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Cross-Border Investment and the Global Financial Crisis in the Asia-Pacific Region

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the Asia-Pacific Region**

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Abstract

The views expressed in this Working Paper are those of the author(s) and should not necessarily be considered as reflecting the views or carrying the endorsement of the United Nations. Working Papers describe research in progress by the author(s) and are published to elicit comments and to further debate. This publication has been issued without formal editing.

The subprime mortgage crisis erupted in the United States in mid-2007 and was then transformed into the global financial crisis after the failure of Lehman Brothers in September 2008. The total amount of write-downs of loans and securities by financial institutions for 2007-2010 is estimated to reach \$1 trillion in the United States, \$604 billion in the United Kingdom, and \$814 billion in the Euro Area. By contrast, the Asia-Pacific region is expected to have write-downs of only \$210 billion, suggesting the limited damages incurred on the banking sector. Nonetheless, the Asia-Pacific region suffered from the global financial crisis through two channels. One channel was mainly through capital withdrawals from equity markets by foreign investors, causing a sharp drop in stock prices. The other channel was through trade linkages with advanced nations. Nearly all countries faced a contraction in exports and production owing to an abrupt decline in import demand in the United States and Europe. This paper analyses how the Asia-Pacific region was affected by the global financial crisis. To do so, the paper focuses on cross-border capital flows and investment patterns by looking at the pre-crisis features of the United States in relation to the world, as well as the Asia-Pacific region. It also focuses on net international investment positions of the Asia-Pacific region in the pre-crisis period. The paper then sheds light on the impact of the global financial crisis on the cross-border capital flows and the balance of payments in the region.

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1. INTRODUCTION

The subprime mortgage crisis erupted in the United States in mid-2007 and then had an immediate contagious effect on Europe. Many financial institutions in the United States and Europe saw an immediate deterioration of their assets, leading to the impairment of their capital. The crisis was then transformed into the global financial crisis after Lehman Brothers filed for Chapter 11 bankruptcy protection in the United States courts in 15 September 2008. Its failure intensified the counterparty and credit risks among financial institutions and investors. As a result, doubt about overall financial sector stability increased sharply in the United States and Europe, leading to a rapid reversal of investors' risk appetite, toward being risk-averse, and so precipitated a worsening of the credit crunch. A tightening of borrowing costs and terms happened despite continuous easing of monetary policies by the FRB and European central banks. This put many financial and non-financial firms in extremely difficult financial situations; thereby creating a vicious cycle by further increasing loan losses. The financial problems have spread to the Asia-Pacific region and the rest of the world, worsening global macroeconomic performance. Many countries have experienced negative real economic growth from late 2008, a decline in inflation rates, a rise in unemployment, a slowdown in consumption growth, and a contraction in trade growth.

Since March 2009, financial markets began to stabilize rapidly, thanks to massive government assistance to support the financial system and aggressive monetary easing policy undertaken on the global level (together with the expansionary fiscal policy and IMF financial support provided for a number of emerging economies). Nonetheless, banks continue to maintain cautious lending attitude due to holdings of ample impaired assets and potential losses arising from individual and corporate loans (reflecting large losses of jobs, sluggish consumer demand, and lower levels of world trade volumes).

According to the IMF (2009b), the total amount of world-wide write-downs of loans and securities by financial institutions is expected to reach \$2.8 trillion for 2007-2010. Even though securities pricing has been improved, it means that banks are expected to face further large losses from their holdings of loans and securities. Of this amount, the United States will have the largest write-downs of \$1 trillion. The largest losses arise from residential mortgages and their related securities. The United Kingdom is likely to be the next largest country with the amount of \$604 billion as a result of its active investment in the United States capital markets and lively cross-border banking relationships. As a region, the Euro Area will have a large scale of write-downs of \$814 billion. Other European countries (including Denmark,

Norway, Iceland, Sweden, and Switzerland) are also estimated to record \$210 billion. For the United Kingdom and other European countries, the greatest losses occur in the area of foreign loans provided by banks.

By contrast, the Asia-Pacific region is expected to write-down only \$210 billion, being much smaller than banks in the United States and Europe. Nonetheless, the Asia-Pacific region suffered from the global financial crisis through two channels. One channel emerged mainly through capital withdrawals from equity markets by foreign investors, causing a sharp drop in stock prices. The other channel was through trade linkages with advanced nations. Nearly all countries faced a contraction in exports and production owing to an abrupt decline in import demand in the United States and Europe.

This paper consists of 4 sections. Section 2 analyses cross-border capital flows and investment patterns by looking at the pre-crisis features of the United States in relation to the world and the Asia-Pacific region. Detailed observations are presented with respect to cross-border stocks and debt securities investments, as well as banking activities prior to the crisis. Section 3 focuses on net international investment positions of the Asia-Pacific region. Section 4 sheds light on the impact of the global financial crisis on the region. Section V includes final remarks.

2. CROSS-BORDER CAPITAL MOVEMENTS BEFORE THE GLOBAL FINANCIAL CRISIS

This section examines the features of cross-border capital investment between the United States (which has the most advanced capital markets in the world) and the rest of the world. It also focuses on the investment behavior and patterns of the Asia-Pacific region.

2.1. The size of the United States capital markets

Before the global financial crisis, the United States attracted the substantial amount of capital from the rest of the world. It received \$2 trillion from abroad (increasing net external liability) and invested \$1.25 trillion abroad (increasing net external asset) in 2006. The difference between these figures indicates the capital account balance, recording net capital inflows of \$837 billion. It is important to recognize that the amount of (gross) capital inflows to the United States was much bigger than that of net capital inflows.

This suggests that the United States were able to attract a large amount of cross-border capital, thereby being able to lower their interest rates and finance government and private sector activities. The bubbles in the real estate industry and consumption growth were fueled by low interest rates. The United States could absorb a large amount of global capital, thanks to the presence of the liquid, deep, diversified capital and financial markets in the world. Table 1 shows the size of several markets in the world and the United States.

The United States have the largest, most diversified debt securities markets in the world. This is evidenced by the sheer size of corporate bond market (outstanding bonds issued), which amounted to \$10 trillion in the United States in 2006 and accounted for about 90 per cent of global corporate bond markets. This size exceeded that of corporate loans, suggesting that direct finance has been well-developed in the United States. The similar pattern was observed for the case of asset-backed securities (ABSs) (e.g., mortgage-based securities (MBSs), credit card and/or auto loans-backed securities, asset-based commercial papers), as the United States asset-backed securities market with the size of \$10 trillion was dominant in the world.

On the other hand, the United States corporate equity market accounted for only 41 per cent of the world equity markets in spite of the substantially large market size. This reflects that other countries also have relatively large equity markets. Generally speaking, it is relatively easier to foster an equity market than debt securities markets (i.e. bonds and asset-backed securities), because potential capital gains tend to be greater on stocks than on bonds. The United States government debt market (which includes only treasury securities) also accounted for only 20 per cent of the world government debt markets.

Table 1. The Size of Global Securities Markets (2006, \$ Trillions)

	Corporate Equity	Corporate Bonds	Corporate Loans
Total	51	11	6
US	21	10	3
	Government Debt	Asset-Backed Securities	Money Markets
Total	26	11	6
US	5	10	2

Source: Prepared by the author based on Bank of England (2007) and U.S. Flows of Funds.

2.2. Features of cross-border stock investment flows

Before the subprime mortgage crisis arose, the United States was an active investor in the world stock markets. The United States investors held foreign stocks of about \$5.2 trillion at the end of 2007, while foreign investors held U.S. stocks of about \$3.1 trillion at the end of June 2007 (table 2). This indicates that the United States was a net investor in foreign stocks, despite its position as the largest net external debtor in the world. Thus, it could be said that the United States contributed to the development of global stock markets to a significant degree by expanding the investor bases of other countries.

**Table 2. Cross-Border Movements of Securities between U.S. and Non-U.S. Investors
(\$ Trillions)**

	Foreign Holdings of US Securities (June 2007)						US Holdings of Foreign Securities (End-2007)		
	Total	Stocks	Debt Securities	Treasury Securities	Agency Bonds	Corporate Debt Securities	Total	Stocks	Debt Securities
Total	9,771	3,130	6,641	2,194	1,413	3,034	7,212	5,248	1,964
Europe	4,203	1,594	2,608	398	362	1,848	3,652	2,569	1,083
UK	921	421	499	48	28	423	1,142	715	427
Asia	3,143	560	2,582	1,484	826	272	1,325	1,194	132
Japan	1,197	220	976	622	231	123	594	529	65
China	922	29	894	478	387	29	97	96	2
Latin America	1,489	524	964	239	169	556	1,300	883	417
Caribbean FCS	1,180	480	700	82	110	508	928	589	339
Canada	475	347	128	25	4	99	586	379	207

Source: U.S. Treasury database.

The United States actively invested in European stocks, accounting for half of its total foreign stock investment. Other European countries in which the United States had large investment were the United Kingdom (\$715 billion, accounting for 18 per cent of the capitalization of the UK stock market), France (\$348 billion, 12 per cent of French stock market capitalization) and Germany (\$329 billion, 15 per cent of German stock market capitalization). The United States were the largest foreign investor in the United Kingdom (accounting for 43 per cent of total foreign holdings of stocks), Germany (33 per cent), and France (39 per cent).

The amount of stocks in the Asia-Pacific region held by U.S. investors was much smaller than that of European stocks. Nevertheless, U.S. investors had a large presence in the region:

Japan (\$529 billion, accounting for 12 per cent of Japanese stock market capitalization), Australia (\$138 billion, accounting for 10 per cent of Australian stock market capitalization), Korea (\$129 billion, 11 per cent of Korean stock market capitalization), and Hong Kong, China (\$119 billion, 10 per cent of Hong Kong, China stock market capitalization), as indicated in table 3. The United States were the largest foreign investor in Japan (accounting for 51 per cent of total foreign holdings of stocks), Australia (46 per cent), Hong Kong, China (36 per cent), Indonesia (39 per cent), Korea (49 per cent), Malaysia (33 per cent), the Philippines (53 per cent), Singapore (43 per cent), Taiwan (53 per cent), and Thailand (34 per cent).

Table 3. U.S. Holdings of Foreign Stocks at End-2007
(\$ Millions and Percentage of Domestic Market Capitalization)

	US Holdings of Foreign Stocks	% of Domestic Market Capitalization
Grand Total	5,247,990	11
Japan	529,219	12
Australia	138,096	10
Korea	129,234	11
Hong Kong	119,522	10
China	95,658	2
India	81,755	4
Taiwan	81,024	11
Singapore	55,584	15
Malaysia	17,637	5
Thailand	15,998	8
Indonesia	15,077	7
Philippines	9,909	10
Vietnam	11	0

Source: U.S. Treasury database.

Regarding foreign investment to the U.S. stock market, European investors were more active than Asia-Pacific investors (table 2). Investment from Europe to the United States reached \$1.6 trillion and accounted for half of the total U.S. stocks held by foreign investors. This amount was far greater than that held by the Asia-Pacific region (which accounted for 18 per cent of U.S. stocks held by foreign investors). The United Kingdom was the most active investor, holding \$421 billion of U.S. stocks as of June 2007. Japan was the most active Asia-Pacific investor, but its scale (\$220 billion) was considerably smaller than the United Kingdom (\$421 billion) and Luxemburg (\$235 billion).

While foreign investors held a substantial amount of U.S. stocks (\$3.1 trillion), this accounted for only 11 per cent of the total U.S. stock market. This reflects the presence of a large number of domestic individual and institutional investors in the United States. The amount of financial assets of U.S. households was \$50 trillion in 2007, the largest in the world and much greater than that of Japan's individually held financial assets (\$13 trillion). U.S. households held 28 per cent of the total U.S. stocks. U.S. mutual funds, with financial assets of over \$8 trillion, were the second largest investor as a group, holding 22 per cent of U.S. stocks outstanding. The ratio of foreign ownership in the United States was then smaller than the ratios of Indonesia (about 20 per cent), Japan (about 30 per cent), Korea (about 35 per cent), and Thailand (about 30 per cent) in 2006. This suggests that the United States has a lower degree of dependence on foreign investors than does the Asia-Pacific region.

In the case of China, foreign investors held \$389 billion of Chinese stocks in 2007 (according to the IMF data). Investors from Hong Kong, China were the largest group (\$153 billion), followed by the United States (\$96 billion). Since 2002, foreign investors have been allowed to invest in China's capital market through the system of "Qualified Foreign Institutional Investors (QFII)," in addition to the existing access through the B-share market. A QFII license is issued by the China Securities Regulatory Commission and the People's Bank of China to applicant entities that meet certain requirements. For example, a fund management institution must have over 5 years experience of operating a fund business and have managed assets of not less than \$5 billion. A securities firm must have over 30 years experience of operating a securities business, have paid-in capital of not less than \$1 billion, and manage securities assets of not less than \$10 billion. In 2008, 24 foreign institutions were granted QFII status with total permitted investment of \$2.9 billion. As of August 2009, a total of 87 foreign institutions had been granted QFII status with total permitted investment of \$15.7 billion. Both the number of permitted foreign institutions and the amount of permitted investment grew rapidly in 2008.

Regarding Indian stocks held by foreign investors, the amount reached \$303 billion in 2007. The largest investors were originated from Mauritius, accounting for 35 per cent of total foreign holdings. The United States were the second largest investor (37 per cent of total foreign holdings).

2.3. Features of cross-border debt securities investment flows

Compared with stocks (\$5.2 trillion), U.S. investors had invested less actively in foreign debt securities (\$1.96 trillion) by the end of 2007 (table 2). Most U.S. investment in foreign debt securities was allocated to foreign private sector debt securities (\$1.2 trillion as compared with \$737 billion for government ones) and long-term debt securities (\$1.6 trillion as opposed to \$357 billion for short-term ones). The small amount of investment in foreign government securities partly reflects the fact that the United States holds only a small amount of foreign reserves (about \$74 billion) as it hardly intervenes in foreign exchange markets. The United States held a substantial amount of UK debt securities (\$427 billion), followed by securities issued in the Cayman Islands (\$312 billion), Canadian securities (\$207 billion), French securities (\$100 billion) and German securities (\$97 billion). Most of these bonds were private sector debt securities. The United States remained the largest foreign investor in UK debt securities, accounting for 21 per cent of the total value of UK debt securities held by foreign investors (according to IMF data).

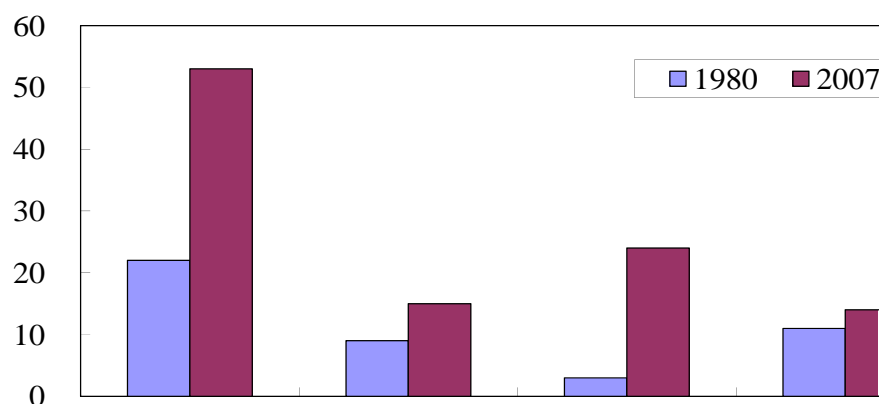
While U.S. investors were not active in investing in foreign debt securities, foreign investors actively invested in the U.S. debt securities market. By June 2007, foreign investors held U.S. debt securities equivalent to \$6.6 trillion (table 2), which exceeded the amount of U.S. stocks (\$3.1 trillion) they held. Japan and China stood out as the two top investors in U.S. debt securities, \$976 billion and \$894 billion, respectively. The debt securities were mostly longer-term ones such as treasury securities and agency-related securities, and were relatively risk-free. Agency-related securities include bonds and mortgage-backed securities issued by government-sponsored enterprises (e.g., Fannie Mae and Freddie Mac). The U.S. treasury securities held by Japan and China constitute a substantial part of their foreign reserves.

UK investors, the third largest group of foreign investors, purchased a substantial amount (\$423 billion) of corporate debt securities (including corporate bonds, asset-backed securities, asset-backed commercial papers, etc.). Investors from other European countries, such as Luxembourg, Belgium, Ireland, Switzerland and Netherlands, had investment tendencies similar to those of UK investors. These countries hold few foreign reserves and thus were less keen than the Asia-Pacific region on holding foreign government securities. This could be because most of these countries have adopted the euro as a single currency and thus were largely precluded from intervening in the foreign exchange market. The United Kingdom, which still has its own currency, also rarely intervenes in the foreign exchange market, similar

to the United States. This view is supported by figure 1, which shows that the Asia-Pacific region accounts for more than half of the total foreign reserves accumulated worldwide.

Based on the above observations, it can be concluded that European investors were greater risk-takers than the Asia-Pacific investors. It can be said that the Asia-Pacific investors contributed to lowering U.S. long-term interest rates by holding large amounts of U.S. treasury securities. But the Asia-Pacific investors were less willing to hold other debt securities, such as corporate bonds and ABSs. By contrast, European investors were more interested in holding riskier assets, contributing to financing firms and private sector issuers of securitized assets in the United States. This suggests that European investors would suffer most in the event of a U.S.-led financial crisis and resultant plunge in financial asset prices.

**Figure 1. Foreign Reserves
(Percentage of World Foreign Reserves)**



Source: World Bank database.

In the case of the Asia-Pacific debt securities, the amounts of foreign holdings were much smaller than those of stocks. This was true for China, Hong Kong, China, India, Indonesia, Japan, Korea, Malaysia, Singapore, Taiwan and Thailand (except Australia and Philippines). The potential capital gains that would offset risk premiums (and pro-longed low interest rates in Japan) appear to have attracted foreign investors to the stock markets in the Asia-Pacific region. The nationalities of foreign investors were diverse (based on IMF data). For Japanese debt securities (\$697 billion outstanding in 2007), investors in the United Kingdom were the largest group (holding \$258 billion), followed by France (\$76 billion). Some of these bonds appear to have been held by financial institutions in the United Kingdom and other places on

behalf of foreign central banks as part of their foreign reserves. Chinese debt securities (with \$21 billion held by foreign investors) were owned largely by investors in Hong Kong, China (\$13 billion). Hong Kong, China debt securities, \$19 billion held by foreign investors, were largely held by investors in Singapore (\$3.5 billion) and the United Kingdom (\$3.2 billion). Korean debt securities (\$103 billion held by foreign investors) were held largely by investors in Hong Kong, China (\$17 billion), France (\$16 billion) and Singapore (\$14 billion).

Regarding holdings of foreign debt securities by the Asia-Pacific region, investors from Japan, China, Hong Kong, China, Australia, Singapore and Korea were dominant. Table 4 indicates the amount of holdings of foreign stocks and securities with major investment destinations for these countries/regions (excluding China whose detailed data were not available). Although their total amounts of investment were far below those of the United States and United Kingdom, they have been becoming important supplier of cross-border capital. This became possible for Japan, China, Hong Kong, China and Singapore mainly due to the accumulated current account surpluses (positive saving-investment gaps). Moreover, China, Hong Kong, China and Singapore accumulated foreign reserves under the policy to stabilize their currencies against the dollar, thereby enabling their monetary authorities to become the large exporters of capital. Australia, which has been facing the current account deficit, was able to attract foreign capital through the well-developed funds management industry. The industry is highly sophisticated and competitive, in part thanks to the compulsory superannuation policy implemented over the two decades.

Japan, China and Singapore invested more actively in foreign debt securities than stocks. This gap is great for Japan, indicating Japanese preference towards debt securities. Most of cross-border capital in the Asia-Pacific region was allocated to the United States and Europe (and offshore financial centers mostly managed by U.S. and European financial institutions). Table 4 also reports that little regional money was circulated within the Asia-Pacific region.

Table 4. Major Investor Countries/Regions in the Asia-Pacific Region (\$ Millions)

	Foreign Stocks	Major Inv. Desination	Foreign Debt Securites	Major Inv. Desination
Japan	573,469	US, UK	1,950,097	US, Cayman
Hong Kong	514,511	China, Cayman	264,019	US, Australia
Australia	262,517	US, UK	132,705	US, UK
Singapore	140,553	US, India	184,510	UK, US
Korea	106,110	HK, US	52,541	US, UK
Memorandum:				
US	5,247,983	UK, Japan	1,943,796	UK, Cayman
UK	1,541,432	US, Japan	1,890,811	US, Ireland

Note: Data for China is not covered due to lack of data.

Source: Prepared based on IMF data.

2.4. Features of cross-border banking activities

Cross-border banking activities expanded globally in the early 2000s and became dominated by banks in the United States, the United Kingdom, and other European countries. Banks increased cross-border business not only with other banks and their affiliates operating abroad, but also with non-bank firms (including loans, corporate bonds, ABSs, MBSs, collateralized debt obligations (CDOs) and stocks). In particular, UK local banks and affiliates of foreign nationality banks operating in the United Kingdom were the most active players in cross-border banking around the world. Foreign bank affiliates operating in the United Kingdom primarily originated from the United States, France, Germany, Switzerland and other European countries.

According to the BIS data, the external (on-balance) assets and liabilities of banks (including local banks as well as affiliates of foreign nationality banks residing in the country under consideration) were largest in the United Kingdom. The amount of external assets and liabilities recorded in December 2007 were \$6,844 billion (2.4 times larger than the United Kingdom's GDP) and \$7,305 billion (2.6 times) (table 5). The absolute size of external assets and liabilities was substantial and indeed the largest in the world, but the net external assets were only -\$462 billion (or net external liabilities of \$462 billion). This indicates that the United Kingdom offered the best location for both local and foreign banks from which to engage in cross-border bank lending and borrowing activities.

Table 5. Cross-border Banking Activities (\$ Billions)

	External Asset				External Liability			
	End-2006	End-2007	Sep-09	Mar-09	End-2006	End-2007	Sep-09	Mar-09
Total	26,126	33,459	33,323	29,419	24,448	31,177	30,994	27,730
United Kingdom	5,185	6,844	6,403	5,459	5,432	7,305	6,983	5,908
United States	2,383	2,961	2,929	5,672	3,111	3,715	3,419	3,133
France	2,196	2,814	2,811	2,423	2,123	2,806	2,792	2,336
Germany	2,794	3,561	3,677	3,093	1,722	1,993	2,107	1,142
Switzerland	1,122	1,539	1,313	1,010	1,002	1,393	1,171	987
Japan	1,903	2,402	2,467	2,348	682	712	760	906
Hong Kong	621	798	772	770	353	476	505	486
Singapore	604	785	849	726	607	803	864	729
Australia	147	185	244	247	380	496	539	508
Taiwan	144	185	188	163	68	85	105	86
Korea	69	86	108	100	146	204	240	187
Malaysia	--	37	28	28	--	48	55	45
India	26	28	22	25	74	98	80	71

Source: Based on BIS data.

Compared with banks in the United Kingdom, banks based in the United States had smaller external assets and liabilities. The amounts of their external assets and liabilities were \$2,961 billion and \$3,715 billion, respectively. These amounts accounted for only 22 per cent and 27 per cent, respectively, of the United States' GDP, far below the ratios for banks in the United Kingdom. These facts support the view that the United Kingdom (namely, London) was a more important focus for cross-border banking activities (where both local banks and foreign bank affiliates were active players) than the United States (namely, New York). It is clear that one of the strong advantages of London as a competitive international financial centre is the presence of the internationally-active banking sector that circulates global money from oil-exporting and other countries to the United States and other regions of the world.

Compared with banks in the United States and Europe, the amounts of external assets and liabilities in the Asia-Pacific region remained much smaller. This could imply that Asian cross-border banking businesses are still in a pre-mature stage. Banks in Japan had external assets of sizes comparable to banks in Europe and the United States, but their external liabilities were much smaller, even smaller than banks in Singapore. This meant that banks in Japan did not play an active role in the intermediation of foreign money. Moreover, their external assets and liabilities accounted for only 53 per cent and 16 per cent of Japan's GDP,

respectively. These relatively small sizes may be attributed to the fact that Japanese banks were cautious after experiencing serious domestic banking sector problems in the 1990s. These had been caused by the collapse of real estate and stock price bubbles in 1991. Banks in Japan began to increase their cross-border activities from 2002, particularly in the United States, followed by the United Kingdom, France and Germany. However, the pace of their activities did not match that of banks in the United Kingdom and the United States, as seen in the case of external assets.

Banks both in Japan and the United Kingdom invested substantially in debt securities. However, their risk attitudes were different: banks in the United Kingdom had large exposures to structured credit products and corporate bonds. This indicates that banks in the United Kingdom would suffer more than those in Japan in the event of a U.S.-led financial crisis. Banks in Hong Kong, China had small external assets (\$798 billion) and external liabilities (\$476 billion). However, these were large in terms of GDP, being about 4 times and 2.3 times the Hong Kong, China GDP respectively. Singapore had a pattern similar to that of Hong Kong, China: its external assets and liabilities as a share of GDP were 4.7 times and 4.8 times, respectively. These data suggest that Singapore particularly, like the United Kingdom, participated in intermediating global money more actively than did banks in Japan. Their activities stagnated somewhat during the economic crisis of 1997-1998, but began to expand again from the early 2000s. Meanwhile, the external assets and liabilities of banks in Australia, Korea, Malaysia, Taiwan and India remained relatively small.

Prior to the East Asian crisis, Hong Kong, China and Singapore functioned as intermediaries in the circulation of foreign money from Japan, the United States and Europe (through affiliates operating in Hong Kong, China and Singapore) to emerging Asian countries (such as Korea, Thailand, Indonesia and China). This was in addition to direct financing by Japanese, U.S. and European-headquartered banks to emerging Asia. After experiencing a decline in activities during the East Asian crisis, these two locations emerged again as regional financial centres. However, their role in intermediation was transformed from being a provider of net claims against emerging Asia (from Japan, the United States and Europe) to being a provider of net claims against the United States, United Kingdom and other European countries (from emerging Asia). The shift of their current account balances from deficit to surplus for a number of East Asian countries after the crisis of 1997-1998 promoted investors and banks in Asia to place deposits in, and extend loans to, banks in Hong Kong, China and Singapore. These proceeds were in turn extended to financing for banks in the United States, United Kingdom and other European countries (figure 2).

Figure 2. Cross-border Banking Activities in East Asia

Before the East Asian Crisis of 1997-98



After the East Asian Crisis of 1997-98



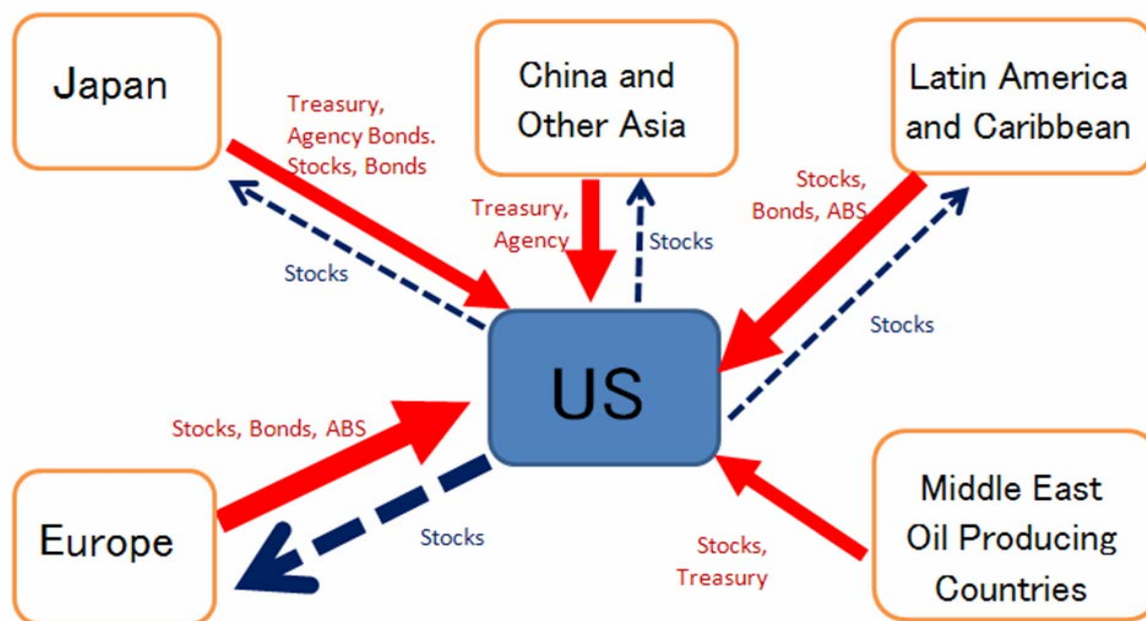
2.5. Summary of Section 2

Based on the aforementioned observations, Section 2 can be summarised as follows: first, the scale of U.S. investors' investment in foreign stocks was large and was dominant around the world. The amount of their investment in foreign stocks was even greater than the amount of foreign investors' investment in U.S. stocks. At the same time, the United States obtained external financing mainly through issuing debt securities. The U.S. government, agencies, non-financial firms and ABS issuers were able to issue large amounts of bonds internationally. Thus, it may be concluded that investors in the United States were risk-takers in the sense that they preferred investment in foreign stocks (while raising funds internationally through issuing debt securities). Stocks are generally considered riskier than bonds as they could potentially give rise to substantial capital gains or losses without any assurances on the repayment of their principals.

Secondly, investors in Europe could be regarded as risk-takers, since they actively invested in riskier stocks, corporate bonds, ABSs, MBSs and CDOs in the United States. By contrast, investors in the Asia-Pacific region could be regarded as risk-averse, as foreign reserves were one of their largest external assets (invested largely in U.S. treasury securities and agency-related bonds). Moreover, Japanese private sector investors preferred investing in foreign bonds to foreign stocks. The United States and Europe together contributed to the rapid growth in the structured finance industry in the 2000s. While this investment generated substantial returns and profits to U.S. and European investors, the risks (such as credit, counterparty, liquidity risks) borne by them were substantial and underestimated.

The afore-mentioned features with regards to securities investment are summarised in figure 3.

Figure 3. Cross-Border Movements of Securities Investment Before the Global Financial Crisis



Thirdly, cross-border banking activities were undertaken largely by U.S. and European banks. The United Kingdom offered the most important intermediary location in terms of circulating global banking money. These funds were managed by local banks and European banks' affiliates operating in the United Kingdom. These were then allocated largely to non-bank borrowers in the United States. Compared with the United Kingdom, the United

States was a less important centre for cross-border banking activities. Instead, U.S. banks actively engaged in international activities through establishing subsidiaries and branches residing in the United Kingdom, the European continent, and other regions (such as the Asia-Pacific region). The U.S. banks' foreign affiliates were less exposed to financing non-bank borrowers in the United States, as compared with UK and other European banks.

Fourthly, Japanese banks were the most active players in cross-border banking activities among the Asian banks, but their activities were largely concentrated on the external asset side. In addition to deposits and loans, they also invested in a large amount of U.S. treasury securities and agency-related bonds. Given that the amount of external assets substantially exceeded external liabilities, it appears that Japan did not offer a place for intermediate global money. It can also be said that the role of Japanese banks in the intermediation of global money was limited. Meanwhile, Singapore and Hong Kong, China have become important locations for cross-border banking activities in the Asia-Pacific region (like the United Kingdom) by circulating regional money to other regions in the world. Most of active players there were affiliates of U.S. and European banks.

Fifthly, it could be added that Hong Kong, China's role as an intermediary for foreign direct investment (FDI) has become increasingly important and more international. This is evidenced by the large share of FDI in Hong Kong, China's external assets (38 per cent) in 2007. IMF (2008c) points out that bilateral FDI flows (both asset and liability sides) involving Hong Kong, China were second to (mainland) China, amounting to 20 per cent of intra-Asian FDI flows (compared with 36 per cent in China). The largest FDI flows were from Hong Kong, China to China and from China to Hong Kong, China; that is to say, Hong Kong, China's intermediary role for FDI flows was mostly linked to China. While FDI flows related to China dominated, Hong Kong, China's FDI flows with other East Asian countries were growing.

3. CHANGES IN NET INTERNATIONAL INVESTMENT POSITIONS BEFORE THE GLOBAL FINANCIAL CRISIS

This section investigates how the Asia-Pacific region shifted its external asset and liability structure after the East Asian crisis of 1997-1998 (until the eruption of the global financial crisis). To do so, this paper focuses on each country's data on "net international investment positions" or the difference between each country's external financial assets and liabilities.

External financial assets refer to the assets accumulated through outward FDI to abroad, portfolio investment to abroad, and other investment to abroad (e.g. loans and deposits). External financial liabilities cover the debts related to inward FDI from abroad, portfolio investment from abroad, and other investment from abroad.

If a country's net international investment positions turn out to be positive, it means that the country is a net external creditor or has net external assets. On the contrary, if its positions turn out to be negative, the country is regarded as a net external debtor, or has net foreign debt. In order to make comparison on time-series and cross-country bases, this paper extensively uses data on net international investment positions measured as a percentage of GDP.

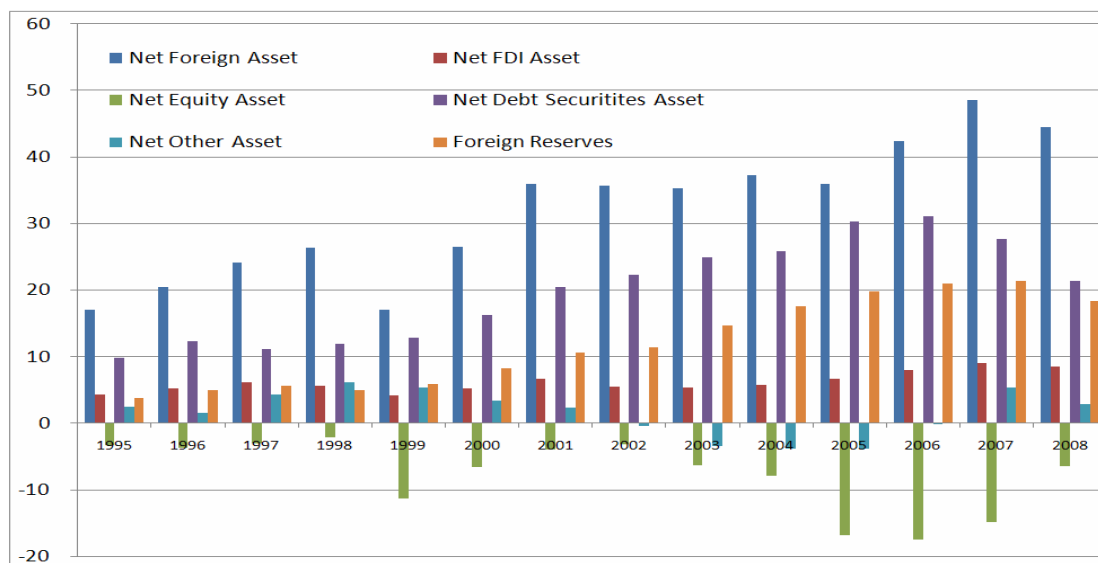
3.1. Cases of advanced countries: Japan and Australia

Japan has been the largest net foreign creditor in the world, as evidenced by the largest positive net international investment position. The position rose from \$818 billion in 1995 (15 per cent of Japan's GDP) to \$1.8 trillion (42 per cent) in 2006, and to \$2.2 trillion (49 per cent) in 2007. Debt Securities remained the largest net external asset, growing from 10 per cent of GDP in 1995 to 31 per cent in 2006, and to 28 per cent in 2007 (figure 4). Foreign reserves constituted the second largest asset, growing from 4 per cent of GDP in 1995 to 21 per cent in 2006-2007. This reflected occasional intervention by the monetary authority in the foreign exchange market for the purpose of limiting the pace of the yen's sharp appreciation. Largest interventions through US\$ purchases were performed in 2003-2004, followed by operations in 1999 and 1995. Japan has stopped intervening in the foreign exchange market after April 2004, thereby maintaining a free float exchange rate system currently.

Meanwhile, Japan's dependence on net equity investment from abroad grew rapidly during 2005-2007, as evidenced by the increase in negative net equity investment positions (figure 4). The ratio grew from -3 per cent in 1995 to -17 per cent in 2006 and 15 per cent in 2007. While there are limited numbers of foreign listed firms on Japanese stock exchanges, foreign investors have increasingly played an important role in activating stock transactions in Japan. The share of stocks listed on the five stock exchanges (excluding JASDAQ) and held by foreign investors raised from 4.7 per cent in 1990 to 18.8 per cent in 2000, and to 27.6 per cent in 2007. While non-bank firms and Japanese banks reduced their mutual share holdings in the process of improving their balance sheets during the "*lost decade*", foreign investors took this opportunity to increase investment in Japanese stocks. Foreign investors also play a key role as active participants in the daily equity market transactions. Foreign investors

accounted for 65 per cent of annual stock transaction value in 2007, rising rapidly from 25 per cent in 1991.

**Figure 4. Japan's Net International Investment Positions
(Percentage of GDP)**



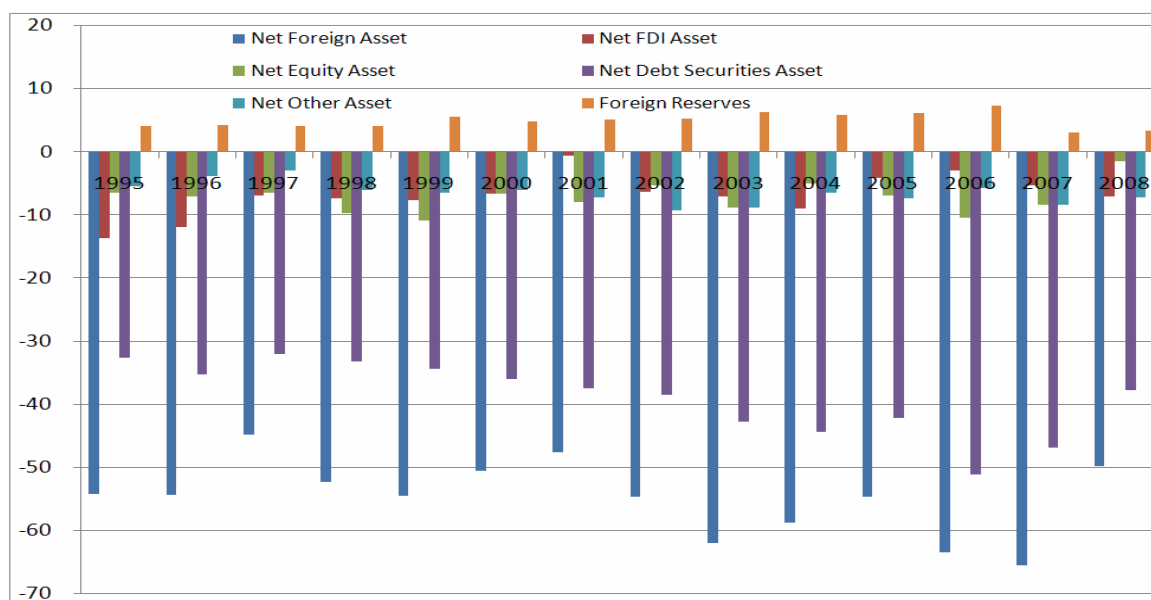
Source: Based on IMF data.

During 1995-2007, Australia faced a current account deficit due to a sustained trade deficit (in most of the period) and a deficit on the income balance. The current account deficit widened to over 6 per cent of GDP in 2007, despite the commodity boom. The accumulated current account deficits were financed by foreign borrowing channeled primarily through financial institutions. External debt was mainly in the form of external debt securities, as shown in figure 5. Although the ratio of net external liability to GDP has barely changed during 1995-2007, external liability shifted from FDI to debt securities. The appreciating trends of the Australian dollar helped by the commodity boom and relatively high interest rates attracted foreign investors. The yen carry-trade caused by prolonged nearly zero interest rates in Japan also contributed to active investment in Australian debt securities by Japanese individuals and institutional investors with the growing risk appetite.

In general, Australian banks were financially sound, but their degree of dependence of wholesale financing was large and accounted for 60 per cent of total funding (more than 40 per cent of wholesale funding were originated from abroad). This feature is similar to that of European banks prior to the subprime mortgage crisis. It differs significantly from banks in

Japan and other Asian countries, whose major sources of funding remained retail deposits. About 30 per cent of offshore funds and 75 per cent of domestic wholesale funds of Australian banks had residual maturity of less than one year, which make them fragile to the volatility of the external financial markets (IMF 2008b).

**Figure 5. Australia's Net International Investment Positions
(Percentage of GDP)**



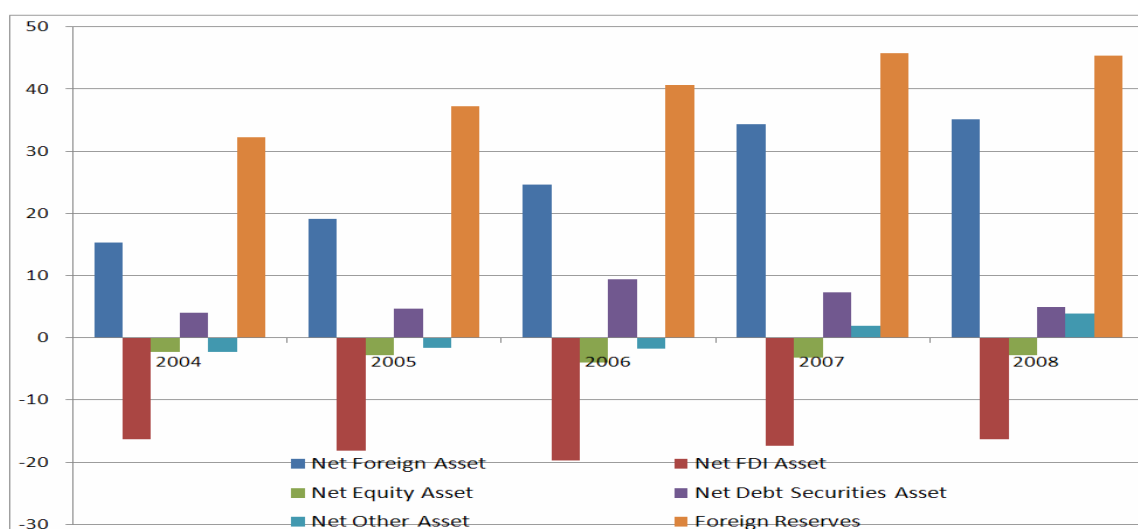
Source: Based on IMF data.

3.2. Cases of net external creditor countries: China and Singapore

In the case of China, its net international investment positions shifted from a deficit to a surplus over the period of 1995-2007. China transformed its status from an external debtor to an external creditor. While data on net international investment positions are available only for 2004-2008 (figure 6), this transformation could be inferred from the movements of the current and capital account balances. The limited scale of current account surpluses in 1995-2000 indicates a limited accumulation of foreign reserves or external assets. Meanwhile, China continuously faced net capital inflows (mainly in the form of inward FDI from abroad) from 1995 to 2007 (except in 1998). The limited build-up of foreign reserves before 2000, together with continuous dependence on foreign capital inflows, suggests that China remained a net external debtor during this period.

Since then, China’s net international investment positions expanded significantly from \$297 billion (15 per cent of China’s GDP) to \$653 billion (25 per cent) in 2006, and to \$1.2 billion in 2007 (34 per cent). This was largely triggered by the expansion of the current account surplus thanks to China’s entry to the World Trade Organization (WTO) in 2001—the ratio of the current account surplus expanded rapidly from 1.7 per cent of GDP in 2000 to 10 per cent in 2006, and to 11 per cent in 2007. Consequently, foreign reserves as the largest net external asset, swelled from \$623 billion in 2004 (32 per cent of GDP) to \$1 trillion (41 per cent) in 2006, and to \$1.5 trillion (46 per cent) in 2008 (figure 6). As of September 2009, the amount of foreign reserves recorded \$2.27 trillion, renewing the top position globally and historically. The debt securities were the next largest net external asset albeit the limited amount (only 9 per cent and 7 per cent of GDP in 2006 and 2007 respectively). The large foreign reserves were partially offset by FDI-related net external liability.

**Figure 6. China’s Net International Investment Positions
(Percentage of GDP)**

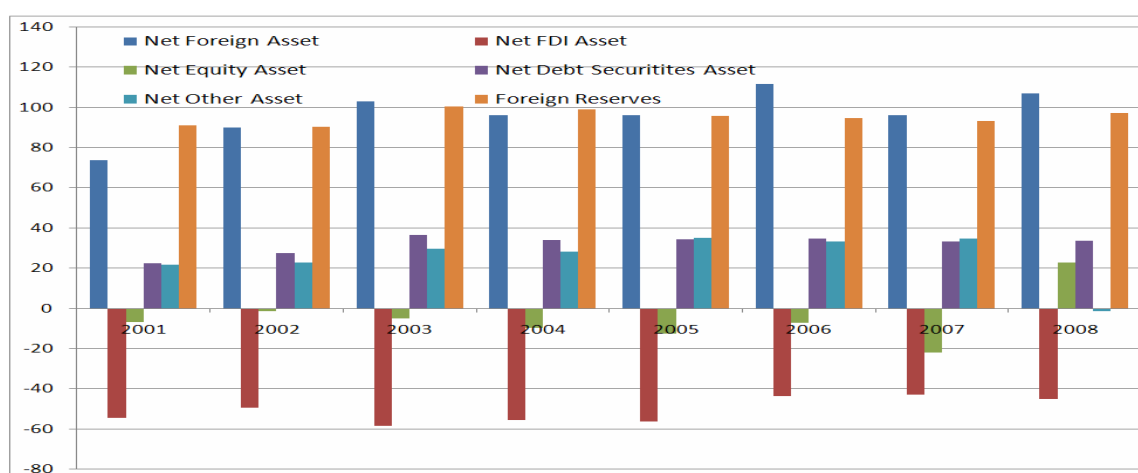


Source: based on IMF data.

Figure 6 indicates that China increased dependence on net external liability related to equity, rising from \$43 billion in 2004 to \$105 billion in 2006, and to \$109 billion in 2007. It should be noted that the size of “gross” equity external liability was much greater than that on the net equity external liability; it expanded 3 times from \$43 billion in 2004 to \$129 billion in 2007. Foreign investors increased holdings of Chinese stocks over the period because of higher sustainable economic growth and thus greater potential capital gains.

Even before the East Asian crisis of 1997-1998, Singapore had been a net external creditor owing to the maintenance of large current account surpluses. The net external assets amounted to \$155 billion (112 per cent of Singapore's GDP) in 2006 and to \$160 billion (96 per cent) in 2007, from \$63 billion (74 per cent) in 2001. Foreign Reserves constituted the largest net external asset, accounting for over 90 per cent of GDP (figure 7). The expansion of the current account surpluses from 12 per cent of GDP in 2000 to 23 per cent in 2003 and 24 per cent in 2007 contributed to the sharp increase in foreign reserves. Singapore's high level of the current account surplus stands out in the Asia-Pacific region and the world. Notwithstanding the limited scales, Singapore increased its net external asset position on debt securities and other items. Meanwhile, it increased its net external liability position on equity.

**Figure 7. Singapore's Net International Investment Positions
(Percentage GDP)**



Source: Based on IMF data.

3.3. Cases of net debtor countries (1): Thailand, Indonesia, Philippines and Malaysia

The East Asian crisis of 1997-1998 occurred in the new global environment, where massive international capital (largely in the forms of private sector, short-term lending) moved from advanced countries to emerging Asia. The capital inflows to East Asia were driven by strong macroeconomic fundamentals (e.g., high economic growth, low inflation, high savings, limited fiscal deficits, private sector investment activities), interest rate differentials, and a quasi-fixed exchange rate regime. Substantial capital inflows occurred after governments had liberalised the domestic financial sector and the capital account without a well-designed regulatory and supervisory system. This promoted rapid credit

growth, bubbles in the real estate and stock prices, as well as heavy reliance on foreign bank finance. In addition, close relations among governments, financial institutions and firms became a source of moral hazard in the private sector due to both banks' weak incentives for monitoring and to implicit government guarantee on bank loans. The structural weakness of financial institutions was aggravated further through equally weak corporate governance of both firms and financial institutions (Yoshitomi and Shirai 2000).

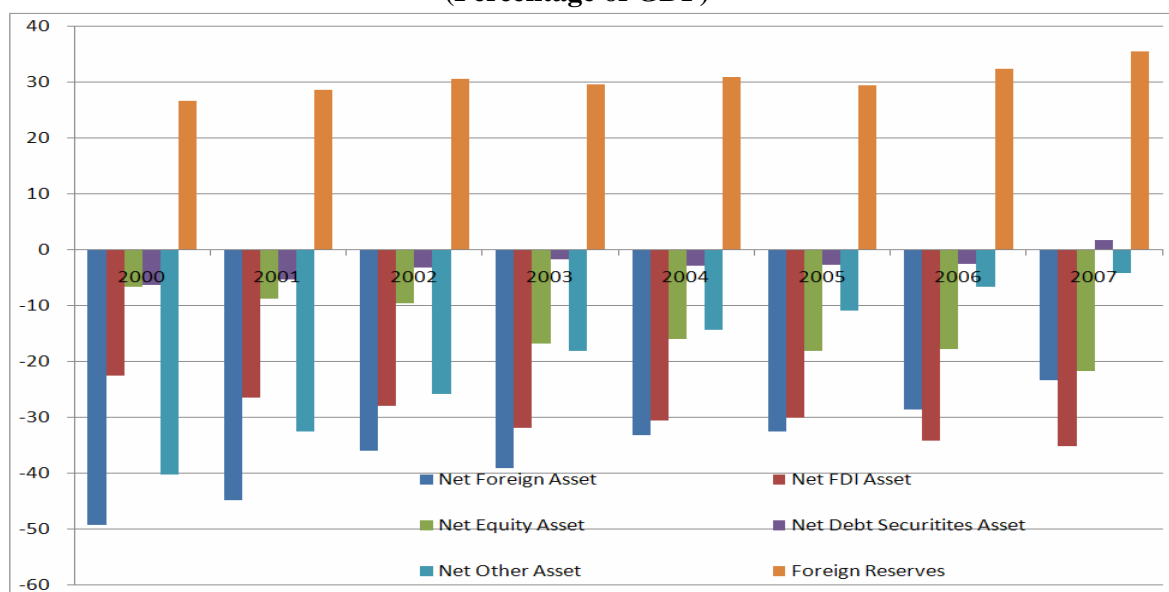
Massive capital inflows exceeded the underlying current account deficit, thereby generating an overall balance of payments surplus and an increase in foreign reserves. Despite the growing trends, the amount of foreign reserves was insufficient in comparison with the amount of rapidly growing short-term foreign debt. Triggered by the initial deterioration of the balance sheets of financial institutions and firms (owing to the burst of the bubbles and excess capital formation), capital inflows dropped sharply, causing a severe balance of payments deficit and a drain in foreign reserves. The subsequent sudden and massive reversal of international capital flows occurred due to the mutually enforcing currency and banking crises. East Asian countries— particularly Thailand, Indonesia, Korea with recourse to IMF financial support—suffered from a sharp contraction of economic activities, deep depreciation of the exchange rates, and a deterioration of the balance sheets of domestic financial institutions.

Since then, a number of these crisis-affected East Asian countries have strengthened their resilience to the volatile global financial environment and investors' sentiments in the following manners: First, Thailand, Indonesia, the Philippines, and Malaysia have reduced the degree of dependence on foreign loans. Other items (including loans) dropped sharply in terms of both GDP and net external liabilities over the period (figures 8-11). Second, these four countries have increased foreign reserves both with respect to the absolute amount and in terms of GDP. Their current account balances have shifted from a deficit to a surplus immediately after the East Asian crisis. The improvement of the current account balance enabled these economies to build up foreign reserves.

Third, all these countries currently hold a greater amount of foreign reserves than that of short-term external debt. The ratio of foreign reserves to short-term external debt in 2006 reached 176 per cent (255 per cent in 2007) in Thailand, 154 per cent (180 per cent) in Indonesia, 173 per cent (215 per cent) in the Philippines, and 434 per cent (515 per cent) in Malaysia. If the ratio exceeds 100 per cent, a country is regarded as having ample foreign reserves in order to cope with a potential reversal of capital flows in the event of the economic

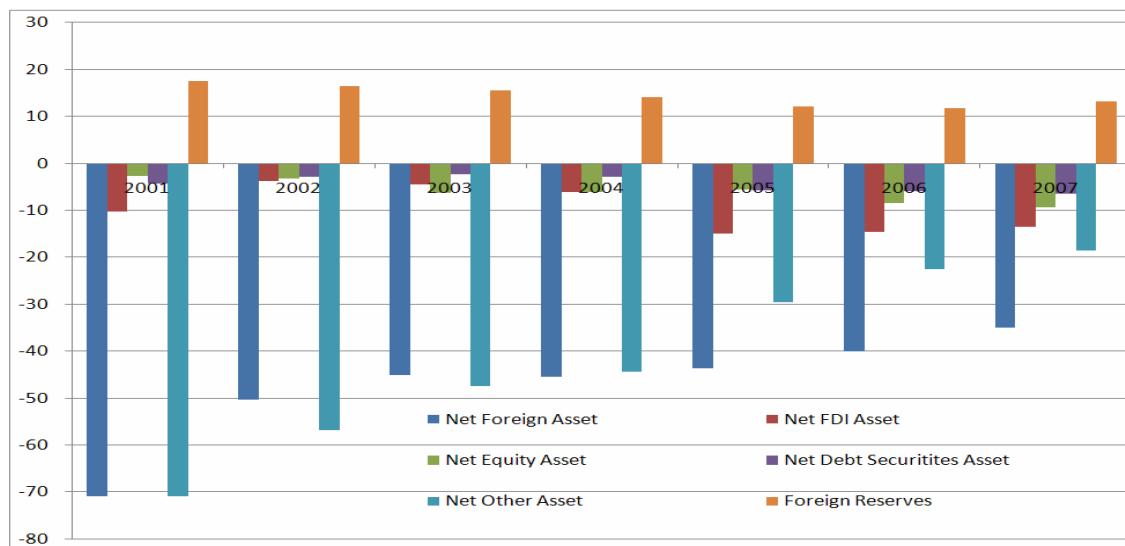
crisis. Fourth, the banking sector has strengthened the soundness and risk management since the East Asian crisis owing to the strengthening of the supervisory and regulatory regimes. They all maintained relatively high capital adequacy ratios in 2006: 10.7 per cent (12 per cent in 2007) in Thailand, 21 per cent (19 per cent) in Indonesia, 11.7 per cent (11.7 per cent) in the Philippines, and 13 per cent (12.8 per cent) in Malaysia. Their non-performing loan ratios were also relatively low in 2006: 8 per cent (7.9 per cent in 2007) in Thailand, 6 per cent (4 per cent) in Indonesia, 7.5 per cent (5.8 per cent) in the Philippines, and 8.4 per cent (6.4 per cent) in Malaysia.

**Figure 8. Thailand's Net International Investment Positions
(Percentage of GDP)**



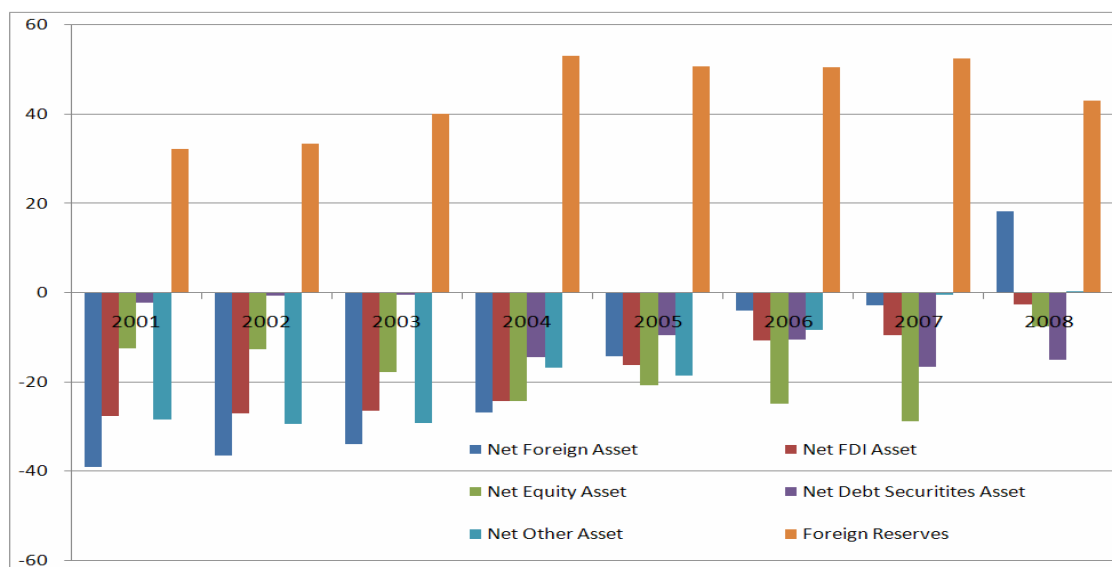
Source: Based on IMF data.

**Figure 9. Indonesia's Net International Investment Positions
(Percentage of GDP)**



Source: Based on IMF data.

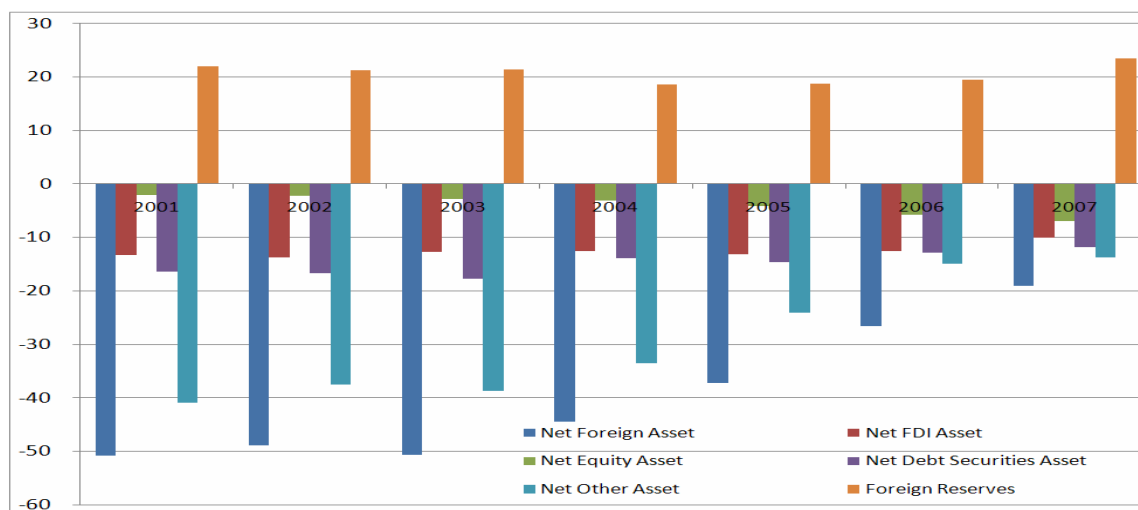
**Figure 10. Malaysia's Net International Investment Positions
(Percentage of GDP)**



Source: Based on IMF data.

Rather than relying heavily on short-term foreign loans, moreover, these four countries diversified the sources of external financing and shifted toward equity financing. This tendency is clearly confirmed from figures 8-11, which indicate an increase in the shares of equity in net external liability (or the negative number became greater).

**Figure 11. Philippines’s Net International Investment Positions
(Percentage of GDP)**



Source: Based on IMF data.

3.4. Cases of net external debtor countries (2): Republic of Korea

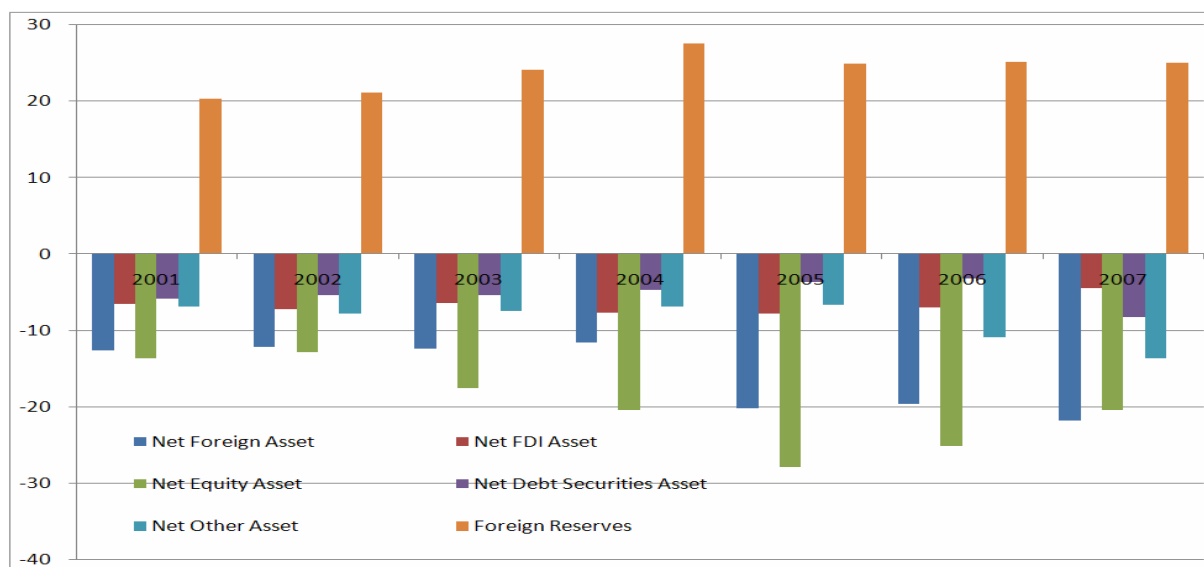
Like Thailand, Indonesia, the Philippines, and Malaysia, Korean current account balance also transformed from a deficit to a surplus immediately after the East Asian crisis. The current account balance remained in surplus throughout the period of 1998-2007. This contributed to an accumulation of foreign reserves, which expanded from 20 per cent of GDP in 2001 to 25 per cent in 2006-2007 and formed the single net external asset (figure 12).

After maintaining the relatively low share of net external liability to GDP, on the other hand, Korea re-started to depend on foreign borrowing from 2003. Net external liability position on “other” item grew from 13 per cent of GDP in 2002 to 25 per cent in 2006. More than 40 per cent of the increase reflected an expansion of short-term external borrowing in 2006-2007, largely undertaken by foreign bank branches operating in Korea. Such borrowing has been mainly the counterpart to hedging-related forward contracts. For example, exporters (e.g. shipbuilders) and domestic investors abroad sold expected dollar receipts forward to

domestic banks and foreign bank branches in Korea, which borrowed dollars abroad to match their currency exposure. The rapid increase in hedging related debt flows has reflected a sharp rise in ship orders and exporters' hedging ratios and increased outward investment (IMF 2008a).

Meanwhile, Korea increased recourse to equity financing from abroad. The ratio of equity-related net external liability to GDP reached 25 per cent in 2006 and 20 per cent in 2007. This ratio exceeded that of "other" item-related net external liability to GDP.

**Figure 12. Korea's Net International Investment Positions
(Percentage of GDP)**



Source: Based on IMF data.

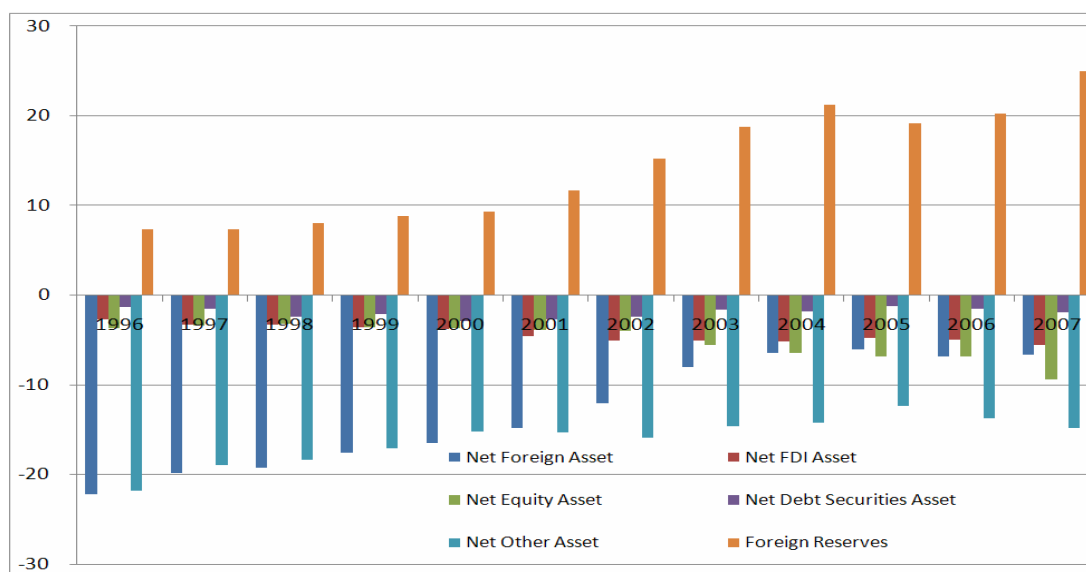
3.5. Cases of India as a country shifting to emerging economy

India achieved an improvement in its international investment position during 1996-2007. This is because the ratio of net external liability to GDP dropped from \$81 billion in 1996 (22 per cent of India's GDP) to \$60 billion (7 per cent) in 2006, and to \$73 billion (7 per cent) in 2007. This improvement took place because a foreign reserve accumulation more than offset an increase in net external liabilities related to FDI, equity, debt securities, and others (figure 13). Foreign reserves jumped from \$27 billion (7 per cent of India's GDP) in 1996 to \$177 billion (20 per cent) in 2006 and to \$275 billion (25 per cent) in 2007. The fact that capital inflows more than financed the current account deficit enabled India to build up foreign

reserves. While this situation appears to be similar to the East Asian countries prior to the East Asian crisis, the difference is that India's foreign reserves have been large enough to cover short-term external debt. The ratio of foreign reserves to short-term external debt exceeded 950 per cent in 2005-2006 and 1050 per cent in 2006-2007.

Among external financing, India depended largely on other items (i.e., foreign loans), followed by equity finance. Nevertheless, the ratio of net external liability on other items dropped from 22 per cent in 1996 to 14 per cent in 2006, and to 15 per cent in 2007, while that of equity rose from 4 per cent in 1996 to 7 per cent in 2006 and to 9 per cent in 2007. India's external liability related to FDI also rose, since the ratio of net external liability on FDI rose from 3 per cent in 1996 to 5 per cent in 2006, and to 6 per cent in 2007. Due to sustainable high economic growth (e.g. average real GDP growth rates of 8.5 per cent in 2003-2006), India was able to attract massive private sector capital inflows.

**Figure 13. India's Net International Investment Positions
(Percentage of GDP)**



Source: Based on IMF data.

3.6. Summary of Section 3

The aforementioned features with regards to net international investment positions are summarised in table 6. A number of interesting features can be traced from the table. First,

Japan and Singapore as “current account surplus” countries expanded the ratios of net external assets to GDP over the period. The major contributor was an increase in external assets related to debt securities in Japan and loans in Singapore. While the trade surplus was the main engine for generating a current account surplus each year in Singapore, the surplus on the income balance became the main source of the current account surplus in Japan (thanks to an increase in dividend receipts obtained from foreign subsidiaries of Japanese firms and interest/dividends receipts from foreign investment)

Table 6. Summary on Changes in Net International Investment Position

		Main Factor	Largest (net) Foreign Asset	Largest (net) Foreign Liability
Net Foreign Asset (+) ⇒ Expansion	Japan	Increase in Debt Securities Asset	Debt Securities	Stocks
	Singapore	Increase in Loan Asset	Foreign Reserves	FDI > Stocks
Net Foreign Liability (-) ⇒ Net Foreign Asset	China	Increase in Reserves	Foreign Reserves	FDI > Stocks
Net Foreign Liability (-) ⇒ Decline	Thailand	Decline in Loan Liability	Foreign Reserves	FDI > Stocks
	Indonesia	Decline in Loan Liability	Foreign Reserves	FDI > Loans > Stocks
	Malaysia	Decline in Loan Liability	Foreign Reserves	Stocks > FDI, Debt Securities
	Philippines	Decline in Loan Liability	Foreign Reserves	Debt Securities > Stocks
Net Foreign Liability (-) ⇒ Expansion	Korea	Increase in Loan Liability	Foreign Reserves	Stocks > Others
Net Foreign Liability (-) ⇒ Decline	India	Increase in Reserves	Foreign Reserves	Loans > Stocks
	Vietnam	Increase in Reserves	Foreign Reserves	FDI > Loans
Net Foreign Liability (-) ⇒ Expansion	Australia	Increase in Debt Securities Liability	Foreign Reserves (limited)	Debt Securities > Stocks

Second, Thailand, Indonesia, Malaysia and the Philippines improved net international investment positions after the East Asian crisis of 1997-1998, as the ratios of net external liability to GDP dropped over the period. This took place through a decline in dependence on foreign loans. While they did not suffer from the East Asian crisis, India and Viet Nam also had similar patterns. The data on net international investment positions were not available for Viet Nam. However, it is clear that massive capital inflows enabled Viet Nam to accumulate foreign reserves in spite of the continuous current account deficits in 2002-2007—a pattern similar to India. And capital inflows largely took the form of inward FDI from abroad, followed by medium- and long-term external borrowing (mostly concessionary ODA loans).

Third, the Republic of Korea had reduced the ratio of net external liability to GDP after the East Asian crisis, but began to increase foreign loans again from 2003. However, major borrowers were foreign banks operating in the Republic of Korea this time, while those before the East Asian crisis had been domestic banks. The greater financial integration with the United States expanded cross -border banking activities by subsidiaries and branches of U.S.

banks operating in the Republic of Korea; and introduced a new type of risks to the Korean economy through greater reliance on wholesale financing.

Fourth, foreign reserves were the largest net external asset in China, Singapore, Thailand, Indonesia, Malaysia, the Philippines, India, and Viet Nam (and the second largest in the case of Japan). This suggests that many Asian countries frequently intervened in the foreign exchange markets in order to stabilize their exchange rates (mainly vis-à-vis the US\$). This reflects (1) their export-oriented economic growth strategies, as well as (2) their precautionary stance to better cope with future economic crises (in other words, a low level of trust on the existing IMF-led international financial architecture). Regarding Japan, it has stopped intervening in the foreign exchange market since early 2004. Thus, the increase has been limited to valuation changes and returns since then, although Japan has been maintaining large foreign reserves of about \$1 trillion accumulated before early 2004. As a result, Asia became the largest investor region for U.S. treasury securities and agency bonds, thereby indirectly contributing to low interest rates and asset bubbles in the United States.

Fifth, Japan, Singapore, China, Thailand, Indonesia, the Philippines, Malaysia, Republic of Korea, and India increased dependence on equity investment from abroad, as evidenced by the rising ratio of net external liability on equity to GDP. In particular, it should be noted that there was a clear shift from external loans to equity financing for Thailand, Indonesia, the Philippines and Malaysia after the East Asian crisis. A similar feature was traced for India, which was able to attract massive capital inflows from foreign investors owing to the impressive, sustainable economic growth and relatively developed stock market. This suggests that Asia became less bank-dominant economy as compared with the pre-East Asian crisis. Greater reliance on equity finance reduced the depreciation risk in Asia. This could also be regarded as hedging behavior by Asian countries, because the greater reliance on equity financing substantially mitigated a “*currency mismatch*”.

Sixth, Australia, as a giant commodity-exporting country and an advanced nation, was able to increase dependence on foreign borrowing in order to finance its long-standing current account deficits. Despite the commodity boom, Australia continues to face relatively large current account deficit. Capital inflows largely took the form of debt securities reflecting relatively well-developed capital market.

4. IMPACT OF THE GLOBAL FINANCIAL CRISIS ON THE ECONOMY IN THE ASIA-PACIFIC REGION

The global financial crisis triggered by the U.S. subprime mortgage crisis caused systemic banking problems and financial instability crises in the world. The financial stress gave rise to market dysfunctions covering almost all segments of markets (i.e., securitized markets, corporate bond/equity markets, money markets) and credit shrinkage. The global financial crisis was also transformed to the global “economic crisis” because it accompanied a contraction of global production, trade, and employment. This section investigates the impact of the global financial crisis on the economy in the Asia-Pacific region.

4.1. Changes in cross-border capital movements between the United States and the world

Since the global financial crisis, two-way active investment activities (investment abroad by the United States and foreign investment in the United States) suddenly stopped. This can be confirmed by looking at the quarterly-based movements of the U.S. financial account balance in 2007-2009. The financial account shifted from a net inflow of \$1.28 trillion in the second quarter of 2007 to a net outflow of \$105 billion in the second quarter of 2008, and again to a net outflow of \$127 billion in the fourth quarter of 2008. And the net outflows remained in the second quarter of 2009 (according to the most recent quarterly data available). Since the U.S. current account deficit also dropped sharply from \$199 billion in the first quarter of 2007 to \$99 billion in the second quarter of 2009, the re-balancing of the “macroeconomic imbalance,” or a large U.S. current account deficit, has been taking place and thus demand for foreign financing plunged.

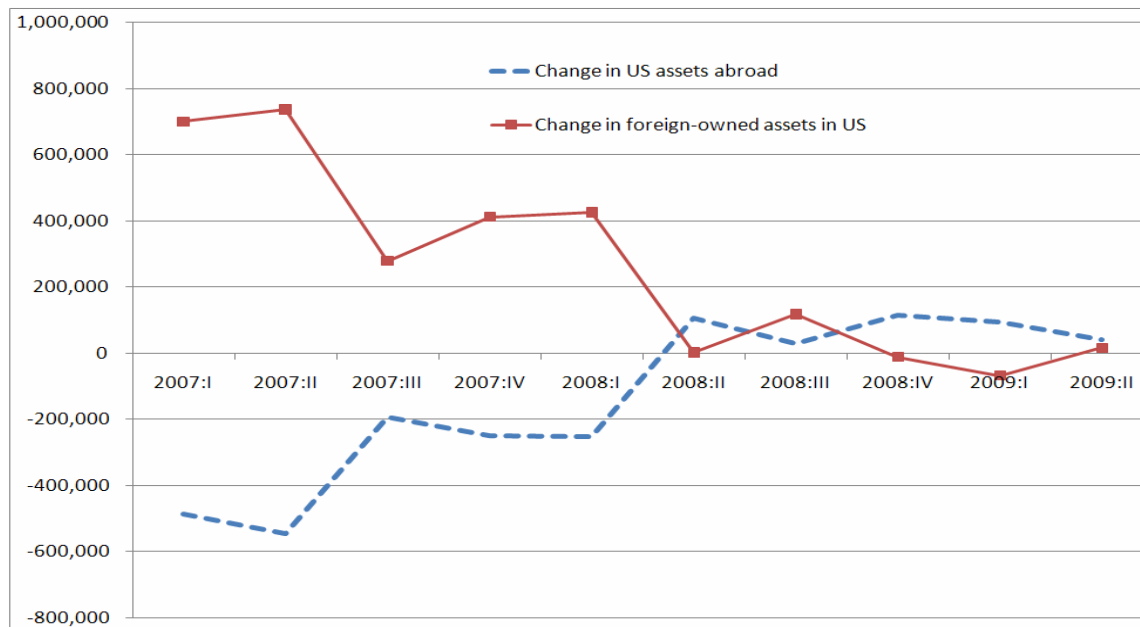
Figure 14 indicates that the change in U.S.-owned assets abroad and foreign-owned assets in the United States separately (and the sum of these items is equivalent to the capital account). Regarding the change in U.S. owned assets abroad, it has shifted from negative to positive since the second quarter of 2008, suggesting that U.S. investment abroad declined sharply. This decline was attributable to (1) a sharp cut in U.S. claims reported by U.S. banks and securities brokers, and (2) a contraction in U.S. investment in foreign securities. The cut in U.S. banks’ claims reflect the de-leveraging process. A contraction in foreign securities indicates that the rest of the world including the Asia-Pacific region was severely affected by the withdrawals of U.S. investors from their respective equity markets.

Meanwhile, the change in foreign-owned assets in the United States also showed a drastic transformation. The change in foreign-owned U.S. assets shifted from positive to negative from the fourth quarter of 2008 to the first quarter of 2009, as seen in figure 14. This means that foreign investors reduced investment sharply in the United States during the two quarters. The reduction in investment was largely undertaken by the foreign private sector and concentrated on (1) a decline in U.S. liabilities reported by U.S. banks and securities brokers, followed by (2) a decline in U.S. liabilities to unaffiliated foreigners reported by non-banking concerns, and (3) a contraction in foreign investment in U.S. securities other than U.S. treasury securities. The first two items reflect the de-leveraging process between banks operating in other countries (mainly the United Kingdom) and banks/nonbank financial institutions in the United States.

Foreign capital inflows toward U.S. private sector securities declined sharply; and this is particularly evident for debt securities, as analyzed in Section 2. Moreover, foreign investors' investment to the United States shifted from corporate bonds and asset-backed securities to U.S. treasury securities. Both foreign monetary authorities and private sector investors expanded their investment in U.S. treasury securities after the failure of Lehman Brothers, suggesting a "flight to quality" (namely, a switch from risky and illiquid assets to risk-free and liquid assets).

China, Japan, other Asian countries and oil-exporting countries increased their holdings of U.S. treasury securities between 2007 and 2009. In particular, China's holdings of U.S. treasury securities rose from \$459 billion in November 2007 to \$587 billion in September 2008, exceeding those of Japan and becoming the largest in the world. As of August 2009, China's holdings of U.S. treasury securities amounted to \$797 billion, growing by nearly 40 per cent on a year-on-year basis. While foreign monetary authorities continue to increase investment in U.S. treasury securities since the fourth quarter of 2007, foreign private sector investors increased those investments from the third quarter of 2007 to the first quarter of 2009. In the second quarter of 2009, however, they began to sell some U.S. treasury securities held, whose amount exceeding that of new purchase. Thanks to the restoration of stability in U.S. capital markets and financial system, foreign private sector investors began to shift investment from U.S. treasury securities back to private sector securities in the same quarter (see Shirai 2009d for details). This is a sign that risk appetite has regained somewhat.

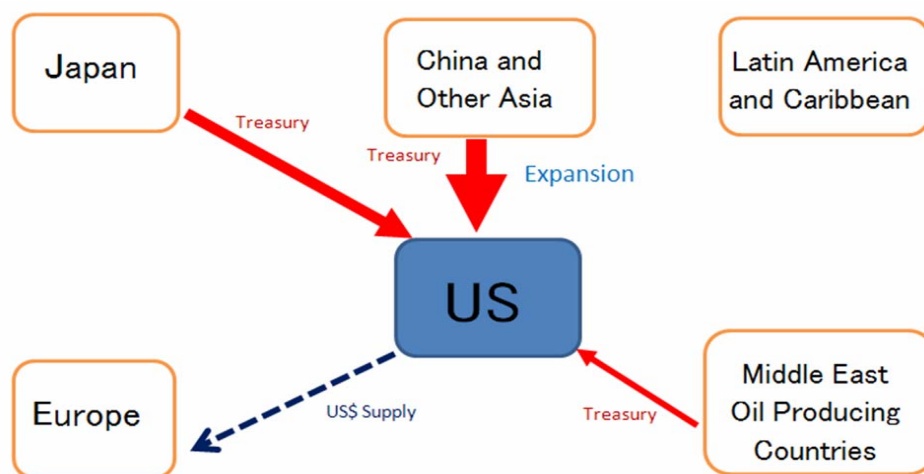
Figure 14. Movements of U.S. Financial Account (\$ Millions)



Source: Based on the U.S. Treasury Database.

While some positive signs or a restoration of risk appetite were observed on the U.S. liability side, the two-way securities investment between the U.S. and the rest of the world remain sluggish. The comparison between figures 3 and 15 clearly illustrate that drastic changes occurred in the two-way securities investment. Active private sector investment from Europe, Latin America and the Caribbean region, and oil-producing countries to the United States plummeted rapidly due to a decline in new investment, a sale of existing assets, and a decline in asset prices. The investment channel that has remained and strengthened further was seen solely on U.S. treasury securities, invested mainly by monetary authorities in the Asia-Pacific and Middle East regions and some private sector investors from these regions (figure 15). The two-way investment channels between Europe and the United States disappeared on both stocks and debt securities; instead, the provision of dollars from the FRB to central banks in Europe emerged as a sole monetary channel after the global financial crisis.

Figure 15. Cross-Border Movements of Securities Investment after the Global Financial Crisis



4.2. The direct impact of the global financial crisis on the Asia-Pacific region

Generally, it could be said that the Asia-Pacific region has managed to escape from direct damage caused by the global financial crisis. IMF (2009b) reported that the estimated bank write-downs for 2007-2010 will be \$1 trillion in the United States, \$694 billion in the United Kingdom, and \$814 billion in the Euro Area. By contrast, those in the Asia-Pacific region (including Australia; Hong Kong, China; Japan; New Zealand and Singapore) will amount to only \$166 billion.

There are several factors contributing to the limited direct impact of the global financial crisis. First, Asian investors and banks had not invested much in U.S. structured credit products, which included subprime mortgage-related products, compared with European investors and banks. In the case of Japan, the book value of structured credit products held by Japanese (nationality) banks (including major banks, regional banks, and cooperative financial institutions) amounted to only a little more than \$210 billion as of September 2008. Of this book value, unrealised losses amounted to \$14 billion. Cumulative realised losses since April 2007 amounted to only \$17 billion. Moreover, their exposure to subprime mortgage-related products was only \$8 billion (of which, cumulative realised losses also reached \$8 billion). This is attributable partly to the risk-averse investment behavior of East Asia in general, as pointed out in Section 2.

In China's case, the amount of subprime mortgage-related investment by the major Chinese banks (Industrial & Commercial Bank, Bank of China, and China Construction Bank) was \$7.2 billion in the first half of 2008 (BBVA 2008). Bank of China had the largest exposure \$5.5 billion, but its share to total assets was only 0.6 per cent and its share to equity was just 8.1 per cent. Industrial & Commercial Bank held \$1.2 billion with ratios to total assets and equity being 0.1 per cent and 1.5 per cent, respectively. China Construction Bank invested \$488 million with ratios to total assets and equity of only 0.1 per cent and 0.7 per cent, respectively. The ratios of structured investment to equity were only 16 per cent (Taiwan), 13 per cent (India), 10 per cent (Hong Kong, China), 5 per cent (Philippines), 3.8 per cent (China, Thailand), 3 per cent (Singapore), 2 per cent (Republic of Korea), and 1 per cent (Malaysia), according to IMF (2008a).

Second, deposit-taking banks (commercial banks) are dominant in the region as compared with nonbank financial institutions. In Japan, this is in part because the removal of firewalls among banking, securities, and insurance businesses, as seen in the United States and Europe, has not been fully implemented yet. Japan undertook a so-called "Financial Big Bang" from 1996. These reforms deregulated cross-entry barriers by allowing the establishment of financial holding companies, but the separate management of various financial businesses has remained a requirement. The concerns over conflicts of interest and possible abuses by banks have deterred any moves toward the integration of various financial services or a "universal banking" system (Shirai, 2009b). Thus, competition between commercial and investment banks has not been as intense as that seen in the United States and Europe.

Third, commercial banks in the region enjoyed a large pool of deposited household savings. In the case of Japan, about 50 per cent of individual financial assets (\$14 trillion) in Japan are kept in the form of cash and deposits, despite there being substantially low interest rates on deposits. Thus, Asian banks' needs to obtain financing from alternative sources (such as the wholesale money market, capital market or abroad) have been relatively limited, as compared with U.S. and European banks. As a result, the market pressures on these banks to achieve better performance tended to be weaker than those on U.S. and European banks. With the exception of Indonesia and the Republic of Korea whose loan-deposit ratios of banks reaching 130 per cent each, the ratios of other countries in the Asia-Pacific region remained low, being less than 100 per cent. For example, the ratios in 2006 were 50 per cent in Hong Kong, China, 60 per cent in China, 75 per cent in India, about 80 per cent in Thailand, Malaysia, Japan and the Philippines; and about 90 per cent in Taiwan and Thailand. Asian

banks enjoyed a large accumulation of savings and thus face a relatively low level of need to obtain financing from the wholesale market.

Fourth, many Japanese banks remained cautious about foreign investment, since it took such a long time to recover from the domestic banking crisis of the 1990s (that is, until the early 2000s). Japanese banks wrote off about ¥100 trillion in NPLs (non-performing loans) over the period of 1992-2004. This amount was about twice as large as that incurred during the S&L crisis (about \$450 billion) that took place from the 1980s to early 1990s in the United States. Many Japanese banks withdrew from their exposure to cross-border activities and other activities through foreign affiliates during this time. The East Asian crisis of 1997-1998 also incurred some losses and thus induced Japanese banks to withdraw from their credit exposure in East Asia. Other Asian banks have also been cautious, owing to a strengthening of the supervisory and regulatory systems after the East Asian crisis.

Fifth, the balance sheets of banks did not deteriorate much because large-scale real estate bubbles did not take place in the region before the global financial crisis, unlike those experienced in the United States, the United Kingdom, Ireland, Spain and other European countries. While China faced some bubble in the real estate market in 2007, the scale and duration were both not as comparable as those in the United States and Europe.

Sixth, the limited exposure to external liabilities, as suggested in Section 3, prevented banks from incurring large credit squeezes arising from any reduction in cross-border financing channels, as seen in U.S. and European banks. Net external liabilities (the difference between financial liabilities and assets, based on data of the net international investment position) as a percentage of GDP was 40 per cent in Indonesia, 27 per cent in the Philippines, 20 per cent in Korea, 29 per cent in Thailand, 7 per cent in India, and 4 per cent in Malaysia in 2006. While such figures indicate that these countries have been net external debtors, these sizes were much smaller than those of European crisis-affected emerging market economies—such as Estonia (80 per cent), the Slovak Republic (60 per cent), Lithuania (55 per cent), and Poland (50 per cent). Moreover, a number of Asia-Pacific countries had net external assets (the difference between external assets and liabilities), expressed as a proportion of GDP, recording 42 per cent in Japan, 25 per cent in China, and 112 per cent in Singapore. These diverse positions among Asia-Pacific countries helped the region to stabilise financial conditions, as compared with those in Europe.

Seventh, household debt remained relatively low in East Asia. For example, the ratios of household debt to GDP were 13 per cent in China, 70 per cent in Japan, 80 per cent in the Republic of Korea—lower than the United States (90 per cent), the United Kingdom (100 per cent), and Iceland (103 per cent). This could thus have helped to mitigate the deflationary impact of the financial sector problems on households, and thus their consumption growth. A low level of household debt indicates that damages on private consumption have been limited. A lack of debt overhung also means that the government country-crisis economic policies (fiscal expansionary policy and monetary loosening) are likely to be more effective in the Asia-Pacific region than the United States and Europe.

Eighth, East Asian countries have ample foreign reserves, thanks to accumulated current account surpluses. Thus, foreign reserves as a percentage of short-term external assets remained over 100 per cent in many East Asian countries. The ratios in 2006 were 950 per cent in India, 210 per cent in the Republic of Korea, 434 per cent in Malaysia, 176 per cent in Thailand, 173 per cent in the Philippines, and 154 per cent in Indonesia. Countries are regarded as vulnerable to the “capital account crisis” (a crisis triggered by a sudden and massive reversal of capital flows, as seen in the East Asian crisis of 1997-1998) if the size of foreign reserves becomes smaller than the size of the short-term external debt.

Ninth, Australia was affected by the global financial crisis due to the heavy reliance on inter-bank market, while the limited exposure to inter-bank financing relative to European banks helped other Asian banks to escape from the massive dollar squeeze experienced by U.S. and European banks. About half of Australian banks’ funding comes from the wholesale market, and this access was disrupted after the collapse of Lehman Brothers. Although the establishment of wholesale funding guarantees in October 2008 enabled banks to raise \$ 140 billion in longer-term funding in the subsequent seven months, rollover risks remain (IMF 2009a).

4.3. The two channels of crisis contagion to the Asia-Pacific region

Nonetheless, the economy in the Asia-Pacific region was severely affected after the failure of Lehman Brothers in September 2008. The region had contagious effects of the global financial crisis through two channels. One is the capital account channel and the other is the current account channel.

Regarding the financial account channel, the crisis spread to the Asia-Pacific region through the behavior of foreign bank affiliates operating in the region. Since banks in the United States, then in Europe, have the most serious balance sheet problems, their foreign affiliates have been more severely affected than local banks; this is because the former have had their financing from their home countries cut. This phenomenon was more pronounced in Eastern Europe (in relation to Western European banks) and the Baltic region (in relation to Nordic banks), but was also apparent in the Asia-Pacific region (in relation to U.S. and European banks). In the Asia-Pacific region, mainly the branches of U.S. banks have curtailed their lending activities. Trade finance has also declined because many banks reduced their supply of letters of credit in the absence of sources of finance, as well as a decline in mutual trust.

Moreover, the Asia-Pacific region experienced a sharp and continuous decline in stock prices due to the massive sales of stocks by domestic and foreign investors. Table 7 shows the change in the stock prices based on the broad stock index adopted in major stock exchanges for three periods: (a) between June 2007 and February 2009 (the period before a restoration of financial stability occurred in the world), (b) between June 2007 and August 2008 (the period up to the most recent month), and (c) between March 2009 and August 2008 (the period after a restoration of financial stability occurred). It indicates that all stock exchanges had faced substantial declines in stock prices during the period before the financial stability was restored. However, all the stock prices began to increase again from March 2009.

The declines before March 2009 were most severe in Japan in the Asia-Pacific region. This made it very difficult even for large-sized firms to raise funds in the international and domestic stock markets. While Japanese banks have maintained relatively high capital adequacy ratios, the declining value of the Japanese stocks held by Japanese banks put them in an extremely difficult position, as it impaired their capital. This has forced many banks to increase their capital, making them cautious about extending loans to small-sized firms. Thus, the growing demand for credit from large- and medium-sized firms and declining bank capital

have made it very difficult for small-sized firms to gain access to bank loans. This situation induced the Japanese government to provide inexpensive financing and credit guarantees to Japanese firms from 2008. The government also attempted to contain the declining trend of stock prices by allowing the Bank of Japan and the Banks' Shareholdings Purchase Corporation (BSPC, established in 2001) to purchase stocks held by banks from 2009; effectively re-starting an earlier measure.

Table 7. Changes in the Stock Market Prices in the Asia-Pacific Region

		% from June 2007 to February 2009	% from June 2007 to August 2009	% from March 2009 to August 2009
United States	NASDAQ OMX Composite	-47	-23	31
United States	NYSE Euronext (US) Composite	-53	-33	33
<u>Asia-Pacific Region</u>				
Japan	Tokyo Stock Exchange TOPIX	-57	-46	25
Australia	Australian Stock Exchange All Ordinary	-48	-29	27
India	Bombay Stock Exchange BSE 500	-44	5	72
Hong Kong	Hong Kong Stock Exchange S&P/HKEX Large Cap	-39	-11	39
Indonesia	Indonesia Stock Exchange JSX Composite	-40	9	63
Korea	Korea Exchange KOSPI	-39	-9	32
China	Shanghai Stock Exchange Composite	-45	-30	12
Singapore	Singapore Exchange Straits Times Index	-55	-26	55
Taiwan	Taiwan Stock Exchange TAIEX	-49	-23	31
Thailand	Thai Stock Exchange SET	-44	-16	51

Source: Based on data from the World Federation of Exchanges.

Regarding the current account channel, the global financial crisis adversely affected the region. The current account surplus countries (Japan, China, Singapore, Republic of Korea, Thailand, Indonesia, and the Philippines) faced a decline in the current account surplus. Nearly all countries faced both export and import contraction. However, an import contraction (mainly due to a decline in commodity prices begun from the second half of 2008) was greater than an export contraction (caused by a decline in global demand), thereby enabling them to maintain trade surpluses albeit smaller scales than before. Among current account deficit countries, India and Viet Nam expanded the current account deficits. Australia, in the meanwhile, reduced the current account deficit as the trade balance shifted from a deficit to a surplus from the third quarter of 2008 to the first quarter of 2009.

Through these two channels, the balance of payment conditions deteriorated in the region and turned from positive to negative in many countries. Some Asian countries (China,

Singapore, Republic of Korea, Thailand, Indonesia, the Philippines, Malaysia, India and Viet Nam) intervened in the foreign exchange market by selling their foreign reserves to prevent a sharp depreciation of their currencies against the US\$ (table 8).

Accordingly, the most Asian currencies depreciated against the US\$ from late 2008 (figures 16-17), with the exception of the Japanese yen that showed opposite trends. The Japanese yen appreciated sharply against the US\$ (as well as the euro and other currencies), because of the unwinding of the yen carry-trade that was active prior to the subprime mortgage crisis. Moreover, the evaluation of the Japanese yen as an international currency improved somewhat as the growing uncertainty in the financial sector in the United States and Europe to some extent reduced the credibility of those currencies. The relatively limited damage incurred in the Japanese financial sector from the subprime mortgage crisis added to this trend.

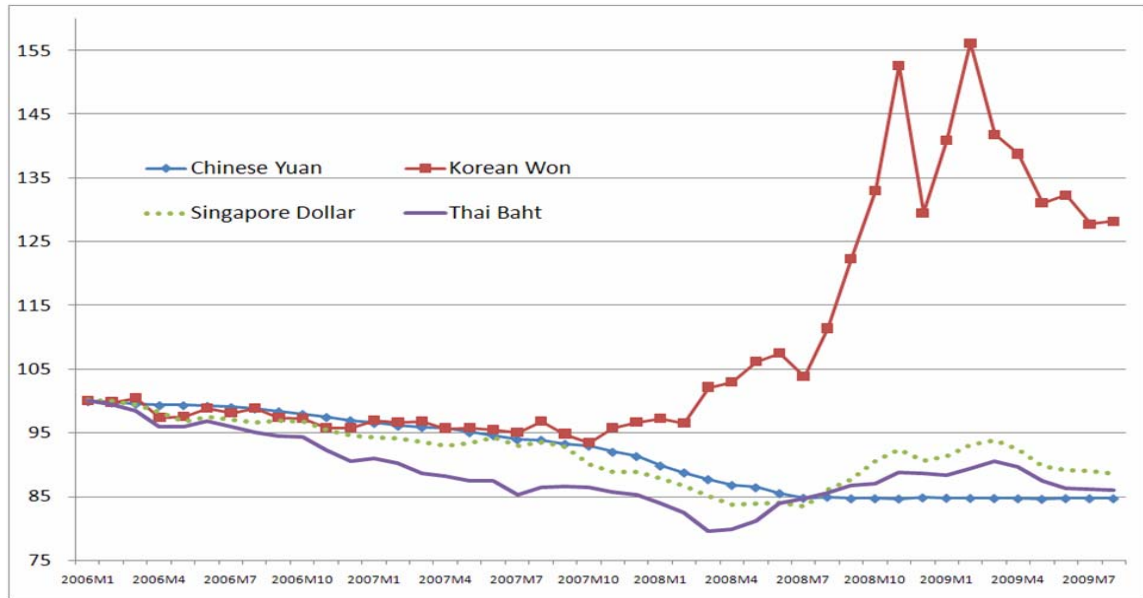
Table 8. Summary on the Change in the Balance of Payments in the Asia-Pacific Region

	Current Account Balance	Stock Investment Inflow:	Decline in Foreign Reserves
Japan	Surplus Declined	Inflows Declined	No
Australia	Deficit Declined	Inflows Declined	No
China	Surplus Declined	Inflows Declined	Yes
Singapore	Surplus Declined	Inflows Declined	Yes
Korea	Surplus Declined	Inflows Declined	Yes
Thailand	Surplus Declined	Inflows Declined	Yes
Indonesia	Surplus Declined	Inflows Declined	Yes
Malaysia	Surplus Did Not Decline	Inflows Declined	Yes
Philippines	Surplus Declined	Inflows Declined	Yes
India	Deficit Expanded	Inflows Declined	Yes
Vietnam	Deficit Expanded	Inflows Declined	Yes

Before the mid-2008, the Chinese yuan had a tendency to appreciate against the US\$ reflecting continuous trade surpluses, which continued to grow because the slowdown in imports exceeded that of exports. Since July 2008, however, the Chinese government introduced the de-facto dollar peg amid a deteriorating export sector environment in its

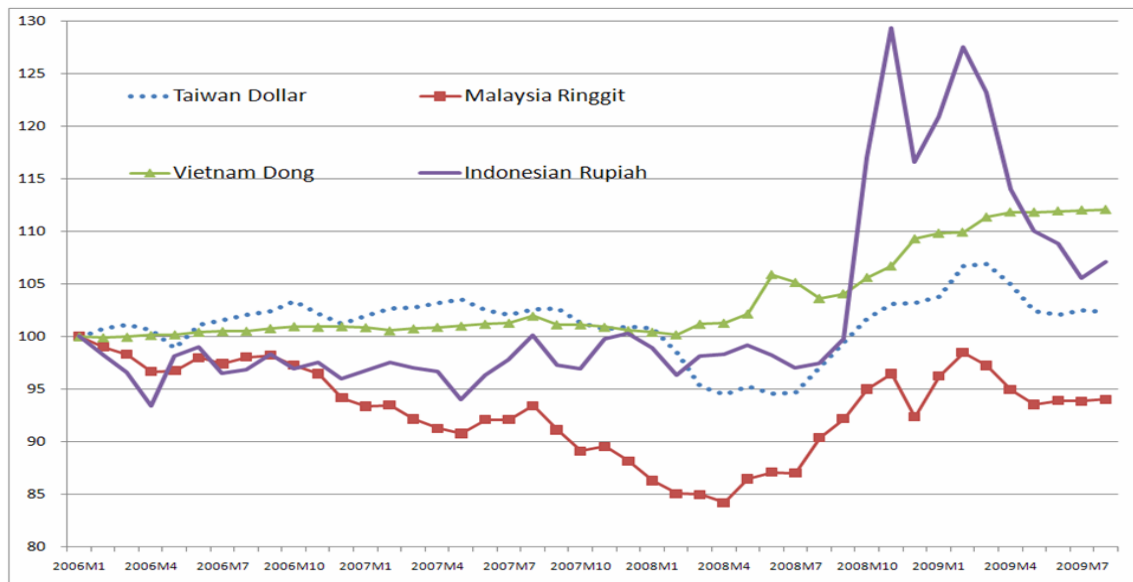
coastal areas and a sharp appreciation of the yuan against other currencies (except the Japanese yen).

Figure 16. Movements of the Exchange Rates against the US\$ (January 2006=100)



Source: Prepared based on IMF data.

Figure 16. Movements of the Exchange Rates against the US\$ (January 2006=100)



Source: Prepared based on IMF data.

Since the financial stability was restored in early 2009, the exchange rates of Asian currencies (such as Korean won, Thai baht, Singapore dollar, Taiwan dollar, Malaysian ringgit, and Indonesian rupiah) began to appreciate again vis-à-vis the US\$. Nonetheless, it appears that these countries attempt to stabilize their exchange rates at more depreciated levels than the pre-crisis period by actively intervening in the foreign exchange market. This reflects the policy to support the export sector.

5. FINAL REMARKS

The recent global financial crisis has posed several challenges to the Asia-Pacific region. First, the region needs to make greater effort to develop a more mature internal market for final goods and services. Intra-regional trade already accounts for 56 per cent and this ratio is comparable to that of the European Union (62 per cent). Nevertheless, the extent of trade integration is more self-complete in the European Union than in the Asia-Pacific region, in the sense that Europe is able to offer internal markets for both intermediate goods and finished products. By contrast, the Asia-Pacific region has internal markets mainly for intermediate goods, given the growing production and trade networks fostered through regional FDI activities that began in the 1980s. However, the Asia-Pacific region continues to depend heavily on the United States and Europe as markets for their final products. The sluggish increase in domestic demand in Japan, as well as the high levels of savings relative to investments in the Asia-Pacific region; have contributed to this phenomenon.

Secondly, the Asia-Pacific region needs to examine various ways to circulate regional money within the region. Prior to the subprime mortgage crisis, the Asia-Pacific region accumulated substantial current account surpluses. The resultant increase in foreign reserves, the largest form of external assets, was allocated mainly to the United States in the form of U.S. treasury securities. Moreover, foreign currencies held by the private sector were allocated to banks in the United Kingdom and United States, mainly through the inter-bank markets of Hong Kong, China and Singapore. Japan's investment in foreign stocks was the largest in the Asia-Pacific region, but they were largely allocated to U.S. and European stocks. Hong Kong, China's investment in foreign stocks was the next largest, but this was largely allocated to (mainland) Chinese stocks. Rather than attracting investment from capital-abundant Asia-Pacific region itself, it was clear that the region depended on capital investment from the United States (and Europe).

This indicates that the Asia-Pacific circulated money within the region, bypassing the United States (and Europe). This may reflect the difference in risk appetites: U.S. (and European) investors were risk takers, while Asian-Pacific investors were risk-averse. Moreover, it is associated with the fact that the United States provided the largest and most diverse (both liquid and illiquid) capital markets in the world, so that foreign money was attracted to the United States. Meanwhile, the United Kingdom offered another internationally competitive financial center by developing relatively large capital markets and providing a place for most-competitive cross-border banking activities. This pattern of cross-border capital flows, however, is not productive from the perspective of developing Asia. It would be better to develop attractive international financial centers within the Asia-Pacific region.

Thirdly, the Asia should strengthen regional financial cooperation. ASEAN, Japan, China, and the Republic of Korea (the so-called ASEAN+3) developed a network of bilateral swap arrangements in 2000 (the Chiang Mai Initiative) to mitigate short-term liquidity shortages in the event of financial crises. Currently, this framework functions as a supplement to IMF-led financial arrangements. That is, a member country must apply for IMF programs (and conditionality) if it borrows more than 20 per cent of the access limit set under the Chiang Mai Initiative. However, the current global financial crisis has reminded the Asia-Pacific region not only of the need to expand the size of swap arrangements in the event of crises, but also of the possibility of extending financial support to each other, independent of the IMF. This is clear from the fact that Korea obtained US\$ directly from the FRB by signing a new swap arrangement, rather than utilizing the existing swap arrangements available within ASEAN+3 countries (Japan, China, and Republic of Korea).

There are three ways, generally, for central banks to provide foreign currency-denominated funding to domestic banks: (1) the use of foreign exchange reserves; (2) borrowing foreign exchange from the market; and (3) borrowing foreign exchange from other central banks. The current global crisis made it inevitable that many central banks had to obtain foreign funds from (1) and (3), given that it was difficult to raise foreign funds from the foreign exchange market because of the severe US\$ shortage. As some central banks did not have ample foreign reserves and were possibly concerned about the afore-mentioned issues, they sought recourse to (3). The creation of flexible, rapid, and effective responses to regional crises through the sophistication of regional swap arrangements (namely, the active use of method (3) is important for the Asia-Pacific region, given that regional capital movements are expected to grow in the near future. This arrangement could be developed independently of the IMF if the region is able to develop sound monitoring schemes. For this

reason, the agreements made in February 2009 among ASEAN+3 in Phuket, Thailand, are welcome. The agreement to expand the current size of total swap arrangements from \$80 billion to \$120 billion, with the proportion of the amount of contribution between ASEAN and the +3 countries being maintained at 20:80 respectively, is positive. An agreement to establish an independent regional surveillance unit was also made for the purpose of promoting economic monitoring. This will ultimately lead to a system of financial arrangements independent of the IMF.

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