controls on capital outflows are; i) design of the controls must be wide ranging and cover all possible targeted outflows; ii) investor's confidence toward countries which impose capital control; iii) timing of the control measures; iv) monetary policies and fiscal policies in conjunction with controls; v) the ability to control offshore market activity to suppress speculative pressures; and vi) the extent to which capital controls discourage other types of investment for example, FDI and trade-related transaction.

Table 2.2.1: Controls on Capital Outflows adopted by Various Countries

Policy Theme	Policy Measures	Countries
- Quantity Control	- Non- interest-bearing deposit of an amount in pesetas, equivalent to 100 percent of 1) the increments in peseta denominated liabilities and domestic banks with their branches, subsidiaries, and parents companies and 2) the increments in loans and deposits to nonresidents denominated in pesetas. The measures later were replaced by non-interest-bearing of an amount in pesetas equivalent to 100 percent of 1) the pesetas sales against foreign currency to nonresidents with same-day value, 2) the increment in net sales of pesetas against foreign exchange to nonresidents, and 3) the increment in the forward sale of foreign exchange against pesetas to nonresidents	Spain(1992)
	- Non-bank lending in foreign currencies required approvals from the Bank of Thailand except for lending to related companies (whose shares of 25 percent or more were owned by the resident lender) abroad not exceeding 10 million USD	
	- Nonresidents can get the maximum of 50 million baht of credit facilities in form of derivatives (including swaps and forwards) from all local financial institutions combined without underlying transactions	
	-Resident foreign currency accounts required authorization except for funds brought in from abroad. There is an obligation to pay authorized persons abroad within 6 months of deposit date, and the amount of deposit must be less than obligation. Outstanding account balances in all accounts were allowed up to 500,000 USD for a natural person and 10,000,000 for a juridical person.	Thailand(1997-1998)
	- End of day's net foreign exchange position in any individual foreign currency must not exceed 15 percent of its capital funds, or 5,000,000 USD, whichever is higher	

Policy Theme	Policy Measures	Countries
- Exchange Control	- Limits on non-trade-related swap transactions with nonresident were imposed	Malaysia (1997-1998)
	- Ringgit held aboard were required to repatriated back to the country	
- Repatriation of portfolio capital held by nonresidents were blocked by 12 months (This measure was later replaced by the declining scale of exit levies)		
- Prohibition of the ringgit asset trading offshore		
-Demonetization of large denominated ringgit notes		
-Amending the Companies Act to limit dividend payments		
- Ringgit was pegged to the U.S. dollar		
- Thai banks were required to suspend all transactions with nonresidents that might lead to a buildup of baht positions outside the country.	Thailand(1997-1998)	
-The repatriation of proceeds from asset sales in baht was prohibited and conversion had to be on the onshore quoted exchange rates.		

Source: Ariyoshi (2000), Sangsubhan and Vorawangso (2007)

THE RECENT EXPERIENCES OF RAPID CAPITAL FLOWS IN ASEAN+3 COUNTRIES

Considering the often contagious nature of capital flows, it is meaningful to review the recent experiences in Asia in this particular framework. We investigate the magnitude and types of capital inflows and outflows in the Asian countries, focusing on the ASEAN+3 and subject to data availability. All in all, the purpose of this section will be to assess the extent of volatility in recent capital flows in Asia.

3.1 Empirical Evidence of the Types and Magnitudes of Capital flows in ASEAN+3 Countries

During the Asia financial crisis in the 1990s, we were in the position of current account deficit with massive capital outflows because of short-term profit making. The Asian financial crisis caused massive capital outflows that drove out foreign capital and caused dramatic regional exchange rate depreciation in a short period of time.

Yet, different story of foreign capital flows and impact to domestic economy have presented during the US subprime crisis in the 2000s. Currently, we are experiencing *current surplus* for a period of time with *massive capital inflows* since there is a there

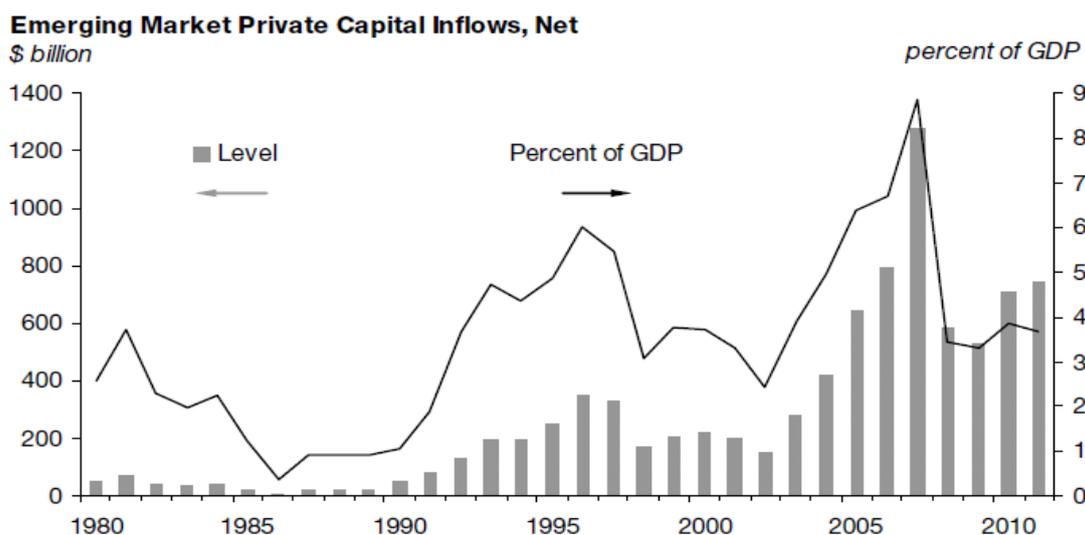
is a long-term shift of capital flows from US.

Thus, it is important to take a closer look at the path of development of the foreign exchange flows, in general, and capital flows. Hence, it leads to different policy/measure to handle with the situation.

Regarding the subject matter, Figure 3.1.1 and Table 3.1.1 present that emerging economies have experienced large capital flows particularly through private flows into equity and debt markets. It shows that the capital flows into the economies account by more than three folds since the Asian financial crisis in the 1990s.

In most cases, the large capital flows create fluctuation in exchange rates and level of foreign exchange reserves of the country – the latter extend is differ among countries depend on the domestic policy to handle with the situation of massive capital flows (see also Figure 3.1.2)

Figure 3.1.1: Capital Flows to Emerging Economies



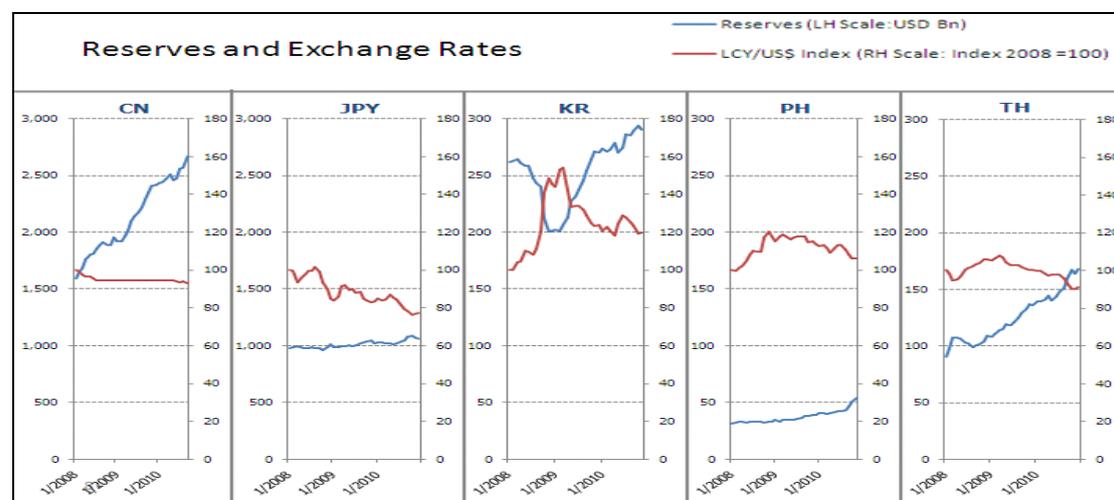
Source: The Institute of International Finance, 2010

Table 3.1.1: Capital Flows to Emerging Economies – Types of Capital Flows

Emerging Market Economies: External Financing				
<i>\$ billion</i>				
	2008	2009e	2010f	2011f
Current Account Balance	591.0	351.6	373.0	319.5
External Financing, Net:				
Private Inflows, Net	588.2	530.8	708.6	746.4
Equity Investment, Net	420.8	465.8	528.8	568.3
Direct Investment, Net	505.5	346.6	434.9	470.2
Portfolio Investment, Net	-84.7	119.2	93.9	98.1
Private Creditors, Net	167.5	65.0	179.8	178.1
Commercial Banks, Net	33.1	-31.9	48.9	66.7
Nonbanks, Net	134.4	96.9	130.9	111.4
Official Inflows, Net	61.4	62.4	55.2	35.3
IFIs	27.2	47.5	28.7	12.2
Bilateral Creditors	34.3	14.9	26.5	23.1
Equity Investment Abroad, by Residents, Net	-228.0	-183.5	-230.1	-268.6
Resident Lending/Other, Net	-535.4	-211.6	-293.2	-297.2
Reserves (- = Increase)	-477.2	-549.8	-613.5	-535.4
<i>Memo:</i>				
Private Flows, Net (IIF Former Measure)	360.2	347.3	478.5	477.8

Source: *The Institute of International Finance, 2010*

Figure 3.1.2: Capital Flows to Emerging Economies



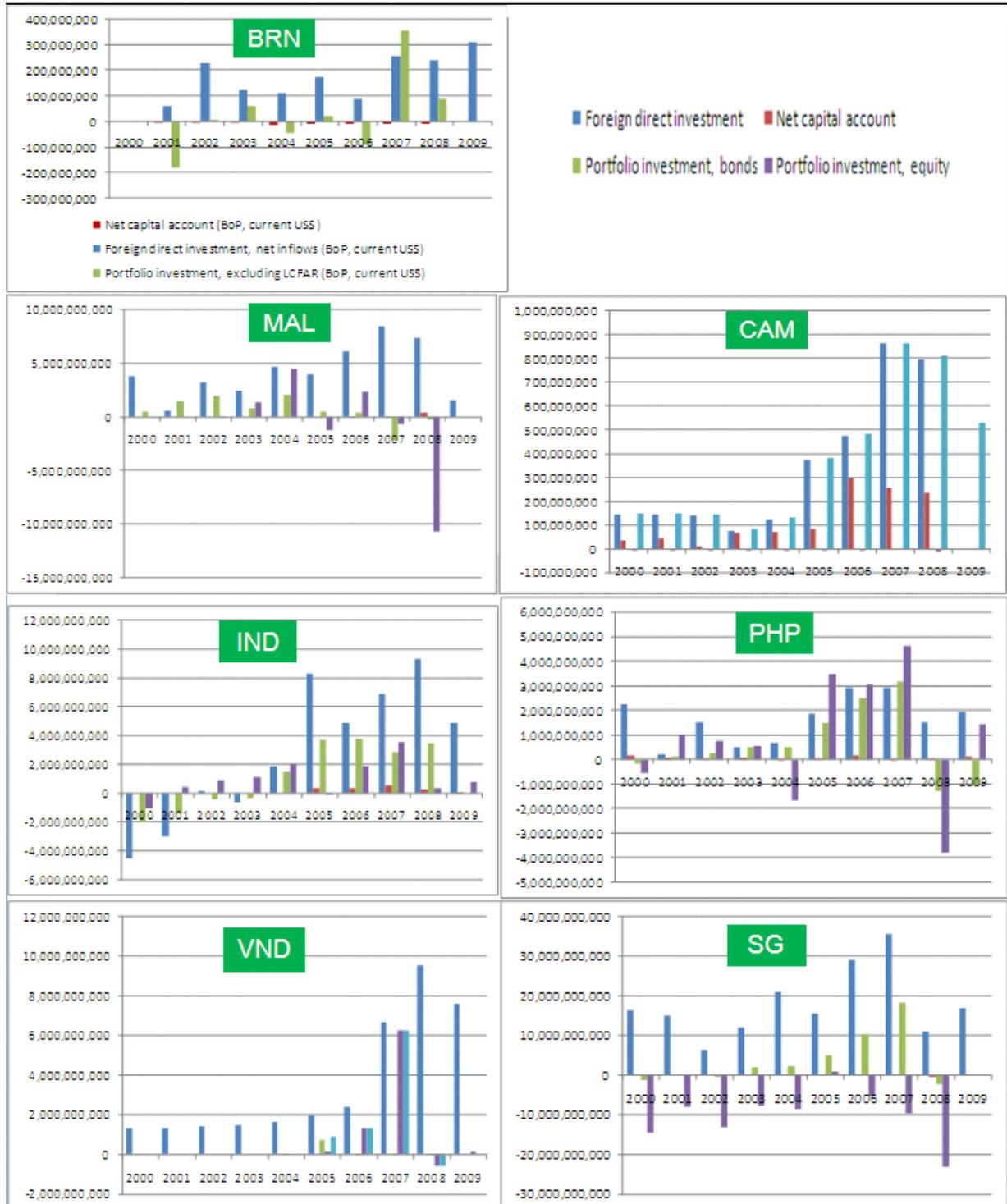
Source: *CEIC Database, compiled by FPRI*

Focusing on types and magnitude of capital flows in the ASEAN+3 countries can be presented in Figure 3.1.3. Mostly, there are five major channels of foreign exchange flows: current account, foreign direct investment (FDI), equity securities, debt securities, and loans, when the equity and debt securities are accounted as portfolio investment. In many ASEAN countries where equity and debt markets are relatively undeveloped,

▪ The Recent Experiences of Rapid Capital Flows in ASEAN+ Countries

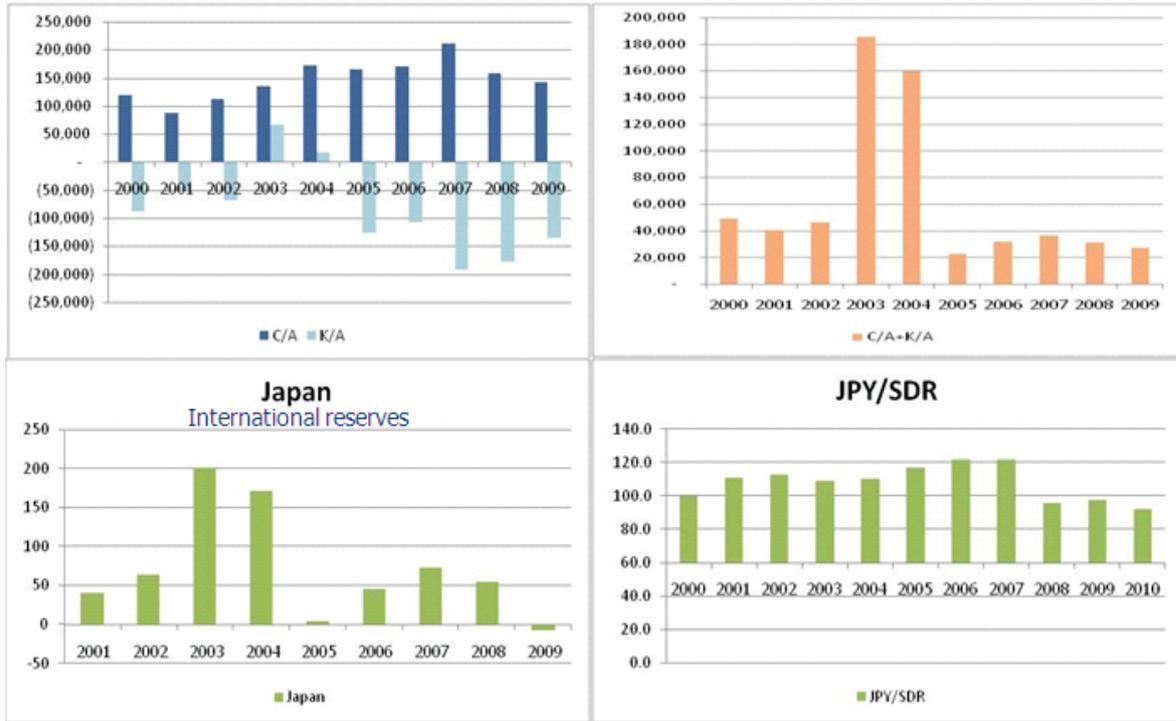
FDI has historically played a leading role in capital flows. However, portfolio investment through equity and bond market has increased in 2000s.

Figure 3.1.3: Capital Flows to Selected ASEAN+3 Countries

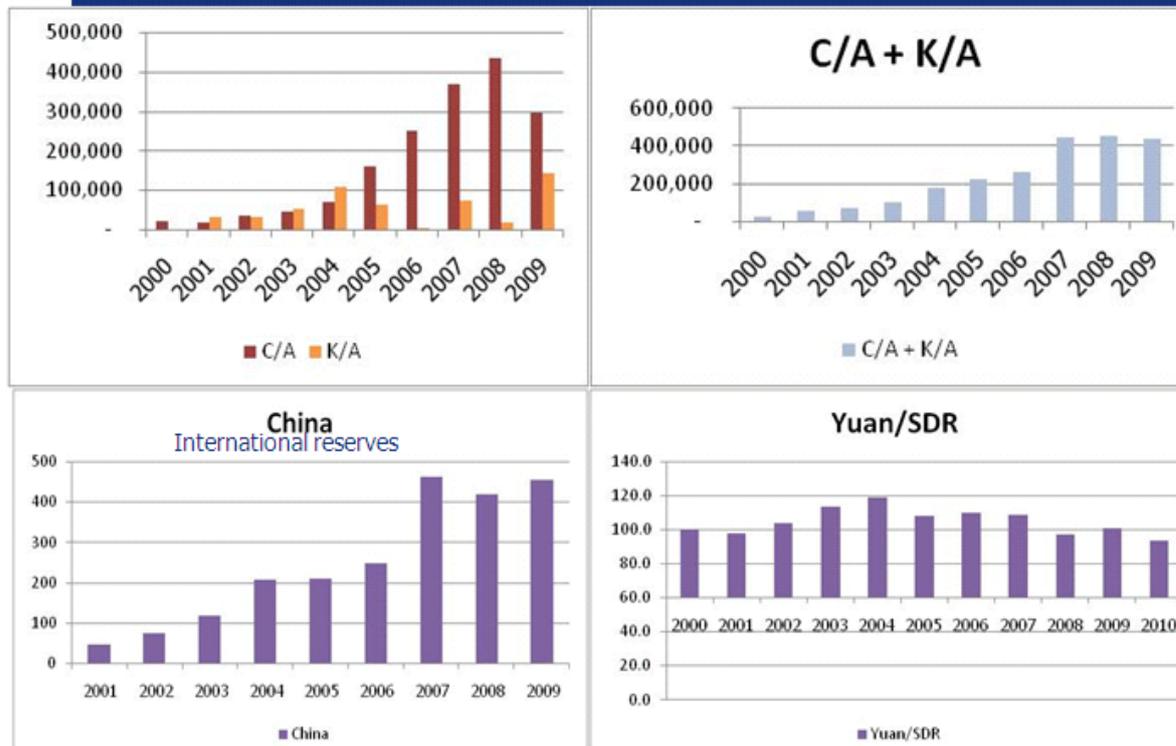


■ The Recent Experiences of Rapid Capital Flows in ASEAN+ Countries

Japan : C/A surplus/Induce K/A outflows/Collect reserves/FX appreciation!



China: C/A surplus/K/A surplus/Collect reserves/Stable FX



Source: CEIC Database, compiled by FPRI

With the aid of the FPRI Model for monitoring the capital flows into the country, we then present the details of the situation in the case of Thailand, particularly the recent experience of capital flows in the 2000s.

Focusing on the composition of capital flows, the major flows in Thailand come from the large magnitude of the current account, while the steadiest flow is observed in the FDI flow. Nevertheless, fluctuations occurred in every type of capital flow since 2005 and particularly the recent global financial crisis (2010). Similar to other countries in ASEAN+3, part of the capital inflows into Thailand appeared to be portfolio investment (Figure 3.1.5 and Table 3.1.2)

In 2010, a strong rebound in imports led to a sharp narrowing of the *current account* surplus from 7.7 percent of GDP in 2009 to 2.4 percent in 2010. After plummeting 25 percent in US dollar terms in 2009, imports are on track to jump by over 30 percent in 2010 as exports and equipment investment pick up (imports were up 53 percent in dollar terms in the first half of 2010). Importantly, given that a large portion of manufacturing firms' inventories are comprised of imported inputs for production, a rebuilding of inventories depleted in 2009 is also likely to drive up imports. The result creates a substantial narrowing of the current account from 2009, although a surplus still exists given the sizeable value added of exports (40 to 50 percent of total export value) and import prices that are still well below than the highs observed in 2008.

The *FDI* comprises a large proportion of capital flows in the economy. Net FDI during the past 10 years fluctuated slightly and has remained positive but was low in early period as the Asian crisis drove FDI away from the local economy. Since late 2000, both the volume of FDI inflows and outflows had increased at a progressive rate and generated a constant trend of net FDI in a narrow range. This indicated a return of confidence in the Thai economy owing to the government's efficient policy management (Sangsubhan and Vorawangso, 2007). With a higher level of FDI inflows, the value of the Thai baht had become stronger. In 2006, the considerable amount of FDI inflows

suggested that favorable government policies to persuade foreign investment inflows succeeded. It is to be noted that the magnitude of Thai direct investment going abroad has remained relatively low.

While the current account narrowed, the *financial account* surplus widened in the first half of 2010 as Thai residents repatriated assets. Net capital flows surged to USD 8.5 billion, the largest level since the early 1990s with the exception of the first half of 2008, when the BOT fully removed capital controls that had been introduced in 2006. Capital inflows in the first half of 2010 were driven in part by Thai residents. In part this was due to the repatriation of investments made in the first half of 2009 in Korea, since at that time there was an unusual interest rate differential between the two countries given that Korea's financial sector was more affected by the global financial crisis. Banks have also contributed by taking advantage of low G3 interest rates to fund credit expansion, posting inflows of nearly USD 12 billion in the four quarters.

Importantly, with the normalization of the political situation since late May, foreign capital returned. As interest rate differentials with advanced economies started widening in the first half of 2010, capital flows from advanced to emerging economies have accelerated. Thailand had also joined this trend through June because of the political situation, which increased near-term risk perceptions of foreign investors. Nevertheless, the resolution of the immediate political turmoil and Thailand's favorable growth outlook has led to a resumption of substantial foreign capital inflows. Through September, total bond inflows estimates to have been close to USD 4 billion, with around USD 2.5 billion of the inflows recorded in August and September alone (see also Figure 3.1.5 and Table 3.1.2).

In sum, foreign ownership in the local government bond market ran around THB 200 billion (USD 6.7 billion) at the end of September, accounting for around 5-6 percent of the total outstanding local government bonds. Comparing with other countries, in a regional context, inflows into the Thai bond market had lagged its regional peers —

■ The Recent Experiences of Rapid Capital Flows in ASEAN+ Countries

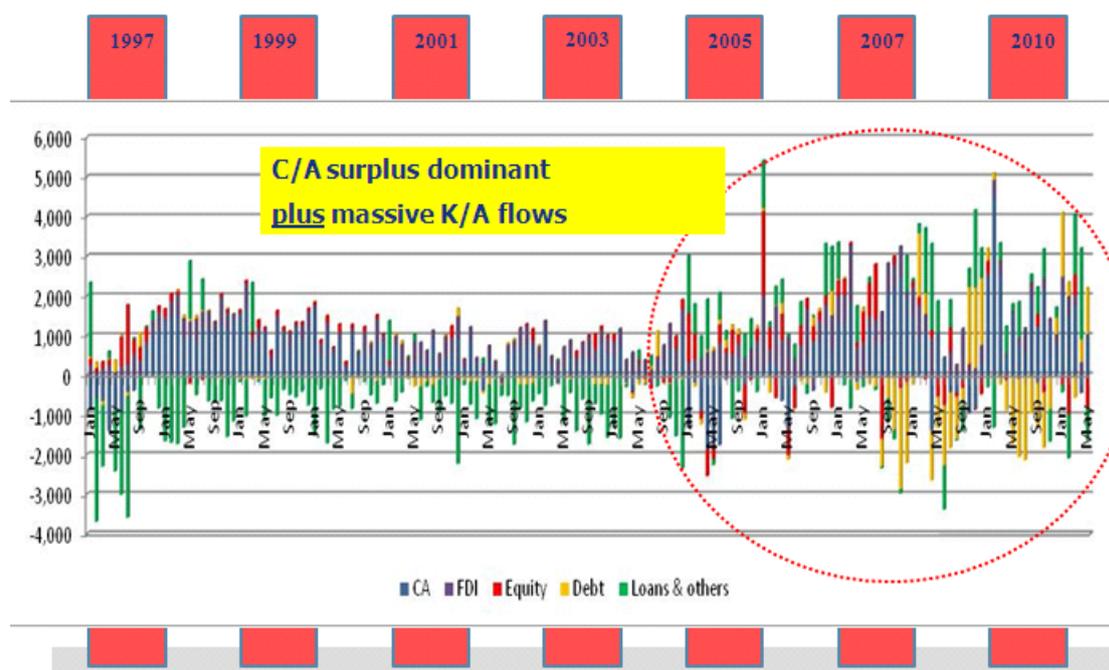
Malaysia and Indonesia — up until July. In August there appeared to be a significant allocation into Thailand relative to the other two countries.

Figure 3.1.4: FPRI Model for Monitoring Capital Flows

Month	Non-Bank	Commercial Banks	BOT	SPOT	FORWARD	FORWARD
Oct-06	SPOT			CA: 855.85, FDI: 422.27, Equity: 412.47, Debt: 382.11, Loans: 192.29	CA: , FDI: , Equity: , Debt: , Loans:	NFA
	NFA					
	Gain/Loss	-648.40				
	Commercial Banks			1,978.39, 2,264.99, 286.60	1,329.99, 1,306.00, -296.01	Open Pos.
				3,595.00		-296.01
				1,329.99		954.59
				21,144.59		Outstanding
				Outstanding		
				709.51		
				62,302.19		
Nov-06	SPOT			CA: 1,511.87, FDI: 610.63, Equity: 437.94, Debt: -515.39, Loans: 624.41	CA: , FDI: , Equity: , Debt: , Loans:	NFA
	NFA					
	Gain/Loss	-842.66				
	Commercial Banks			-1,566.66, 2,669.46, 1,102.80	724.00, 2,597.00, 76.00	Open Pos.
				5,990.46		76.00
				724.00		1,030.59
				21,868.59		Outstanding
				Outstanding		
				2,186.20		
				64,488.40		
Dec-06	SPOT			CA: 1,214.78, FDI: 778.47, Equity: -613.36, Debt: 117.71, Loans: 991.29	CA: , FDI: , Equity: , Debt: , Loans:	NFA
	NFA					
	Gain/Loss	79.91				
	Commercial Banks			682.91, 2,487.89, 3,170.80	401.00, 1,595.00, 204.00	Open Pos.
				4,765.80		204.00
				682.91		1,234.59
				21,265.59		Outstanding
				Outstanding		
				2,496.38		
				66,984.78		

■ The Recent Experiences of Rapid Capital Flows in ASEAN+ Countries

Figure 3.1.5: Thailand's Monthly Capital Flows (1997 – 2010)



Source: CEIC Database, Bank of Thailand, Thai Bond Market Association, Stock Exchange of Thailand, compiled by FPRI

Table 3.1.2: Thailand's Monthly Capital Flows in 2010

	2010									
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
CA	1,996.90	1,520.99	1,734.40	-422.58	1,038.62	820.89	-1,000.75	280.51	2,766.96	2,739.56
inflow	15,039.54	15,324.17	16,738.45	13,599.54	15,175.32	16,155.07	15,265.59	15,720.34	17,479.12	17,512.42
outflow	-13,042.64	-13,803.18	-15,004.05	-14,022.12	-14,136.70	-15,334.18	-16,266.34	-15,439.83	-14,712.16	-14,772.86
FDI	493.40	473.45	294.49	327.62	-207.24	230.86	267.07	39.63	196.85	-1,262.88
inflow	1,452.91	1,451.84	1,617.20	1,471.90	1,430.56	1,382.26	1,602.74	1,336.26	1,476.20	1,366.76
outflow	-959.51	-978.39	-1,322.71	-1,144.29	-1,637.80	-1,151.41	-1,335.67	-1,296.62	-1,279.35	-2,629.63
Equity	-231.97	-963.67	504.30	-22.59	-880.71	-369.89	120.81	-79.13	502.03	138.45
inflow	3,886.55	1,242.79	3,077.23	1,526.20	604.10	1,201.82	1,301.03	1,912.30	2,388.64	1,743.60
outflow	-4,118.53	-2,206.47	-2,572.93	-1,548.80	-1,484.81	-1,571.71	-1,180.22	-1,991.44	-1,886.60	-1,605.14
Debt	1,600.78	354.44	-564.63	577.52	803.66	-825.26	-153.24	-65.96	-381.51	-147.95
inflow	2,118.71	1,975.50	1,256.80	1,569.93	2,435.64	1,719.50	1,179.21	1,034.41	1,546.87	671.99
outflow	-517.92	-1,621.06	-1,821.43	-992.41	-1,631.98	-2,544.77	-1,332.46	-1,100.38	-1,928.38	-819.94
Loans, others, errors & omissions	-196.23	-1,122.11	1,520.63	2,292.85	-180.91	-416.86	1,393.56	1,405.96	290.43	178.62
inflow	4,294.13	3,525.19	6,632.17	6,739.04	18,674.82	19,161.39	19,367.16	19,672.56	20,788.14	20,123.35
outflow	-4,490.36	-4,647.30	-5,111.54	-4,446.19	-18,855.73	-19,578.25	-17,973.60	-18,266.60	-20,497.71	-19,944.73
TOTAL	(196.23)	(1,122.11)	1,520.63	2,292.85	(180.91)	(416.86)	1,393.56	1,405.96	290.43	178.62

C/A+K/A

Source: CEIC Database, Bank of Thailand, Thai Bond Market Association, Stock Exchange of Thailand, compiled by FPRI

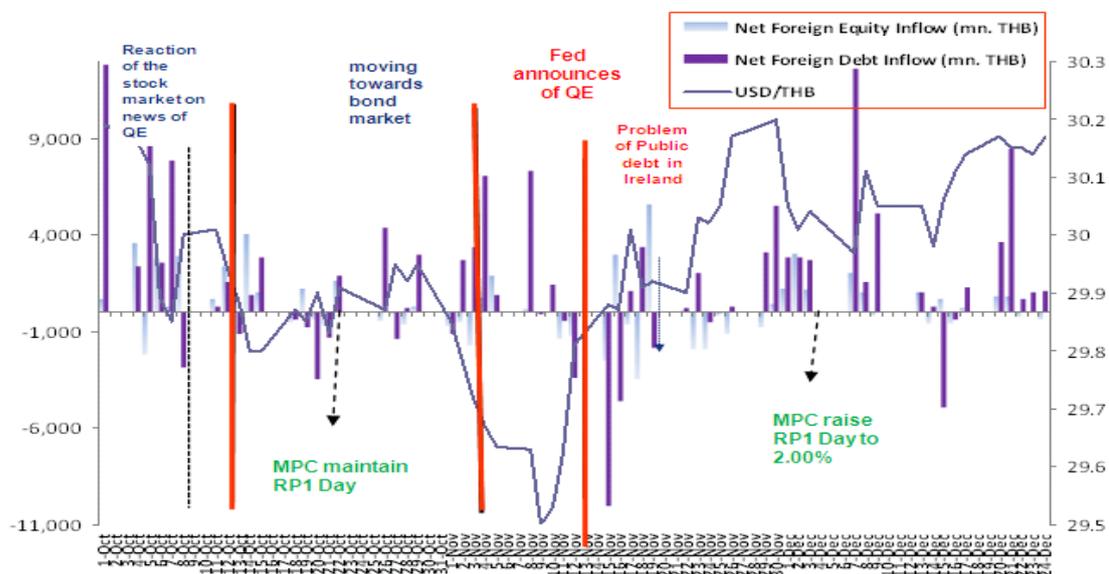
3.2 Analysis of the Outcomes of Rapid Capital Flows

In this part, an examination of the capital-flow allocation has been conducted along with an investigation into its impacts on the financial system and on the macroeconomy. However, according to the data availability and access to the detail analysis, this section presents only the outcomes of rapid capital flows in the case of Thailand.

Financial systems

Focusing on the effect of exchange rate, capital inflows remained positive which led to the gradual appreciation of the baht and movement of domestic equity and debt markets as presented in Figure 3.1.6.

Figure 3.1.6: Thailand's Capital Flows - Effect on Financial Systems



Source: Fiscal Policy Office, Ministry of Finance

In Thailand, since the beginning of 2005, capital inflows have increased over time. Despite the fluctuations, capital inflows remained positive which led to the gradual

appreciation of the baht. In part, this may be due to the USD depreciation against some currencies around the world which has pushed up the value of the baht and led to persistent capital inflows into the Thai economy.

Regarding this, there are 2 distinct periods that need to be mentioned.

First episode was when the baht appreciated by about 8% of its 2006 value, reaching 32.22 baht per USD on 13 July 2007. In response, the Bank of Thailand (BOT) intervened in the foreign exchange market, buying mostly USD at the spot rate, to absorb the rapid build up of USD in a short period of time; this measure had led to the rapid increase in foreign reserves. According to the FPRI's capital flows monitoring, the positive capital flows from the current account and equities channels have been observed from 2006–2007, and excess USD supply has existed since the beginning of 2007. From Figure 3.1.4, illustrates the BOT's exchange rate intervention in both the forward and spot foreign exchange markets. Capital inflows into commercial banks in the spot market showed a huge drop in August 2007 before rebounding. At this turning point, reserves increased rapidly, reflecting currency intervention in the foreign exchange market. With a considerable increase in reserves during August and September 2007, the BOT sold foreign currency in the forward market for hedging purposes. In the Figure, a positive value shows forward purchasing while a negative value shows forward selling by the BOT during September 2006–August 2007.

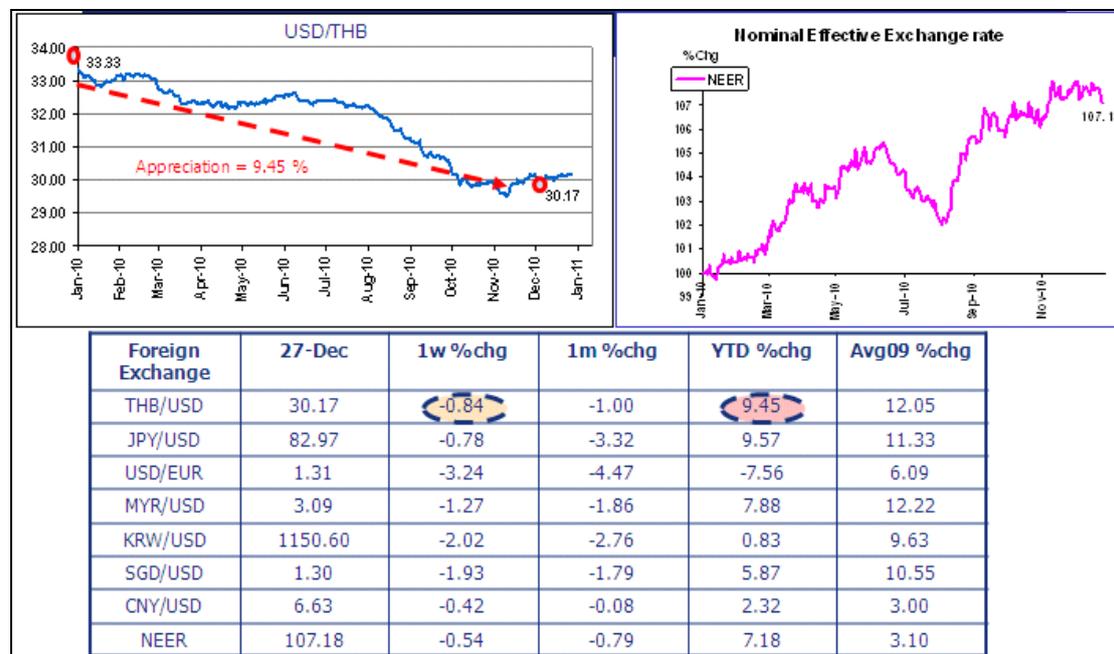
Foreign capital that entered the spot and forward markets reached \$671 million (FPRI, 2007). This amount could have caused a dramatic appreciation in Thai baht, but there was in fact only a slim change in the exchange rate, which implied government intervention in the foreign currency market.

Looking at the direction of the onshore exchange rate movement, the trend suggests an improvement of the baht value after the government intervened in July 2007, through the lowering of the repurchase rate by 0.25%, the relaxation of foreign

exchange regulations on foreign currency deposit, the expansion of foreign investment fund, and the support on refinancing and foreign loans in baht.

Second episode accounts when the exchange rate has appreciated rapidly since August 2010. In 2010, the baht has appreciated approximately 9.45 percent against the US dollar which takes the second ranked after Japanese Yen. In details as presented in Figure 3.1.7, the baht appreciated 7 percent against the US dollar since early August, well above the 0.5 percent average of other countries in the region (almost 10 percent for 2010). In real effective terms, however, the exchange rate is up only two percent during the period, 7 percent since the beginning of the year and about 20 percent since mid-2005. As in Malaysia, however, the currency is still below the levels reached before the 1997-98 Asian financial crisis in real effective terms.

Figure 3.1.7: Thailand's Capital Flows - Effect on Financial Systems



Source: Fiscal Policy Office, Ministry of Finance

As a result of sterilized interventions to slow down the pace of exchange rate appreciation, foreign exchange reserves rose by USD 23.6 billion between January and

November, reaching a record high. Reserves are equivalent to 11 months of trailing imports, nearly five times the sum of short-term debt and principal repayments due in 2011, and amount to about three-fourths of the country's gross external liabilities. On all three metrics, reserves are the largest in developing East Asia except China. As highlighted in Figure 3.1.2, Thailand's international reserves have climbed further in 2010.

Macroeconomic implications

The FPRI has constructed a model to assess the impact of a sharp appreciation of the baht on the real sector. It is estimated that a 12% appreciation of the baht (January–August 2007 and the year 2010) decreases the profit (total capital return) of the real sector by about 6.4%.

Upon disaggregating the real sector, results show that the labor intensive sectors (i.e., agriculture, food manufacturing, and textile, etc.) tend to be adversely affected by a change in the exchange rate (Figure 3.1.8). On the other hand, "high-import content" sectors, such as paper and printing, automobile, and construction, tend to benefit from baht appreciation. This demonstrates that the baht appreciation is a two-sided coin. It benefits exporters with a high volume of imports and a low volume of exports, e.g., electricity plants and iron industry, because most of their revenues are in local currency, while their import costs are lowered. On the other hand, exporters with high levels of exports and low levels of imports, such as textiles, agriculture, and tourism, will lose their advantages. In response to cries for government support to maintain export competitiveness, the BOT intervened in the foreign exchange market in July 2007 and announced six regulations to prevent further appreciation, and to enhance local competitiveness and flexibility in foreign exchange management, including balancing foreign currency flows across borders. However, in 2010 the BOT has further promoted capital outflows to help out the Bath appreciation.

Figure 3.1.8: Thailand's Capital Flows Effect on Real Sectors

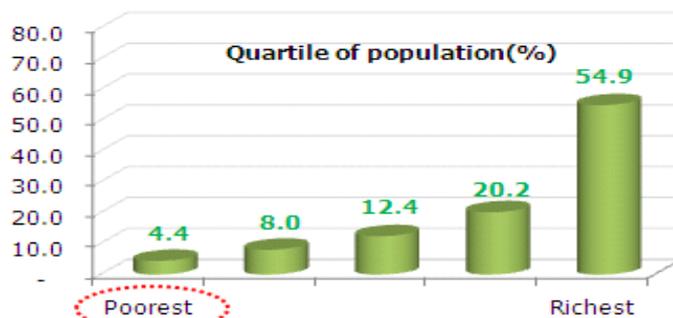
	Change in Exchange Rate	Change in Total Cap Return
	-12.00%	-6.37%

	Key Ratios			Cost
	Wage / VA	CapReturn / VA	Export / Total Revenue	Capital Return
Agri	42.83%	57.17%	7.37%	-0.9%
Mining & Quarrying	17.71%	82.29%	20.00%	-4.7%
Food Manufacturing	43.16%	56.84%	31.26%	-21.1%
Textile Industry	61.66%	38.34%	30.29%	-17.6%
Saw Mills & Wood Products	63.13%	36.87%	48.42%	-21.4%
Paper & Printing	44.07%	55.93%	21.62%	4.3%
Rubber, Chem, and Petroleum	40.81%	59.19%	40.57%	-0.8%
Non-Metallic Product	44.04%	55.96%	41.11%	-23.6%
Metal, Metal Products and Machinery	47.02%	52.98%	55.34%	-14.8%
Automobile	46.08%	53.92%	14.47%	1.7%
Other Manufacturing	58.72%	41.28%	46.92%	-20.2%
Public Utility	29.47%	70.53%	3.02%	-0.4%
Construction	47.06%	52.94%	1.47%	9.7%
Trade	51.25%	48.75%	0.94%	-0.5%
Services	55.59%	44.41%	5.86%	-1.1%
Transport & Commu	36.73%	63.27%	19.55%	-10.6%
Other Services	47.32%	52.68%	62.07%	-28.0%

Source: FPRI (2007 and 2010)

Figure 3.1.9: Thailand's Capital Flows Effect on Income Distribution

Income	% Change
Population Quartile 1	-1.35%
Population Quartile 2	-1.30%
Population Quartile 3	-0.88%
Population Quartile 4	-0.69%
Population Quartile 5	-0.45%



Source: FPRI (2007 and 2010)

Figure 3.1.9 present that the Baht appreciation creates effect to the poorest much larger comparing with the richest one based on quartile of population..

POLICIES AND MEASURES IN RESPONSE TO CAPITAL FLOWS

This section gauge into the policy responses among the Asian countries in dealing with the volatility of capital flows.

4.1. Capital Controls on Short-Term Inflows

Cases in 1990s

According to Ariyoshi (2000), capital controls as means of limiting abrupt short-term capital inflows were imposed to alleviate the impact of size and volatility of capital inflows on macroeconomic stability. Capital controls were mostly observed in emerging economies during 1990s. In most cases, short-term capital inflows were invited to the countries due to financial liberalization, and the high interest rate gap between the countries and the rest of the world in the context of fixed or managed exchange rate regimes for example in Thailand, Brazil, Chile, Colombia, and Malaysia. And in some cases, the persistent capital inflows caused troubles to countries which had limited monetary instruments to implement like Thailand. Table 4.1.1 showed that during 1990s, sterilization was the first weapon that all countries used to deal with short-term capital inflows.

Noting that sterilization operations were used only to some extent since they were costly and they might introduce further inflows as they tended to keep interest rates high.

As such, capital controls were imposed in place of sterilization as to reduce the huge burden and to resolve the monetary dilemma and preserve the independence of monetary policy stance. Table 4.1.1 shows that countries in the scope had utilized capital controls both in forms of market-based controls (indirect controls) or administrative controls (direct controls), together with other complimentary policies such as liberalization of capital outflows, flexible exchange rate adjustment, and prudential measures. For instance, Brazil used an explicit tax on capital flows and administrative controls (outright prohibitions of minimum maturity requirements on certain types of inflows).

The measures later were extended to deal with fund flow to derivative markets as inflows of this kind could reap the benefits from tax exemptions. Chile adopted market-based controls through URR with minimum stay requirement for direct and portfolio investment and other regulatory measures. The URR was imposed on foreign loans and later extended to cover inflows that potentially stayed only in short-term. Malaysia used a combination of administrative (prohibition of nonresident purchases of money market securities and non-trade-related swap transaction with nonresidents) and regulatory measures (asymmetric limits on banks' external liability positions for non-trade purposes and reserve requirements on ringgit funds of foreign banks). Thailand, in addition, mostly adopted market-based measures such as asymmetric open position limits, information requirements, and reserve requirements on nonresident bank accounts and baht borrowing, finance company promissory notes, and banks' offshore short-term borrowing.

Cases in 2000s

Emerging economies have improved significantly after the 1990s crisis and returned to growth as their risk premium were down and closed to pre-crisis level. As emerging markets have gotten stronger, the United States began to face large current account deficit and aggressively reduced its policy rates while European economies were having trouble in managing debts. And thus, global liquidity has resumed to emerging economies with a strong growth outlook, an appreciation expectation, and high interest rate differentials. Continuation of capital inflows has been occurring in 2000s and there are numbers of countries embarked capital controls policies to deal with the surge. During 2001-2006, Indonesia used combination of prudential and administrative policies.

Korea adopted monetary and regulatory measures. In 2004, Korea limited bank's long nondeliverable position to 110 percent of their long nondeliverable forward positions. Later in 2007, foreign currency lending to residents to specific transactions were restricted and the thin capitalization rules on foreign back branches in Korea⁴ and the authorities also actively liberalized capital outflows to deal with appreciation pressure.

Focusing particularly in the case of Thailand, since 1985, Thailand has maintained relatively open current and capital accounts, with liberal treatment of FDI and portfolio investments. Exchange controls, however, still apply to the repatriation of interest, dividends, and principal of portfolio investment. Foreign borrowing by Thai residents is allowed but subject to registration at the BOT. By the end of 1994, Thailand was free of foreign exchange restrictions on current account transactions, and had a

⁴ The thin capitalization rule limits the tax deductibility of interest paid on loans exceeding three times the capital of foreign bank branches in Korea.

very open and favorable regime for foreign investment. Foreign investors were still subject to some restrictions on ownership, particularly with regard to listed companies on the Stock Exchange of Thailand (SET), and on real estate. Restrictions also apply to investments of Thai financial intermediaries and banks overseas.

The capital controls currently employed in Thailand are the results of the following regulations: (i) Exchange Control Act B.E. 2485; (ii) Ministerial Regulation and Notification of the Ministry of Finance (MOF), and (iii) Notices of the Competent Officer. Most of the restrictions fall into the category of direct controls.

Most capital controls employed by Thailand are imposed on non-residents with the intention of reducing speculative attacks. These controls are generally aimed at reducing non-resident holding of the baht (without underlying trade and investment) and eliminating the offshore baht market, which could otherwise provide ammunition for speculators looking opportunities to attack the baht. Examples of this type of controls are the limit on holding of non-resident baht accounts to 300 million baht, as well as the 50 million baht rule on short-term lending to and borrowing from non-residents. Other types of controls are imposed on residents to limit foreign currency risk exposure, both on short-term borrowing and investment abroad. However, the BOT has gradually relaxed its restrictions on in-out portfolio investment since 2002 through a series of special schemes, such as the Foreign Investment Fund (FIF) allowing residents to invest abroad through mutual funds since mid-2003 and Qualified Domestic Institutional Investor (QDII) schemes. Thai state enterprises are allowed to hedge freely against foreign currency debts regardless of maturity. Since July 2003, six types of financial institutions have been allowed to invest in sovereign, quasi-sovereign, and investment-grade debt securities. The scope was widened in 2005 to include investment units of foreign unit trusts that are supervised by the members of the International Organization of Securities Commission (IOSCO). Table 4.1.2 and 4.1.4 provides a summary of the changes in regulations on capital flows since 1997 - 2007 and additional measures in 2010.

Since 2005, the BOT's framework in dealing with macroeconomic stability involves monitoring 7 potential sources of financial imbalances that, if left unchecked, can threaten macroeconomic stability (Table 4.1.3). If any potential imbalance is identified, the BOT will act using monetary policy tools along with prudential regulations to correct the situation.

In 2007, Thailand imposed a URR of 30 percent on most capital flows, requiring them to be deposited with the central bank for one year. Shortly after, this measure was revised and narrowed down the scope of capital control. In 2007, Colombia introduced a package of measures, including a 40 percent of URR on external borrowing to be held for six months in the central bank and couple of the regulatory measures such as a new ceiling on the foreign exchange position of banks, limits on the currency derivative positions of banks.

Capital flows has become a global agenda as the United States⁵ has launched series of quantitative easing during 2009-2010. The move is believed to depress the dollar and drive capital flows to emerging markets, creating asset bubbles and causing risks to emerging markets. This issue was discussed during the G-20 meeting in November 2010 and the meeting mutually agreed that countries should conduct best practices on financial-security policies, including capital-flow tools. The agreement came after countries from Brazil, Indonesia, and South Korea imposed restrictions on investment inflows aimed at defusing the danger of hot money, or capital seeking short-term gain. Brazil imposed a tax on the purchase of financial assets by foreigners and raised entry tax on portfolio into fixed income instruments. Indonesia adopted regulatory measures (prohibition of certain trading activities by domestic banks and raised the

⁵ The United States embarked 1.7 trillion USD quantitative easing QE1 started at the end of November 2008 and ended in March 2010. The second round of quantitative easing or QE2, amounted around 600 billion USD, will be re-embarked by the end of second quarter of 2011.

reserve requirement) while Korea opted for exchange control and is now considering for other measures. Thailand, in addition, started to liberalized capital outflows and later removed tax exemption for foreigners on income from domestic bonds. Noticing that URR was relatively less implemented since the consequences of the URR are abrupt and creating adverse market reaction like the case of Thailand in 2006. Countries tended to use more of prudential and regulatory measures altogether with accommodate policies as they can be designed to take care of specific type of speculative capital flows.

In response of massive capital inflows in 2010, the Bank of Thailand has been employing a number of policy tools to deal with higher capital inflows. Although the recent jump in foreign inflows—and accompanying strengthening of the baht—have recently brought the issue to the public’s attention, the Bank of Thailand has been managing capital flows throughout the year through (i) appreciation of the exchange rate in line with regional currencies; (ii) sterilized interventions in foreign exchange markets; and (iii) measures to facilitate capital outflows (including lifting limits on Thai entities for investing abroad and liberalizing opportunities for companies to hedge foreign exchange exposure¹⁹). More recently, the BOT announced a second round of measures to facilitate capital outflows (see Table 9), and the government announced the elimination of favorable tax treatment formerly enjoyed by foreign investors in government bonds.

▪ **Policies and Measures in Response to Capital Flows**

Table 4.1.1: Selected Countries' Policy Measures on Capital Inflows

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
Brazil	1993-1997	- Persistently high inflation, huge government financing led to high interest rates -Well-developed financial markets, advanced financial products	- Administrative controls (such as increased the minimum average amortization term for loans from 30 to 36 months and time for reimbursement for income tax from 60-96 months)	
			- Explicit tax on capital flows on stock market investments, foreign loans, and certain foreign exchange transaction	
	2009-2010		- Raised the IOF tax (Imposto sobre Operações Financeiras) on foreign fixed-income investment to 6 percent (it had been at 2 percent since 2009)	
			- Increased the tax on margin deposits on futures markets to 6% from 0.38% previously	
			- Investors wishing to migrate from stocks to fixed-income investment must make a new foreign-exchange contract and pay additional taxes	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
Chile	1991-1998	- Improvement in status of current account	- URR on foreign borrowing, non-debt flows	- Liberalization of capital outflows
		- Tight monetary policy and relax fiscal policy	- Increased discount rate	- Widening of exchange rate band
		- Flexible exchange rate policy		
Colombia	1993-1998	- Wide ranging liberalization of the exchange and trade system	- URR on external borrowing (limited to loans with maturities up to 18 months) and later extended to cover certain trade credits	
		- Interest rate control removal		
		- Financial sector reform		
		- Current account deficit		
		- Expansionary fiscal policy and tightening monetary stance		
	2007-2008		- Introduced URR of 40 percent on foreign borrowing and portfolio inflows	
			- Imposed limits on the currency derivative positions of banks (500 percent of capital)	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
Indonesia	1991-1997	- Restricted monetary and credit policies (1991-1992)	- Restriction of net open position (NPO) for forex trading by banks and non-banks	
		-Tight fiscal policy	- Approval required for external borrowing by national banks/public corporations	
			-Restriction on the external borrowing more than 2 years	
	2001-2006	- Recapitalized banking sector - Improved oversight of capital markets - Fuel price hiked up by 126 percent to reduce government's subsidy burden, leading to increased inflation rate in 2006 to 12.6 percent	- The following tradings by the domestic banks were prohibited ; 1. Rupiah-denominated overdraft; 2. Lending to nonresidents; 3. Transaction of Rupiah-denominated bonds issued by nonresidents; 4. Rupiah trading among nonresidents; 5. Investment in stocks issued by nonresidents in Rupiah	
			- Raised the reserve requirement in Bank of Indonesia account	
			- Transfers of Rupiah to nonresidents prohibited	
	2010	- Banking sector and fiscal position appear to be more secure than ever (external debt fall from 150 percent	- Widening of the overnight interbank money market rate corridor to a range of 5.5 percent to 7.5 percent. The standing lending facility rate is 7.5	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
		of GDP in 1998 to 30 percent in early 2010)	percent and the standing deposit facility rate is 5.5 percent	
			- Impose minimum 1 month holding period for Bank Indonesia Certificate (SBI)	
			- Introduction of term deposits as non-securities monetary instrument	
			- Issuance of the 9 and 12 month SBI	
Malaysia	1994	- Strong economic fundamentals - High interest differentials	- Direct monetary instruments including increases in the statutory reserve requirements	
			- Prohibition against sale of short-term debt securities and money market instruments to nonresidents, and against commercial banks' engagement in no-trade-related swap or forward transactions with non residents	
			- Ceilings on bank's net liability position	
			- Non-interest-bearing deposit requirement for commercial banks against ringgit funds of foreign banks were required to place with central banks	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
South Korea	2004		- Banks' long nondeliverable forward position was limited to 110 percent of their long nondeliverable forward positions	
	2005-2007			- Liberalization of capital outflows
	2007		- Foreign currency lending to residents to specific transactions were restricted and the thin capitalization rules on foreign bank branches in Korea were applied	
	2009		- Banks were called to hold at least 2 percent of their total foreign assets in foreign treasury bonds rated A or above	
	2010		- Foreign exchange currency forwards and derivatives positions were limited at 50 percent of equity capital in case of domestic banks and 250 percent in case of foreign banks (previously set at 300 percent)	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
	2010		- Use of bank loans in foreign currencies was restricted for oversea use. Only SMEs have been allowed to use foreign currency financing for domestic use, to the extent that total foreign currency loans remain within the current levels	
			- Domestic banks were required to monitor the soundness of foreign currency liquidity on a daily basis and report to authorities every month	
Thailand	1995-1997	- Fixed exchange rate - Tight fiscal policy - Current account deficit	- Asymmetric open-position limited for short and long positions to discourage foreign borrowing	
			- Imposed reporting requirements for banks on risk-control measures in foreign exchange and derivative trading	
			- Imposed 7 percent reserve requirement on non resident baht accounts with less than one-year maturity and on finance companies' short-term borrowing	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
			- Introduced prudential measure which is an uplift of the minimum capital adequacy requirement for commercial banks	
	2006-2008	-Managed float exchange rate - Inflation targeting - Double accounts surplus	-Financial institutions were asked to refrain from buying and selling all types of securities through sell-and-buy back transactions for all maturities. - Financial institutions were allowed to sell and buy foreign currencies with nonresidents. -Financial institutions were allowed to borrow Thai baht from nonresidents. - URR of 30 percent imposed on foreign currencies sold or exchanged against baht with authorized financial institutions (except for FDI and amounts not exceeding US\$ 20,000)	- Liberalization of capital outflows and relaxation of exchange controls. The measures include: 1) Thai debt securities issues and sold abroad (subject to BOT's permission) 2) Foreign securities were permitted with an investment limit of not greater than 2,000 million USD.
			- Equity investments in companies listed on the stock exchange were made exempt from the URR	
	2010	- Baht appreciating at the historical record since the 1997 financial crisis	- Remove a 15 percent tax exemption for foreigners on income from domestic bonds	- Liberalization of capital outflows and relaxation of exchange controls

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Countries' Economic Highlights	Controls	Other accommodate policies
			- Securities companies were asked not to sell bills of exchange to nonresidents, regardless of the maturity of the papers.	
			- Securities companies were required to submit daily reports of those clients' outstanding cash assets, starting on November 1st, 2010	

Source: Compiled from various sources

▪ **Policies and Measures in Response to Capital Flows**

Table 4.1.2: Changes in regulations of capital flows in Thailand (1997- 2007)

	1997	1998	1999	2000
Foreign Exchange Regime				
Exchange rate system	<p>Independent floating adopted (Effective July 2, 1997, the exchange rate of the baht was determined on the basis of supply and demand in the foreign exchange market.</p> <p>On July 2, 1997, the authorities introduced a two-tire currency market that created separate exchange rates for investors who buy baht in domestic and overseas markets.</p>	<p>January 30, 1998, the two-tire foreign exchange market was unified.</p> <p>January 30, 1998, baht proceeds from sales of stock by nonresidents no longer need to be converted into foreign currency at the onshore market rate.</p>		

▪ Policies and Measures in Response to Capital Flows

		1997	1998	1999	2000
Regulations of Foreign Exchange and Capital Transactions					
Major developments		A series of measures introduced to limit capital outflows.			
- FDI					
Inward direct investment		The foreign ownership limit of 25% for financial institutions was lifted on a case-by-case basis. Foreign investors were allowed full ownership of local financial institutions for up to 10 years.			
Outward direct investment					
- Portfolio investments					
Inflow	Purchase locally by nonresidents Sales or issue abroad by resident				

▪ Policies and Measures in Response to Capital Flows

		1997	1998	1999	2000
Outflow	Sales or issue locally by nonresidents				
	Purchase abroad by residents				
Others					
General provisions					
Inflow	Financial Institutions	Borrowing			
		Position limits			
		Deposits & Reserve requirement		Commercial banks are required to maintain at least 6% of their nonresidents foreign exchange deposits in the form of (1) at least 2% as nonremunerated balance at the BOT; (2) at most 2.5 % value cash; and (3) the rest in eligible securities.	
	Enterprises				
Outflow	Securities lending transactions by nonresident		January 30, 1998, to guard against potential speculation,	(As of end December 1999) It was clarified that in	Penalty was prescribed for the violation of maximum

▪ **Policies and Measures in Response to Capital Flows**

	1997	1998	1999	2000
	<p>were prohibited.</p> <p>On May 28, 1997, the BOT imposed temporary limits on outright forward transactions in baht with non-residents and on the selling of baht spot to nonresidents, and requested banks to submit daily reports of foreign exchange transactions with nonresidents including all spot, forward, and swap transactions, as well as purchase of debt instruments from nonresidents, to the BOT.</p>	<p>Thai baht credit facilities provided by each financial institution to nonresidents, in cases where there are no underlying trade or investment activities in Thailand, were made subject to a maximum outstanding limit of 50 million baht per counterparty.</p>	<p><i>applying the maximum outstanding limit of 50 million Baht, the nonresident's head office, branches, representative offices, and affiliated companies are counted as one entity.</i></p>	<p>outstanding limit on baht credit to nonresidents (e.g. 10 days suspension of repo transaction with BOT)</p> <p><i>(As of end December 2000)</i></p> <p><i>Baht credit facilities provided by resident banks to nonresidents by way of derivatives must be used for domestic trade or investment activities.</i></p> <p><i>For nonresident accounts, approval is required for nonresidents to sell foreign currencies for baht for same day delivery value same day and for next day delivery (value next day)</i></p>

▪ **Policies and Measures in Response to Capital Flows**

	1997	1998	1999	2000
				<i>Baht lending (direct loans) by commercial banks and other credit institutions to nonresidents with or without underlying transactions or collateral is prohibited.</i>
Other regulations	BOT tightened a remittance ban in response to stock sales by foreign investment funds. Payment in baht to nonresident on redemption of debt instruments was permitted only if the holding period exceeded 6 months. In January 7, 1998, proceeds	January 7, 1998, proceeds from exports must be surrendered to authorised banks within 7 days of receipt (previously 15 days) All restrictions pertaining to transfer of Thai baht from the sale of domestic securities by nonresidents imposed in		<i>(As of end December 2000) Residents are not allowed to use foreign exchange for domestic payments. Foreign capital may be brought into the country without restriction but proceeds must be surrendered to authorised banks or deposited in foreign</i>

▪ **Policies and Measures in Response to Capital Flows**

	1997	1998	1999	2000
	<p>from exports must be brought into the country immediately after payment is received and within 120 days from the date of export.</p> <p>In June, 1997, the baht proceeds from sales of stock by nonresidents were required to be converted into foreign currency at the onshore exchange rate. The authorities introduced a two-tier currency market that creates separate exchange rates for investors who buy baht in domestic markets and those who bring it overseas.</p>	<p>1997 were lifted.</p>		<p><i>currency accounts with authorised banks in Thailand within 7 days of receipt.</i></p>

▪ **Policies and Measures in Response to Capital Flows**

	1997	1998	1999	2000
	<p>Effective September 8, 1997, foreign exchange earners were allowed to deposit their foreign exchange received in their foreign currency deposit account only if they have obligations to pay out such amounts to nonresidents abroad within 3 months from the deposit date.</p> <p>September 23, 1997, export proceeds exceeding 500,000 Baht must be repatriated within 120 days from the date of exportation and surrendered to authorized banks within 15 days of receipt.</p>			

▪ **Policies and Measures in Response to Capital Flows**

	2001	2002	2003	2004
Foreign Exchange Regime				
Exchange rate system	Effective June 30, 2001, the exchange rate arrangement of Thailand was reclassified to the category managed floating with no pre-announced path for the exchange rate from the category independent floating.			
Regulations of Foreign Exchange and Capital Transactions				
Major developments			Control measures introduced to prevent inflow of short-term speculative funds.	
- FDI				
Inward direct investment				
Outward direct investment		Thai residents were allowed to purchase immovable asset for residential purposes up to the equivalent of \$500,000 a		

▪ Policies and Measures in Response to Capital Flows

		2001	2002	2003	2004
			person without BOT approval. Previously, BOT approval was required for all purchases.		
- Portfolio investments					
Inflow	Purchase locally by nonresidents Sales or issue abroad by resident				
Outflow	Sales or issue locally by nonresidents Purchase abroad by residents		Residents were allowed to purchase foreign shares under employee stock option plans up to the equivalent of \$100,000 without BOT approval. Previously, BOT approval was required for all purchases.		Commercial banks allowed to purchase baht-denominated bond issued by foreign financial institutions. The Thai government allowed the issuance of baht-denominated bonds by International Financial Institutions.
Others					

▪ Policies and Measures in Response to Capital Flows

			2001	2002	2003	2004
General provisions						
Inflow	<i>Financial Institutions</i>	Borrowing				
		Position limits				
		Deposits & Reserve requirement		Effective July 30, 2002, the total outstanding balances in all resident accounts should not exceed equivalents of \$10 million for a juridical person (previously, \$5 million)	Effective September 12, 2003, the BOT imposed a limit of 50 million baht on the amount that nonresidents may deposit with domestic banks. Effective October 14, 2003, nonresidents may maintain domestic or foreign exchange accounts for settlement purposes only, while deposits held for other purposes must have a maturity of at least 6 months. Further, the total daily outstanding amount for all	

▪ Policies and Measures in Response to Capital Flows

			2001	2002	2003	2004
					<p>accounts may not exceed the equivalent of 300 million baht a nonresident without prior approval of the BOT. Any excess funds in these accounts at the end of the day must be surrendered to the BOT at a penalty rate.</p> <p>Effective October 14, 2003, interest may not be paid on nonresident accounts, except for fixed accounts with maturities of at least 6 months.</p> <p>October 14, 2003, accounts held by nonresidents were made subject to a maximum daily limit of the equivalent of</p>	

▪ Policies and Measures in Response to Capital Flows

			2001	2002	2003	2004
					300 million baht an account unless prior approval has been granted by the BOT.	
	<i>Enterprises</i>					
Outflow			<p>Effective December 28, 2001, direct loans in Thai baht were allowed to be made to entities in neighboring countries (i.e. Cambodia, Southern parts of China, the Lao PDR, Myanmar and Vietnam) under specified conditions and with prior BOT approval.</p> <p>Prior to September 24, 2001, when these regulations were liberalized, baht lending (direct loans) to nonresidents</p>		<p>The 50 million baht limit applies to loans to nonresidents without underlying transactions with maturities of less than 3 months.</p> <p>In cases where there are no underlying trade and investment activities in Thailand, Thai baht credit facilities in the form of derivatives obtained by a nonresident from all domestic financial institutions</p>	

▪ **Policies and Measures in Response to Capital Flows**

	2001	2002	2003	2004
	<p>with or without underlying transactions or collateral were prohibited, except that lending to natural persons was allowed under specific conditions. Effective that date, financial institutions are allowed to extend direct loans in Thai baht with collateral to nonresident natural persons permitted to work in Thailand for not less than one year. Also effective that date, financial institutions may issue letters of guarantee to nonresidents when there is a stand-by LC from a financial institution abroad.</p>		<p>combined are subject to a maximum outstanding limit of 50 million baht.</p> <p><i>(As of end December 2003)</i></p> <p><i>Baht credit facilities provided by domestic financial institutions to nonresidents by any means must be used for domestic trade or investment activities. However, financial institutions may provide credit facilities for other purposes, up to a limit 50 million baht an entity.</i></p>	

▪ **Policies and Measures in Response to Capital Flows**

	2001	2002	2003	2004
Other regulations		<p>July 30, 2002, the minimum amount of foreign exchange transactions required to be reported to the BOT was increased to the equivalent of \$10,000 from \$5,000.</p> <p>July 30, 2002, the limit on foreign currency account balance for a juridical person was increased to the equivalent of \$10 million from \$5 million.</p>	<p>July 22, 2003, the period for which foreign exchange derived from exports and certain other transactions may be deposited in resident foreign exchange accounts was extended to 6 months from 3 months, provided that foreign exchange obligations are due over the longer period.</p>	<p><i>(As of December 2004)</i> <i>Export proceeds of \$20,000 or higher must be repatriated immediately after payment is received and within 120 days from the date of export.</i></p>

▪ **Policies and Measures in Response to Capital Flows**

		2005	2006	2007
Foreign Exchange Regime				
Exchange rate system				
Regulations of Foreign Exchange and Capital Transactions				
Major developments				
- FDI				
Inward direct investment	(As of December 31, 2005) Foreign capital may be brought into the country without restriction, but proceeds must be surrendered to authorised financial institutions or deposited in foreign currency accounts with authorised financial institutions in Thailand within 7 days of receipt.			
Outward direct investment	(As of December 31, 2005) Investment exceeding \$10 million (or the equivalent) a year require BOT approval.			
- Portfolio investments				
Inflow	Purchase locally by nonresidents Sales or	(As of December 31, 2005) <i>Foreign equity participation is limited to</i>		

▪ **Policies and Measures in Response to Capital Flows**

		2005	2006	2007
	issue abroad by resident	<p>25% of the total amount of shares sold in locally incorporated banks, finance companies, credit finance companies, and asset management companies.</p> <p>Foreign equity participation is limited to 49% for other Thai corporations.</p> <p>Foreign investors are all allowed to hold more than 49% of the total shares sold in local financial institutions for up to 10 years, after which the amount of shares will be grandfathered, and the nonresidents will not be allowed to purchase new shares until the percentage of shares held by them is brought down to 49%. Foreign investors are allowed to hold 100% for other Thai corporations with the approval of the BOT. For sales or issues abroad by residents, approval is required under the regulations</p>		

▪ **Policies and Measures in Response to Capital Flows**

		2005	2006	2007
		<i>governing domestic issuance.</i>		
Outflow	<p>Sales or issue locally by nonresidents</p> <p>Purchase abroad by residents</p>	<p><i>(As of December 31, 2005)</i></p> <p><i>Purchases of shares under employment stock option plans exceeding the equivalent of \$100,000 a year are allowed without BOT approval. Sale or issues locally by nonresidents require the approval of the MOF, BOT, and SEC.</i></p>		
Others				
General provisions				
Inflow	<p><i>Financial Institutions</i></p> <p>Borrowing</p>	<p>The 50 million baht limit on baht credit from nonresidents that was imposed on commercial banks and other financial institutions extended to securities firms.</p>	<p><i>A limit of 50 million baht applies on the amount that nonresidents may lend to domestic financial institutions. This limit applies to loans granted by nonresidents without underlying transactions with maturities not exceeding 3 months. The nonresident's head office, branches, representative office, and affiliated</i></p>	

▪ Policies and Measures in Response to Capital Flows

			2005	2006	2007
				<p><i>companies are counted as one entity.</i></p> <p><i>Foreign investors required to deposit 30% of investment in foreign currency the deposited account will be returned if investment in question does not flow out of the country for 1 year.</i></p>	
		Position limits			
		Deposits & Reserve requirement			
	<i>Enterprises</i>				
Outflow				<p><i>Only authorised banks are allowed to grant financial credits to nonresidents, subject to the rule of net foreign exchange position. Without approval from the BOT, residents may grant loans of only up to \$10 million (or equivalent) a year to their affiliated companies, provided they own at least</i></p>	

▪ **Policies and Measures in Response to Capital Flows**

	2005	2006	2007
		<p><i>10% of total shares in the company.</i></p> <p><i>Direct loans in Thai baht were allowed to be made to entities in neighboring countries (i.e. Cambodia, Southern parts of China, the Lao PDR, Myanmar, and Vietnam) under specified conditions and with prior BOT approval.</i></p> <p><i>Financial institutions are allowed to extend direct loans in baht with collateral to nonresident natural persons permitted to work in Thailand for not less than 1 year.</i></p>	
Other regulations	Reporting requirement on all fund transfer by nonresidents imposed on financial institutions.		

Source: Bank of Thailand (various years)

Table 4.1.3: 7 Sources of Macroeconomic Imbalance

Source	Transmission Mechanism
1. External position	Freer capital flows mean more inflows could come during good times. Yet if short-term capital keeps flowing in, the external position of the country would be weakened and sudden capital outflows may arise leading to volatility in the economy.
2. Non-financial corporation's financial conditions	Greater inflows of capital can lead to a sharp appreciation of REER, diminishing the corporate sector's price competitiveness. Moreover, direct borrowing from the private sector is a possible source of imbalance.
3. Household financial conditions	Inflows of capital, if channeled to household credit, can lead to higher household debt.
4. Credit growth	Inflows of capital might be channeled to lending in certain speculative sectors, such as the real estate and stock markets.
5. Stock market	Inflows that manifest in real estate and stock market can lead to asset price
6. Real estate sector	bubbles.
7. Fiscal position	Unlikely to be directly affected by capital flows (except if the government heavily borrows in foreign currency with short maturity).

Source: Bank of Thailand (2005)

Table 4.1.4: Thailand's Additional Measures to Facilitate Capital Outflows Announced in September 2010

Area	Measures
1. Investment abroad	(1) Relaxing regulations on Thai direct investment and lending to affiliated companies overseas; (2) relaxing regulations on lending of Thai companies to non-affiliated companies abroad up to USD 50 million per year; (3) increasing the ceiling for purchase of immovable properties abroad. For instance, Thai companies wishing to undertake direct investment or lending abroad in an amount of USD 10 million or more per year must notify the Bank of Thailand; previously the threshold was USD 5 million.
2. Corporate treasury centers	(1) Increasing the foreign exchange transactions threshold amount for which foreign exchange transaction form must be submitted from USD 20,000 to USD 50,000 and easing the requirement for submission of supporting documents. (2) Raising the outstanding balance limit of foreign currency accounts to USD 500,000 (vs. USD 300,000 earlier).
3. Other measures related to exporters.	(1) Allowing Thai companies having export proceeds in foreign currency to transfer funds from their foreign currency deposit accounts to counterparties in Thailand for payment of goods or services. (2) Relaxing regulations on repatriation of export proceeds of values less than USD 50,000.

Source: Bank of Thailand (2010)

4.2. Capital Controls on Outflows

Cases in 1990s

Brazil, Malaysia, Spain, and Thailand all imposed controls on capital outflows to relieve pressure on exchange rates resulting from the economic crisis.⁶ Controls aimed at dealing with currencies speculation and stabilizing foreign exchange markets against the sharply depletion of foreign exchange reserves. According to Ariyoshi (2000), there were limitation of using interest rate defense since there was a market concerns about adverse effect regarding to fiscal burden and impact on the banking systems.

The sequences of implementing capital outflow controls among these three countries are different. Brazil uplifted minimum amount of sovereign debt must be held in the country foreign investment fund was raised from 60 percent to 80 percent. In Spain, the outflow controls were in the form of a compulsory, 100 percent non-interest-bearing deposit requirement on domestic banks in order to discourage speculation by imposing additional costs to certain transactions between banks and nonresidents. In Thailand, a two-tier currency market was implemented as to segment the onshore market from offshore market. Thai banks were required to suspend all transactions with nonresidents to prevent a buildup of baht positions in the offshore market. The repatriation of proceeds from asset sales in baht was prohibited and the conversion had to be at the rate quoted from onshore market.

In Malaysia, the controls were a combination of capital controls and exchange controls. Those measures included the stabilization of onshore ringgit market. All legal channels for a buildup of ringgit funds offshore were eliminated. Offshore ringgit was required to return onshore. The use of ringgit in trade payments and offshore trading of

⁶ Spain faced the European currency crisis in 1992, whereas Malaysia and Thailand fell in to the regional financial crises during 1997-1998.

ringgit assets were prohibited, and transfers between external accounts of nonresidents and ringgit credit facilities between residents and nonresidents were prohibited. Not only transactions made by nonresidents, transfers of capital by residents were also limited, and repatriation of nonresident portfolio capital was blocked for a year. Later, the one year-block was replaced by exit levies on the repatriation of portfolio capital. Details of policies measures are exhibited in Table 4.2.1

▪ **Policies and Measures in Response to Capital Flows**

Table 4.2.1: Selected Countries' Policy Measures on Capital Outflows

Country	Year	Country Characteristics	Controls	Other accommodate policies
Brazil	1999		- Minimum amount of sovereign debt must be held in the country foreign investment fund was raised from 60 percent to 80 percent	
Malaysia	1997-2000	- Undergone liberalization of capital flows	- Imposed limits on ringgit non-trade-related swap transaction with non residents (1997)	
		- Structural weaknesses in the banking system	- Required repatriation of ringgit held abroad to Malaysia, blocked the repatriation of portfolio capital held by non-residents for 12 months	
Spain	1992	- Liberalized the capital accounts in line with EC requirement - Weak fiscal position - Widen current account deficit	- Required domestic banks to place with the central bank a non-interest-bearing deposit of an amount in pesetas equivalent to 100 percent of (1) the peseta sales against foreign currency to nonresidents with same-day value (2) the increment in net sales of peseta against foreign exchange to nonresidents with value "next day" and the (3) increment in the forward sale of foreign exchange against pesetas to nonresidents	

▪ Policies and Measures in Response to Capital Flows

Country	Year	Country Characteristics	Controls	Other accommodate policies
Thailand	1997-1998	- Economic Overheat - Persistent high inflation - Widening of the current account deficit - Peg exchange rate system	- Financial institutions were asked to refrain from, and then suspend, transactions with nonresidents that could facilitate a buildup of baht positions in the offshore market	
			- Any purchase before maturity of baht-denominated bills of exchange and other debt instruments required payment in U.S. dollars	
			- Foreign equity investors were prohibited from repatriate funds in baht (but were free to repatriate funds in U.S. dollars)	
			-Nonresidents were required to convert baht proceeds from sales of stocks	
			-Financial institutions were required to submit daily reports of foreign exchange transactions with nonresidents	
			- Restrictions on capital account transactions were introduced.	
			- Outright forward transactions were limited.	

▪ **Policies and Measures in Response to Capital Flows**

Country	Year	Country Characteristics	Controls	Other accommodate policies
			- Proceeds on exports and invisible transactions and current account transfers must be surrendered after 7 days (instead of 15 days)	
			- Two-tier exchange rate system was initiated. Baht proceeds from sales of stocks required to be converted at the onshore market rate. Financial institutions were asked to refrain from transactions with nonresidents. Any purchase before maturity of baht-denominated bills of exchange and other debt instruments required payment in USD. Foreign equity investors were prohibited from repatriating funds in foreign currencies. Nonresidents were required to use the onshore exchange rate to convert baht proceeds from the sales of stocks	

Source: Compiled from various sources

POLICY STANCES GOING FORWARD

Policy measures to minimize the instability caused by rapid capital flows

Undoubtedly, we, Asian countries have already experienced the impact of foreign capital flows since 1997 both too much outflows and too much inflows. With the aid of the study, in this section, we summarize that there are **3 major “facts”** to cause policy challenges regarding the volatility of capital flows that are currently facing or are likely to face the monetary authorities of the region in the near future. These facts can be highlighted as follows.

- 1) Movement of exchange rate determined by capital flows from both Current A/C and Capital A/C.

- 2) Since global imbalance, it hence leads to capital flows into ASEAN+3 region is massive and make exchange rates fluctuation. However, experiences are differ and vary from country to country.
 - Some countries have Current A/C deficit, yet massive inflows still

 - Some countries let the exchange rates fluctuation without intervention (collect international reserves), yet some countries do intervene.

- 3) Exchange rate movement can be effected by how much the central bank of each country use international reserves to intervene exchange rate.

Because international capital flows increasingly play a greater role, traditional macroeconomic policies may not be enough to ensure safety and soundness of the economy. Recent experience with extensive capital flows shows how easily a small open economy without adequate safeguards can fall victim to the massive speculative inflows. Sound macroeconomic fundamentals and a well-regulated financial system are no longer sufficient conditions for financial stability.

5.1 Challenges ahead

In order to arrive at recommendations useful to the improvement of Asia's policy responses aimed at mitigating the negative impacts on the domestic economy as caused by the volatility in cross-border capital flows, with a particular interest in and emphasis on swift and unexpected capital flow reversals that are both massive and unfavourable in nature, - we shed lights on 3 distinctive challenges ahead for this matter.

- (1) **Mega Trend: Multiple reserve currency system is coming and USD as international currency is a doubt**

We empirically evidence the *“mega trend”* that the recognition of USD as international currency has been reduced since the introduction of Euro in 2001, global subprime crisis in 2008 and the fast growing important of Chinese yuan and BRIC in 2010. Comparing foreign exchange reserves in the world in 2002 and 2009, it shows that emerging and LDS economies accounts for 73 percent of the world reserves of USD 5.6 Trillion (worth USD 4.4 Trillion) which the USD share has been reduced for approximately 40 percent

Gradually change depends on “readiness” of Asia’s financial and capital market particularly China.

The idea seems to be in tandem with the thesis of Eichengreen (2010) - “The system for which we need to prepare is one in which the dollar, the euro and the renminbi will all be consequential international and reserve currencies. The international monetary system is growing more multipolar because the world economy is growing more multipolar. After World War II, when the United States accounted for the majority of the industrial production of the non-Soviet world, it made sense that the dollar was the principal unit in which exporters and importers invoiced and settled their trade, in which international loans were extended, and in which central banks held their reserves. But this situation makes less sense today when the U.S. accounts for only some 20 per cent of the combined output of countries engaged in international transactions. Because habits die hard, the dollar continues to play a disproportionately important role. But simply because this is true today does not mean that it will be true tomorrow. Countries that trade with and borrow from the euro area will increasingly seek to hold euros as reserves. Countries that trade with and borrow from China will similarly seek to hold renminbi, if not today then in the not-too-distant future.”

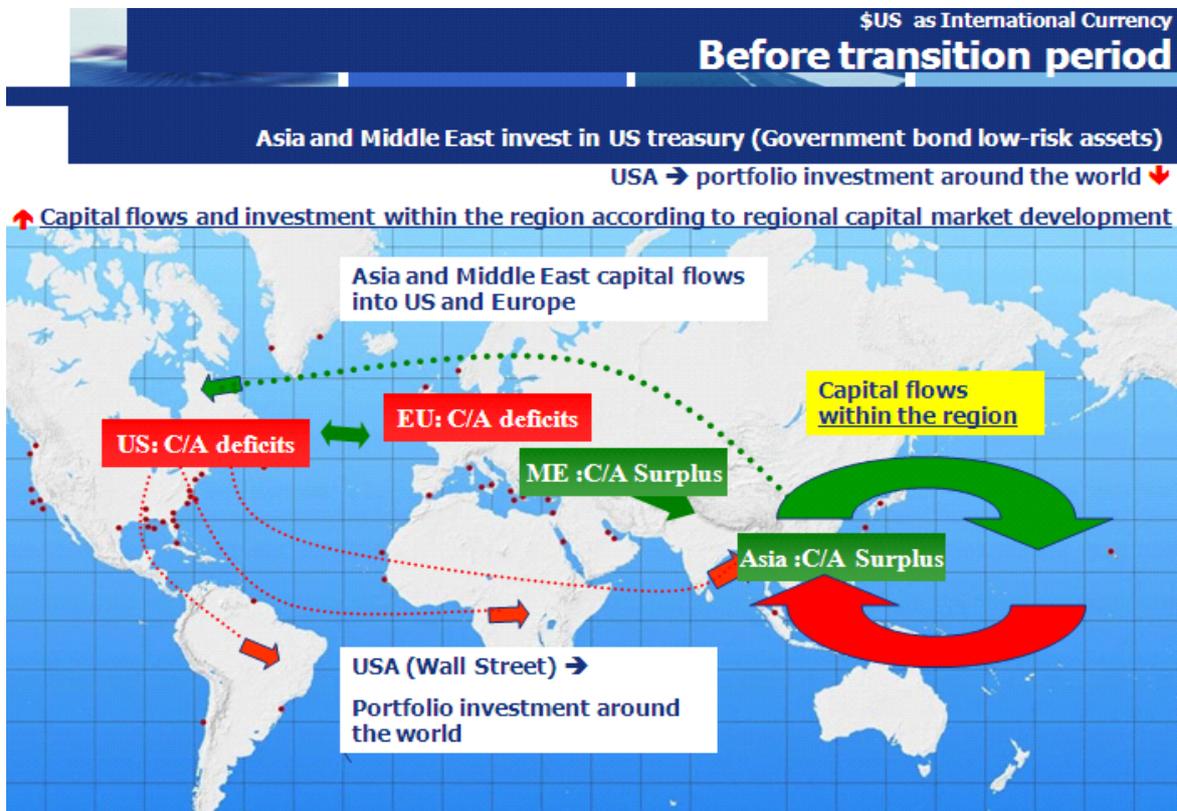
Regarding this, we are expecting that the region will gradually and continually attract more capital inflows subject to the regional capital market development, whereas the US in the role of portfolio investment around the world will be reduced (see Figure 5.1.1).

(2) Market Trend: Capital flows vs. exchange rate movement

Today’s “*market trend*” is that - portfolio investment and risk diversification between financial and commodity markets have become more volatile and more responsive to global equity market developments. These private outflows were joined by an official outflow in the

form of a build-up of foreign exchange reserves. While the inflows took the form of a purchase of risky assets, the outflows amounted to a purchase of safe assets, especially the investment of official reserves in prime securities. Rather than an international exchange of assets effecting a symmetric sharing of risks, Asia was operating in the international capital markets to systematically lay off equity risk. This market trend then creates movement of capital flows and hence leads to exchange rate movement in the region.

Figure 5.1.1: Mega Trend - Movement of Capital Flows



Source: Fiscal Policy Research Institute (2010)

(3) Domestic trend: Exchange rate fluctuation

In the face of such increasingly volatile capital inflows, the authorities in the region have adopted both measures to encourage outflows and to discourage inflows. “*Domestic trend*” shows that exchange rate movement can be effected by how much the central bank of each country use international reserves to intervene exchange rate (see also Chapter 3 for empirical evidence)

5.2 Policy Recommendations

It seems that the inflow of capital has recently tended to sharpen policy dilemmas. While opening the capital account to outflows is a general theme, the response can prove slow among expectations of strong performance of domestic assets and the domestic currency. Hence, coming on top of generally substantial current account surpluses, Asian economies are battening down the hatches, positioning their international accounts to weather storms. Given the challenges posed by capital inflows, the process of opening capital accounts in Asia is not monotonic but instead has a rhythm of two steps forward, one step back.

Since mid 2007 marked another *turning point* of the global economy - Financial globalization led the reconciliation of national autonomy and demands of international markets more difficult. The crisis of 2008 represented another wake-up call for Asia. Global capital movements remained volatile and threatened to cause a capital account crisis. As a financial crisis can involve especially severe turbulences in currency and asset markets, giving rise to macroeconomic instability and further contagion to other countries in the region and beyond. According this, however, each country has to a greater or lesser extent its own monitoring system for capital flows. *In sum, it is important to realize that striking the*

appropriate balance will vary from country to country, but the general policy makers need to recognize the balance between best utilize capital flows while maintaining prudent macroeconomic stability. It is the time that we need to have strong analysis of what would be the appropriate policy mix.

We hence would like to propose a number of recommendations as follows:

Regional Financial Architectures: Several initiatives have been initiated by the ASEAN+3 group to enhance the regional financial architecture, although progress has been slow. For instance, bilateral swap arrangements now exists to combat the short-term liquidity shortage problem; talks are promoted on regional exchange rate coordination to bolster exchange rate stability, and the regional bond market initiative (Asian Bond Market Initiative) was launched to facilitate the utilization of East Asian savings for productive investments in the region.

Exchange Rate Arrangement: The strong investment–production–trade ties in Asia can be disrupted by currency fluctuation. To reduce currency risks from the current triangular currency exchange, direct exchange—price quotation and currency unit—in local currency should be promoted. Some form of Asian currency alignment might be a good step.

Investment Alternatives in the Region: As a high growth region, Asia attracts capital inflows that could lead to currency appreciation. There is way to maintain stability in this particular situation. Asia might consider transforming capital surplus into physical and social investment necessary for future sustainable growth. These investments may mean increasing imports and reducing current account surplus and creating new infrastructure project to generate demand for investment funds of high rate of return.

Cooperation of CMIM and ABMI Outplacement of Asian Bonds: Development of Asian bond market can facilitate regional investment with a long-term financial instrument.

One advantage for holders of long-term bonds denominated in local currency is their lower currency and maturity risks. Compared with the redemption of bank loans, the bond has the secondary market to insulate issuers from massive redemption before maturity. Moreover, Asian bonds could help manage foreign currency given the issue of global imbalance. If Asia is to move to establish some form of currency cooperation, the Asian bond market could be utilized to stabilize a new exchange rate regime

The outplacement of Asian bonds has to be dealt with utilizing the already agreed CMIM and ABMI to work together and to reinforce each other. There are 3 advantages of CMIM and ABMI now happening.

The CMIM is well established. The size of foreign reserves of most member countries has been continuously increased. Some of the countries had to promote the outward investment policy by allowing residences to save in foreign currency, or to set up the Sovereign Wealth Fund (SWF).

The government bonds of ASEAN5 and the Plus Three have become an important asset class of international investors. Now, there have no reason why the government or the central banks of ASEAN+3 cannot accept the government bonds of our counterpart countries. In fact, some of the central banks in ASEAN+3 has long been accumulated the Asian LCY bonds in their foreign reserves portfolio.

As some member countries in the ASEAN+3, especially those in ASEAN have been trapped in the low investment mode for years; albeit, physical and social infrastructures are not up to standard of infrastructure.

The outplacement mechanism is not the new proposal. It was first proposed in 2007 at the Asian Bond Conference in Bangkok. However, the progress of CMIM and ABMI has made the proposal more attractive, and to really consider its possibility.

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