The Flow of Funds in East Asia

Nan Zhang

Hiroshima Shudo University

Abstract

During The 1990s, the fund flows in East Asia, which included Asian NIES (Newly Industrialized Economies), ASEAN (the Association of Southeast Asian Nations) and China, not only increased quantitatively, but also changed form. This research will explain the transformation of the structure of fund flows in East Asian economies, the characteristics of the Chinese overseas fund flows, and other related problems with the use of international statistic.

Keywords: Savings-Investment, Current account, Financial account, International fund flows

I. Theoretical Outline of The Financial Market Analysis

A financial market analysis is an analysis about the characteristics of the financial liquidity of funds, and it is tied to investment, savings and the current balance of the real economy. The financial markets indicate the debts and credits of funds as a whole including the total process of financial liquidity. When the items of financial markets are looked at more carefully, there are inflows of domestic funds, overseas funds by domestic savings and credit loans of banks on the side of fund-sources (fund inflows). On the other hand, there is fund supply to the domestic economy and fund outflows overseas in fund uses (fund outflows). When the flow of funds in financial markets is tied to the international balance of payments, the overseas sector will become fund outflow excess (net capital outflows) if the current account is in surplus. Conversely, the domestic sector will become fund inflow excess. Therefore, when the real economy side of the domestic economy and overseas is analyzed under an open economic system, the balance of savings-investment of the domestic economy corresponds to the current account balance externally. However, domestic net fund outflows-inflows funds that correspond with the capital account balance, when the relationship between domestic and overseas on the financial side is examined. Therefore, relations between the domestic savings-investment balance, the financial surplus or deficit, the current account, and the overseas net fund outflow can be expressed in the following structural formulae.

1) Savings-Investment and Current Account Balance

$$S - I = EX - IM$$

2) Financial Surplus or Deficit Balance

$$S – I=FAI - FLI$$

3) The Overseas Income and Expenditures Balance

$$EX - IM= (FO - FI) + FER$$

4) The Financial Markets Balance

$$DFO + OFO + FER= DFI + OFI$$

The upper formula is transformed as follows.

$$OFO - OFI + FER = DFI - DFO$$

Therefore,

Net fund supply to overseas balance

NOFO + FER (capital account deficit)

= NDFI (domestic financial assets increase)

We can get the outline of the oversea fund flows analysis from the above structural formula.

Notes: FAI: financial assets increase, FLI: financial liabilities increase, EX: export; IM: import,
FO: fund outflow, FI=fund inflow, FER: Foreign exchanges reserves, DFO: domestic fund outflow,
OFO: overseas fund outflow, DFI: domestic fund inflow; OFI: oversea fund inflow,
NOFO: net overseas fund outflow, NDFI: net domestic fund inflow

II. The Pattern of International Fund Flows in 1990's

A large quantity of funds flowed from various more advanced countries into East Asia in the first half of the 1990s, as the Emerging market boom occurred. Let's begin with looking at the background from both East Asia and the advanced countries.

First, we have stated that there were increases in demand for the funds because of economic development, and the maintenance of the financial and capital markets which developed at the same time with in East Asia. When we look at the average growth rate between 1990-1996, we see that China grew by 11%, ASEAN by 7% and NIES by 6.3%[1]. But, the same area caused full demand of funds by making worldwide economic growth that was high as well. However, the countries of East Asian were lacking in domestic funds. Thus, East Asian countries preferred that growth in investment of an expansive type, which introduced foreign capital.

As for each country, (except for China) as can be seen in Table 1, the scale of investment,

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1 IMF "*World Economic outlook, May 2001*", p. 200

which exceeded domestic savings, was seen in East Asia when the Financial Crisis occurred in 1997. This meant that these countries had to assure investment that exceeded domestic savings funds in order to assure economic growth, if the domestic funds couldn't cover necessary investment.

Table 1 Balance of Savings-Investment (percent of GDP)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Hong Kong	5.3	7	1.2	-4.3	-1.4	-3.4	1.1	5.4	4.7
Korea, R of	-1.4	0.3	0.4	-1.8	-4.4	-1.7	12.7	6	2.2
Singapore	9.6	8.6	16.1	15.6	13.3	12.9	19.8	19.4	18.5
Taipei	2.1	1.8	1.9	1.7	3.4	2.2	1.1	2.7	2
Thailand	-4.8	-4.3	-4.3	-8	-8.1	-0.8	12.9	10.2	8
Indonesia	2.9	3	-0.3	-1.3	-0.6	-0.3	9.7	8	4.2
Malaysia	1.4	-0.1	-1.6	-3.9	1.4	0.9	21.9	25	19.9
Philippines	-3.8	-8.4	-6.5	-8	-9.4	-10.6	-7.4	-3.7	-0.6
P.R. of China	1	-2	1.3	1.7	1.5	3.3	2.4	1	0.9

Sources：Asian Development Bank; "*Asian Development outlook 2001*"

When we look at the savings and investment balance of the advanced countries, we also realize the savings of America were continuously insufficient in the first half of the 1990s. That is the consequence of the restoration of the America economy and the increase of consumption in that period. As for the other principal nations Japan that was the pure creditor nation of the world, had always had an excess of savings since the latter half of the 1980s, and the EU was also almost in the condition of savings excesses. Moreover, Japan and the EU had large current-account surpluses, and the condition of fund surplus continued in these countries.

Moreover in the advanced countries, there was a decline of the expected growth rate due to depression and the interest under the conditions mentioned before. Therefore, there was a movement of looking for places where investment could expect a high profit and a high yield from advanced countries capital. For East Asia in the first half of the 1990s, there was not only a full demand for funds because economic development was accelerating, but also maintenance of the finance, and capital markets developed, as well. Therefore, many internal and external banking agencies and investors faced a volatile East Asian capital market, and they raised concerns about this.

Under the above conditions, the long-term capital and short-term capital of the advanced countries were depleted by direct investment, bank lending and portfolio investment to the East Asian area as dictated market by principles, and wide fund flows to the same area thus took place. This is the background of the Emerging market boom in East Asia in the first half of the

1990s.

The existence of a savings- investment gap in East Asia before 1997 meant that wealth and services was more than could be produced, because of the economic development of the same area. In other words, East Asia, where it conformed to the growth of the investment expansion type, accepted direct investment in a large quantity from advanced countries. However, supporting industry that supported local production through the direct investment of the advanced countries capital didn't develop fully, making the import of wealth, service unavoidable. We can see the changes in the current account in Table 2. It reflects the above circumstance so that current account changed with the deficit base with the movement of the investment excess in each county and area of East Asia except for China until 1997. However, this current account shifted the surplus base while savings-investment balance shifted to the savings excess in each country, except for the Philippines after 1998. We thus presume the Asian currency crisis in 1997 was the conversion point of the East Asian economy overall.

Table 2 Balance of Payment on Current Account (percent of GDP)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Hong Kong									
Korea, R of	-1.3	0.3	-1	-1.7	-4.4	-1.7	12.7	6	2.4
Singapore	11.4	7.6	17.2	17.3	14	19	24.8	25.9	23.6
Taipei	4	3.2	2.7	2.1	3.9	2.4	1.3	2.9	2.4
Thailand	-5.7	-5.1	-5.4	-12.1	-7.9	-2.1	12.7	10.2	8.2
Indonesia	-2	-1.2	-1.6	-3.2	-3.4	-2.4	4.3	4.1	5.1
Malaysia	-3.7	-4.7	-6.2	-9.7	-4	-5.9	13.1	15.9	8.8
Philippines	-1.6	-5.5	-4.6	-4.4	-4.8	-5.3	2.4	9.4	11.5
P.R. of China	1.3	-1.9	1.3	0.2	0.9	4.1	3.1	1.6	1.5

Sources: Asian Development Bank; "*Asian Development outlook 2001*"

The savings-investment balances of each East Asian country shifted to the savings excess tendency after 1998. It is important of economy that direct investment showed a decreasing tendency for short-term influence by the Asian currency crisis. On the other hand, while the economies of East Asia began recover to from the end of 1998, an increase in exports due to a rising demand for import in the advanced countries created a surplus in the current-account balance.

III. The Un-stability of Fund Flows in East Asia

There was a problem in the flow of funds of East Asia in the first half of the 1990s. In other words, the fund inflows from the foreign countries had become the means financing the current-account deficit.

A. The financial form of the current-account deficit

When it was analyzed, there were three routes to the above form. The first route was that fund flows as non-debt-creating inflows. There was direct investment as a main function of ODA (Official Development Assistance) as a gratuitous condition in non-debt creating inflows. The second was debt-creating inflows, that is, net external borrowing, which includes commercial bank loans, other private creditors, and public loans except for ODA and ODA payment conditions. The third is what the IMF calls Exceptional Financing. There are "Arrears" when the date of payment comes due, and "Rescheduling" in which means postponing payment of debt. This is not fund inflow, but it means compression of the fund outflows by the same methods. At any rate, this type of fund flow deregulates the influence of the current-account deficit.

B. The actual condition of current-account finance in Asia

Table 3 shows an aggregate of fund flows in 24 developing countries in the Asian, including India, ASEAN and China[2].

Table 3 The Financial Form of The Current Deficit of Developing Asia (US$. billions)

	1993	1994	1995	1996	1997	1998	1999	2000
Non debt-creating inflows	49.1	49.1	64.9	74.3	66.6	57.9	40.2	54.8
Net external borrowing	26.1	26.3	28.7	32.4	30.2	-18.1	-2.5	6.7
Official creditors	10.9	11.3	6.2	-2.1	4.0	13.2	14.9	8.0
Bank loans	10.6	10.3	14.2	19.6	22.7	2.0	-10.8	0.5
Other private creditors	4.6	4.7	8.3	14.9	3.5	-33.4	-6.6	-1.8
Exceptional Financing	1.7	1.2	0.4	0.7	0.5	14.5	14.7	14.6

Sources: IMF; *World Economic outlook, May 2001.*

When we observe the fund flows of Asia in Table 3, we can understand changes in fund flows before and after the Asian currency crisis. The slow increase before the crisis continued, and the non-debt inflow, made up mainly of direct investment of gratuitous condition ODA recorded $74.3 billion in 1996. However, though the movement of recovery in 2000, it is

[2] Developing Asia covers the following countries: Afghanistan, the Islamic State of. Bangladesh, Bhutan, Cambodia, China, Fiji, India, Indonesia, Kiribati, the Lao People's Democratic Rep. Malaysia, Maldives, Myanmar, Nepal, Pakistan, Papua New Guinea, the Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand Tonga, and Vanuatu.

shown that it was changing by a decreasing tendency until 1999 when a crisis was caused after 1997. On the other hand, though an increased base changed debt-creating inflows until 1996, and in shifts they too decreased after 1997. Then what had become a minus for 1998 and 1999 are recovered into the plus column in 2000. When the items of these debt-creating inflows are seen, the official creditor change with the plus figurer from the viewpoint of base, and increasing width rather expanded in 1998 and 1999 when the debt-creating inflow total became negative. However, after the Asian currency crisis occurred, the bank loans and the private creditors stagnated, and the private creditors especially changed to negative after 1998 until 2000. In other words, the flow of funds became stagnant in Asia on the whole negative after the Asian currency crisis of 1997. Still, non-debt inflow has never become negative. And, as for debt-creating fund flows, official creditors loans also increased. Yet, bank loans and private creditors debt became negative, and a change in the flow of funds that the debt-creating fund flows totally shifted to negative as a result. It was the characteristic of the change seen in the financial form of the current-account deficit in Asia that it was formed after the occurrence of the Asian currency crisis.

In a word, the short-term securities investment so-called "Hot Money", commercial bank loans and private creditors debt ran away after the Asian currency crisis in Asia even in debt-creating fund flows. It suggests that the general crisis and a debt crisis took place as a result.

In addition, Exceptional Financing is another route to finance the current account deficit and to compress outflows of the fund monies. Exceptional financing was comparatively small before the Asian currency crisis. However, it increased drastically after 1998, and to a scale exceeding beyond $15 billion every year. The seriousness of the Asian accumulation debt problem has been clearly appearing here.

IV. The Doubtful Flows in East Asia

When we try to collect the aggregate net resource flows of the East Asian area in emerging-markets, we can understand that the Asian developing countries' using the funds borrowed at high interest from the advanced countries to purchase U.S. national bonds at a low investment earning rate caused the return of fund flows in the first half of the 1990s. This phenomenon is expressed with doubtful flow, which is shown by the number of fund flows into East Asia as shown in Table 4.

The above table notes that the amount increased in the previous year ratio of fund inflows (the figure for 1994 is the increase of the ratio for 1990 to restrict ex-data). The rapid change of fund flows can be grasped because of the movement of the real economy of the same area through the scale of capital inflows and its change in composition. There are three points that are given as follows on the characteristics of the fund inflow pattern of East Asia.

Table 4 Aggregate Net Resource Flows of the East Asian Region[3] (US$ million)

	1994	1995	1996	1997	1998	1999	2000
Net RESOURCE FLOWS	63914	17613	18175	1727	-46826	-17003	27575
Net flow of long–term debt	17721	4838	11216	6058	-44405	-22157	18013
Foreign direct investment	35236	6772	7887	4547	-2280	-7256	1954
Portfolio equity flows	10323	5661	-185	-8897	-186	12127	7483
Grants	634	343	-744	20	45	282	125
Official net resource flows	-530	4003	-6194	12664	-2640	-1359	-2950
Private net resource flows	64444	13610	24369	-10936	-44187	-15643	30524

Sources: The World Bank; *World Debt Tables 2001.*

A. Net inflows, net outflows and the returns of flows

Supposing that the fund inflow into East Asia means that financing the current-account deficit of the area suggested above. But two different patterns, which moved 1997 to the border of stability appeared when the movement of net fund inflows were observed. In other words, though tendency of net inflow of funds until 1997, they became a net outflow after 1998. The change was brought about due to the direction of fund flows such as changes in the economic growth pattern of East Asia. Though the movement of leaving East Asia after 1997 was observed, such direct investment, portfolio investment, and the net long-term debt of private funds were flowing to the same area again in 2000.

The flow of long–term debt such as bank loans, and trade can be presumed to reflect general economic conditions in the area. Though the long-term trust of East Asia in 1994 increased by $17,721 million, it declined in 1999 after the currency crisis by -$22,157 million. However, when it came to 2000, big increase in long-term fund inflows could be observed.

B. The stable growth of direct investment and rivalry in its use

even during the period of the Asian currency crisis, direct investment still had an important vitality. Direct investment had the character of a stable long-term capital inflow, and will exert positive effects such as the creation of employment opportunities improvements in income, increases in fixed capital formation, the expansion of production ability, export increases, and

3 Cambodia, China, Fiji, Indonesia, Korea, Rep., Lao PDR, Malaysia, Mongolia, Myanmar, Papua New Guinea, the Philippines, Samoa, Thailand, Tonga, Vanuatu, Vietnam, Kiribati, and the Korean, Dem. Rep

the acquisition of foreign currency. With the influence of the Asian currency crisis though, the amount in direct investment has continually declined by -$7,256 million in 1999 since $35,236 million in 1994. The ratio of direct investment that is occupied in fund inflows in East Asia in the 1990s was 86% in 1999 since 40% in 1990. This has helped a big part in the growth of East Asian economics. Moreover, the inflow of direct investment not only increased from the advanced countries, but also from Asian NIES, ASEAN and China. A change in the market share by area occupied the inflow of direct investment to East Asia as observed in Figure 1. From 1991 to 1999, ASEAN fell from 41% to 11%, the NIES from 38% to 27%, while China increased from 21% to 62%[4].

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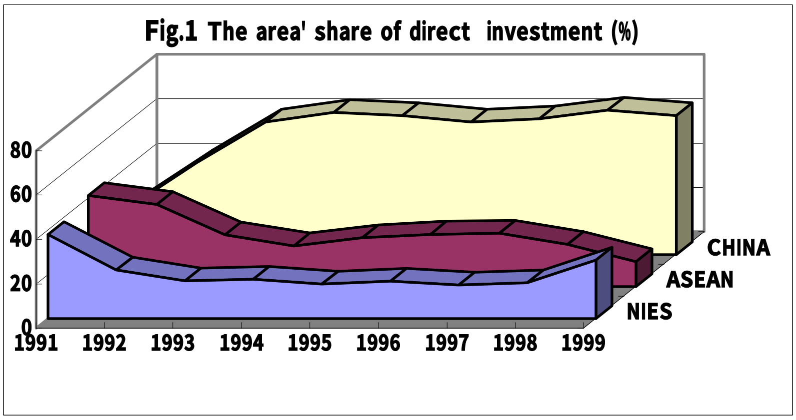

Sources: Asian Development Bank; "*Asian Development outlook 2001*"

At the same times, the Expansion of Portfolio Investment was a factor when the scale of the securities market in East Asia steadily expanded in the 1990s, while portfolio investment was reaching 30% of the amount of fund inflow

As for the stock price earning rate in 1994 there the movement was remarkable for the fact that it was 2.5 times in the Philippines, while even in Hong Kong and Indonesia it was more than 2 times, and exceeded America's (13.7% of annual earning rates), Europe (Germany, 46.7%) and Japan (2.9%) drastically[5]. Therefore, East Asia became the biggest worldwide for the inflow of portfolio investment. However, the increase of portfolio investment became risky in the East Asian financial market, as well, because there were such large inflows and outflows of speculative short-term capital, also beginning in the early 1990's.

C. The existence of private funds and economic recovery

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4 Asia Development Bank, "*Asian Development outlook 2001",* p.224

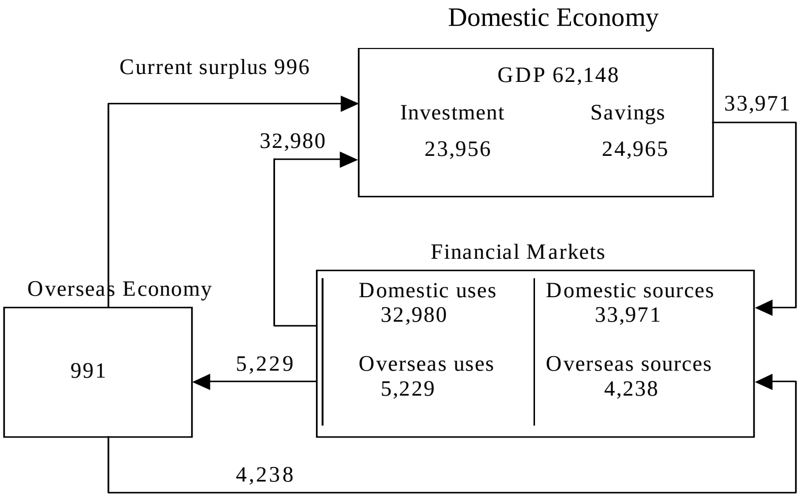
Private funds occupied a large amount in the fund inflow to East Asia. However, after 1997, not only private funds, but also official funds fell drastically. Therein, big public fund inflows began a stable decline after 1998, and private fund inflows also suddenly decrease. In other words, this can be thought about as net fund outflows in East Asia after 1998 being mainly due to the outflows of private funds. Yet, private fund net inflows observed a wide increase of $30,524 million like the previous year ratio as well in 2000, and that ratio also recovered to 88% of the higher levels. The recovery of the East Asian economy can also be shown beyond the influence of the Asian financial crisis.

V. The Characteristics of Overseas Fund Flows in China

The overseas fund flows to China changed greatly in the 1990s. Not only was there an increased inflow of overseas fund, but there was also an increased outflow of domestic funds. We can observe the survey of Chinese overseas fund flows and net fund outflows as follows.

A. The survey of overseas fund flows to China

Figure.2 The Flow of Funds to China (the average of 1992 - 2000, 100 million RMB)



Sources: "The people's bank of China quarterly statistical bulletin" and "the Statistical yearbook of China

Based on the four balance structural formulas mentioned before, we used the related data to compose Figure 2. The survey of overseas fund flows to China was examined. (There are some errors because the monetary unit of the Flow of Funds Account and the Balance of

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[5] World Bank; "*2001 World Development Indicators*", pp.340-342

Payments is different.) Still, the fund flow figures of the 1990s Chinese economy drawn in Figure 2 can be put in order in the following 4 balance-types.

5) Savings-Investment Balance

(Saving 24,965 – Investment 23,956) = 1,009 $\approx$ 996 = (EX - IM)

6) A fund income and costs balance of the domestic economic section

(S - I) = 1,009 $\approx$ 991= (FAI 3,3971 – FLI 32,980)

7) The overseas income and expenditures balance

(OFO 2,782 + FER 1,355 + E&O[6] 1,092) - OFI 4,238 = **991**

8) The financial markets balance

DFO 32,980 + (OFO 2,782 + FER 1,355 + E&O 1,092)

= DFI 33,971 + OFI 4,238

This is transformed to

(OFO 2,782 + FER 1,355 + E&O 1,092) - OFI 4,238

= DFI 33,971 - DFO 32,980 = **991**

Therefore

Net fund supply to overseas (-1,456) + FER 1,355 + E&O 1,092

= Domestic net fund inflow **991**

= Financial assets net increase of the domestic sector **991**

Therefore, from 1992 to 2000, the average total net annual overseas fund supply was -1,456 hundred million RMB, the foreign exchanges reserve was 1,355 hundred million RMB, and the errors and omissions was 1,092 hundred million RMB. This meant a net inflow of 991 hundred million RMB of domestic funds to the financial market and a net increase of 991 hundred million RMB in domestic financial assets.

The flow of funds in the Chinese economy is "the flow of the fund export type", as a result put in order by the above average in the 1990s. That becomes the relation of "the current account surplus – and the capital account deficits (net capital outflows)" externally, and also becomes the relation of "The occurrence of savings excess – and the formation of net financial assets" in the domestic economy.

B. Net outflows from China

China in the 1990s had "doubtful circulation" of fund flows that existed in Asia (Table 5). It declined drastically in 1998 though the fund inflow was changing with an increased base

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[6] E&O: Errors and omissions in the BOP

when the overseas Chinese fund flows became apparent. On the other hand, an increasing tendency is shown fundamentally toward fund outflows from 1992 to 2000. However, when the balance of fund inflows and fund outflows was observed, net inflows to China were positive except for 1992 and 1998

Table 5 Overseas Chinese Fund Flows (100 million RMB)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Inflows (A)	1667	2929	5326	5654	5901	5005	2976	3808	4877
Outflows (B)	1681	1604	2514	2427	2588	3109	3431	3041	4643
Net inflows (A-B)	-14	1325	2811	3228	3313	1896	-454	767	234
Foreign E.R (C)	-117	102	2631	1877	2632	2961	532	704	873
Errors & O. (D)	-456	-565	-842	-1487	-1294	-1405	-1372	-1361	-1056
S or D (E)	-353	658	-662	-137	-612	-2471	-2359	-1298	-1696

Sources: Statistics Department of the People's Bank of China; "The People's Bank of China quarterly statistical bulletin".

Note: E = (A - B) - C + D; S or D: Financial surplus or deficit

However, when we verify the changes of the Financial Surplus and Deficit that puts Foreign Exchange Reserves in a net inflow situation and adding Errors and Omissions, we can get the actual situation. That is the overseas sector was always in financial deficit except for 1993. In other words, the financial surpluses in the domestic sector also became a net fund outflow from China. And the flow of the funds is like the "return of capital" which means to flow to the advanced countries and other areas. Those returns of capital, however, increased rapidly after 1997, and due especially to the Asian currency crises, fund outflows from China increased markedly. This appears in the last row of Table 5.

In a word, the conversion of the increase in large-scale fund outflows with the big decrease in the net fund inflow will be able to be said to be the main characteristic of overseas flow funds in China after 1997.

VI. Problems And Future Prospects

Thus, for the Asian economy in the 1990s, fund flows on a historical record-breaking scale can be understood from the above analysis. Then, though "doubtful circulation" existed in this large-scale flow of funds, it existed not only for ASEAN countries, which had current account deficits, but also for China, which had a surplus. Although the economical phenomenon of the funds flowing from foreign countries returned again in the same way, the causes are different.

A. The difference in “doubtful flows" in East Asia

Though hot money was used as the means to finance the current deficit, it caused an Asian currency crisis in ASEAN countries for the first half of the 1990s. The net fund outflow in China was always caused by capital flight. The main reasons are as follow; the legal system which hasn't developed an immature account system, delays in the financial system originating from the lack of the examination ability of banks, the growing difference in domestic outside interest in China, and the gap in the treatment of domestic enterprise and foreign capital enterprise.

B. Creation of an environment for stabilized fund flows

Fund inflows are not a misfortune for a receiving country, and they can become a chance for economic growth. They can promote the improvement of the management environment in the developing countries and the maintenance of the financial market. However, at an early stage without being equipped with a solid financial system and a prudent risk control system, the regulation of the free movement of capital is unavoidable to maintain the safety of the economic growth from the variation of the international capital. The sixth article of the IMF agreement recognizes that a member nation may regulate the movement of capital within the range where neither the freedom of the current account dealings nor the fulfillment duty of existent contracts is obstructed. Therefore, it seems that it is analyzed by this, and that should concretely restrict capital movements in the short term whose risks are bigger than long-term capital movements.

Moreover, it is greatly divided into the capital movement regulation, and there are varied inflow regulations at the entrance stage and outflow regulations at the exit stage. Regulation at the entrance stage is there to prevent a crisis from happening. If inflows of hot money from a sudden rise were controlled in advance by regulations, shocks due to capital flight from a sudden fall situation would be small and finite. Then, the regulation to the inflow of capital should be able to stem the tide of the inflow of hot money, and through tighter domestic policy it influences the expansion of the interest both on the inside and the outside the effect that prevents the overestimate of a country’s currency can be expected as well. Therefore, the target is limited to the entrance of the short-term capital, and the whole regulation is more suitable at a relatively early stage of development.

However, the idea is to move from a policy of foreign capital treatment to a market guidance plan rather than simply deciding how capital movement can be regulated in the long run. Concretely, a country should consider how capital movement is efficiently guided by financial regulations and the maintenance of the financial market. Therefore, one can see where international cooperation with other countries such as building up the financial information network of East Asia and creating an environment for stabilized fund flows, becomes necessary.

Since 2000, the economy of East Asia has been recovering rapidly. Moreover, China finally joined the WTO at the end of 2001, and the international fund flows of East Asia are being confronted with structural change. Such a situation will make it more important for government and enterprises to moderate economic management in the developing countries of East Asia led by China from the perspective of global economy. For the stability of the economic growth, comprehending the pattern and principle of fund flows will become more realistic and indispensable.

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