

Global Imbalances and Asian Economies

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Introduction

The Asian financial crises of 1997 and 1998 were triggered by a sudden and large-scale backflow of foreign capital that had poured in large quantities to East Asian economies that were growing at a phenomenal rate. Global capital flows have changed dramatically since the Asian crises and so have the structures of capital flows in Asian economies compared with before the crises.

Today, the world economy is confronted by international monetary imbalances, which are an international financial inequilibrium of a global scale. At the core of these global imbalances is a widening US current account deficit. However, Asian economies too are playing an essential role in the expansion of global imbalances by

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financing the US current account deficit. If sudden unwinding of the global imbalances occur, the world economy, including the Asian economies, will suffer grave consequences. To ensure gradual unwinding of the global imbalances, it is imperative that Asian economies' potential contributions are examined.

Based on this recognition, the current status of the Asian economies and their tasks are analyzed in this paper from the perspective of changes in the international capital flows. This paper consists of two parts. In the current issue of the journal, "Global Imbalances and Asian Economies" is discussed. In the next issue, "Changing Capital Flows in Asian Economies" will be examined. This paper is based on the study that was conducted by The Working on Capital Flows in Asia, a group that was set up within JBIC Institute.

Chapter 1: Global Imbalances Embedding Instability for the World Economy

I. Growing Global Imbalances and Their Risks

1. Economic Meanings of the Current Account Balance and Current Account Correction

(Three Meanings of a Current Account Balance)

It is necessary to clearly understand the meaning of a current account balance as a background for analysis provided in this paper. A current account balance is a concept of international balance of payments statistics, and consists of the goods and services balance (the difference between exports and imports of goods and services), the income balance (the difference between receipts and payments of interest, dividends, etc.) and the transfers balance (the difference between receipts and gifting of free economic aids). This is the definition based on international balance of payments statistics. Economically speaking, a current account balance bears the following three meanings all at the same time:

First, a current account balance is the difference between exports and imports as defined in the broadest terms. A current account deficit indicates an excess of imports (i.e. the amount of imports $>$ the amount of exports) in the international trade. A current account surplus is the opposite of this. The same holds true in the rest of this paper.

Secondly, a current account balance represents the difference between capital inflows and capital outflows. A country with a current account deficit has a net capital inflow (i.e. the amount of capital inflows $>$ the amount of capital outflows). Capital inflows (or outflows) are called capital imports (or capital exports) or external borrowings (lending). Capital inflows and outflows alter a country's external investment position (i.e. the balance of external assets - the balance of external debts). A country, such as the United States, that consistently runs a current account deficit borrows from foreign countries an amount that matches the size of its current account deficit on a year to year basis. The external investment position of the United States has deteriorated accordingly. The United States' current external investment position is in a massive negative. In other words, the United States holds a huge net external debt¹.

It is important to note that "external borrowings and lending," as well as "external debt," are used here in a broad sense of the terms. Capital inflows are therefore bank loans, portfolio investments and foreign direct investment. External borrowings, whose definition as used here is the same as that of capital inflows, thus include not only loans but also portfolio investment and foreign direct investment. The balance of external debt (a stock concept), which is the cumulative balance of external borrowings (a flow concept), includes the outstanding balance of stockholdings and that of foreign direct investment.

Thirdly, a current account balance represents the difference between domestic saving and

investment. A country with a current account deficit has a shortage of saving that falls below investment. This also means that the country's expenditures (private consumption, private investment, and public expenditure) surpass its income (GDP). A country with a current account deficit makes investments in excess of domestic saving by using the saving of foreign countries, and at the same time expends more than its own national income.

Investments as used here represent a GDP statistics concept. It refers to tangible investment, such as corporate investment in plant and equipment, housing investment and public investment. Financial investments, such as portfolio investment, are not included. More detailed explanations about the three economic meanings of a current account balance².

(Current Account Imbalances Not Necessarily Undesirable)

There is no general consensus that a country's current account should be in balance. A current account imbalance is more natural than unnatural and oftentimes desirable in an economy in which international trade and capital transactions with foreign countries are conducted (an open economy).

In an economy where domestic saving is abundant and domestic investment opportunities are limited, it becomes possible to increase total returns on investment by investing the surplus saving in foreign countries. When this occurs, the country posts a current account surplus. Conversely, to a country that has more investment opportunities than can be met with domestic saving, it is desirable to post a current account deficit by importing capital from abroad and achieving high

levels of investment so as to realize rapid future economic growth. This approach is also desirable for other countries that lend money to this country as they achieve high investment returns.

Current account imbalances have a tendency to expand or shrink with business cycles. When an economy is in a boom, domestic expenditure for investment and consumption become active with the result that "saving - investment" and "income - domestic expenditure" decrease, causing the current account deficit to expand (or a surplus to shrink). Conversely, when an economy goes into a recession, investment and consumption decelerate, causing a current account deficit to shrink (or a surplus to develop).

(Adjustment of Massive Current Account Deficits)

In general, however, a continued large current account deficit generates questions about the sustainability of such a deficit. Eventually, either the deficit contracts or a surplus develops because a massive deficit cannot be maintained indefinitely. A sustained current account deficit causes the country's net external debt to accumulate. As a result, domestic expenditure for investment and consumption is curtailed to make large external debt repayments. This causes imports to decrease and a current account deficit to contract. Alternatively, concerns about the country's debt repayment capabilities prompt capital inflows to slow down and the country's currency to depreciate. Currency depreciation in turn brings about a contraction of the current account deficit.

Today, the mounting US current account deficit is watched with an alarm. What then has been the past history of industrialized economies that

1 In addition to current account surpluses and deficits, changes in the value of external assets and those in the value of external debt can alter the external investment position. For example, an increase in the price of stocks and bonds in foreign countries that surpasses the increases in the prices of domestic stocks and bonds cause the external investment position to improve even if the current account is in balance. Furthermore, changes in the foreign exchange rate alter the value of external assets and debt that are denominated in the country's currency, and thus cause a change in the external investment position even when the current account is in balance. The evaluation effects of exchange rate changes will be discussed in detail in Chapter 3.

2 The three meanings of the current account balance mentioned in the text are explained here in greater detail:

The first meaning (the difference between exports and imports in the broadest sense) can be explained as follows: The current account can be defined to be “current account = the goods and services account + the income account + the transfer account.” The goods and services account represents the difference between exports and imports of goods and services. This is what is normally used as the external trade account of a country. Incidentally, Japan’s “trade account” statistics contain only the exports and imports of goods. It therefore is an external trade account in its narrowest sense of the term. The income account consists of interest, dividends, and remittances by nationals working abroad. In short, it represents income balance (receipts -payments) of factors of production. These receipts and payments can be viewed as compensation for exporting or importing capital and labor services (= factors of production). The transfer account consists of unilateral aid (such as gifting of rice) and others. This can also be viewed as an export of rice without compensation. Both the income account and the transfer account can therefore be said to be part of the external trade account in the broad sense. Based on the foregoing, the current account, which consists of the goods and services account, the income account and the transfer account, can be said to represent the difference between exports and imports in the broadest sense of the terms. Of the three sub-accounts, the goods and services account typically is the largest and fluctuates widely. For this reason, it is possible to approximate the current account with the goods and services account and state that the current account is the difference between exports and imports.

The second meaning (the difference between capital inflows and capital outflows) is derived from the way the international balance of payment statistics is prepared. International balance of payment statistics are prepared based on the principle of double-entry bookkeeping. As a statistical definition, there always exists a relationship of “current account + capital account + changes in foreign reserves = zero.” (Statistical errors and omissions are ignored.) “Capital account + changes in foreign reserves” is the balance between capital inflows and capital outflows. The positive balance means an excess of inflows whereas the negative balance means an excess of outflows. (An increase in foreign reserves means a capital outflow.) Consequently, a current account deficit (a negative balance) equates to a positive figure for “capital account + changes in foreign reserves,” meaning a net capital inflow to the country. Based on the foregoing discussion, the current account can be said to be the difference between capital inflows and capital outflows.

The third meaning (the difference between domestic saving and investment) is derived from the national income identity (or the definition equation for GDP as seen from the expenditure side). Y represents GDP, C the household consumption, I_p private sector investment (investment in plant and equipment, housing investment and investment in inventories), G the government expenditure, and $(X - M)$ net exports. Net export figures used in GDP statistics are the difference between exports and imports of goods and services, which is the same as the goods and services account of the international balance of payment. The government expenditure G consists of government consumption C_g and government investment I_g . T that appears in Equation (3) represents tax revenues, etc. Equation (1), which is the national income identity, can be transformed as follows:

$$Y = C + I_p + G + (X - M) \quad \text{----- Equation (1)}$$

$$Y - C - I_p - G = (X - M) \quad \text{----- Equation (2)}$$

$$(Y - T - C) + (T - C_g) - (I_p + I_g) = (X - M) \quad \text{----- Equation (3)}$$

$(Y - T - C)$ is the private-sector disposable income ($Y - T$) less household consumption, which is private-sector saving. Private-sector saving can be broken down to household saving and corporate saving (= retained earnings). $(T - C_g)$ is ordinary income of the government less government consumption that is ordinary expense, and termed government saving. (Strictly speaking, interest payments must be included in government bonds, etc. but are disregarded here for simplicity’s sake.) Consequently, $(Y - T - C) + (T - C_g)$ represents domestic saving that is the total of private saving and government saving. $(I_p + I_g)$ represents domestic investment that is the sum of private investment and government investment.

Based on the foregoing, Equation (3) indicates that the relationship of “domestic saving – domestic investment = net exports” always holds true of a country’s economy. As mentioned earlier, net export figures of GDP statistics correspond to the goods and services account balance in the international balance of payment statistics. If we assume that the goods and services account balance roughly equals the current account balance, the current account balance is the difference between domestic saving and domestic investment, based on the relationship provided by Equation (3).

To be exact, the current account balance precisely agrees with the difference between domestic saving and domestic investment when the above-mentioned domestic saving is computed by using the concept of national income Y , which is based on an income concept referred to as Gross National Disposable Income (GNDI) instead of GDP (Gross Domestic Product). The sum of GDP and net receipts of factor income (= income account balance) is referred to as Gross National Income (GNI). GNI is GNP captured as an income concept. GNI equals GNP. Note that GNI focuses on incomes whereas GNP focuses on output, but they measure the same thing.

GNDI is obtained by adding net receipts of transfer income (transfer account balance) to GNI. In other words, GNDI is the most broadly defined national income concept and is the sum of GDP, which is income generated within the domestic economy, and income received from abroad (factor income + transfer income). It represents the total amount of (disposable) income that people of a country can spend in one year. Such statistics as saving rate used by IMF are computed using the GNDI concept.

We have seen why the current account balance can be said to be the difference between saving and investment (the third meaning). This can also be rephrased as the current account balance is the difference between domestic expenditure and income. This relationship too is derived from the national income identity and expresses in words what is shown by Equation (2) above, which is a transformation of the national income identity.

$$Y - C - I_p - G = (X - M) \quad \text{--- Equation (2) (Repeated)}$$

$$Y - (C + I_p + G) = (X - M) \quad \text{--- Equation (2)'}$$

$(C + I_p + G)$ represents the total domestic expenditure (also referred to as “absorption”). The left side of the equation is the difference between income and expenditure, and equals the current account balance. When the right side of the equation is a negative number (a current account deficit), the left side is also a negative number (income < expenditure). In other words, expenditure always surpasses income in a country that has a current account deficit. Such a country compensates its excess expenditure with capital imports from abroad (external debt). The excess expenditure always equals the excess investment.

developed massive current account deficits and what was their experience of adjustments like? The United States' Federal Reserve System analyzes in its research paper the process of current account adjustments in industrialized economies in which current account deficits that had grown to gigantic proportions reversed course and began to shrink (based on 25 episodes starting in 1980) (Caroline L. Freund, 2000). According to this analysis, typical process of current account adjustments in industrialized economies proceeded in the following manner:

1. When current account deficits grew to approximately 5% of GDP, they started to reverse course and began to shrink. Deficit growth continued for approximately four years, which were followed by three to four years of contractions.
2. Current account adjustments resulted in currency depreciation of between 10% and 20% (on a real effective exchange rate basis). Annual economic growth slowed down by between 1% and 2%
3. Growth of current account deficits caused the countries to be net external debtors and their net debt increased. However, their net debt stayed flat when current account adjustments commenced.
4. Current account adjustments occurred as part of business cycles.

Such past experiences of current account adjustments in industrialized economies offer some important insight on the future adjustment of the US current account deficit. First, a deficit equaling 5 percent of GDP has been the typical upper limit historically. Secondly, currency depreciation and deceleration of growth occur in the process of current account deficit contractions. These two points are believed to be especially important.

The US deficit growth has been expanding over the past ten years or so, during which time an economic recession took place. Adjustments therefore do not appear to be tied to business

cycles, which occur roughly with a span of several years. In this regard, the situation in the United States differs from typical cases of past deficit adjustments. Moreover, there have been exceptions when a current account adjustment did not start until after the deficit far surpassed 5% of GDP. These past episodes include Portugal with 17% (1981), Ireland with 14% (1981) and Singapore with 13% (1980). The sustainability of the massive US current account deficit will therefore be examined more closely after we review the current situation about deficit issues.

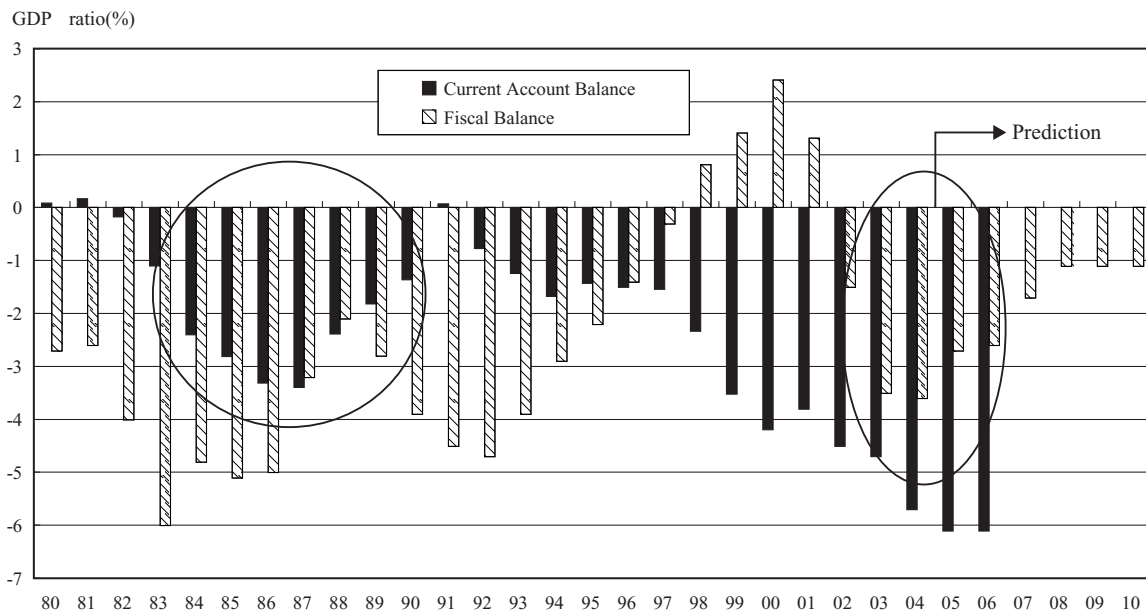
2. The Ballooning US Current Account Deficit and Its Sustainability

(The Current Status of the US Current Account Deficit and Its External Debts)

Let us first review the status of the US current account deficit, which lies at the core of global imbalances. The US current account deficit began to grow in the mid-1990s, rising from US\$109.5 billion or 1.5% of GDP in 1995 to US\$665.9 billion or 5.7% of GDP in 2004. IMF's World Economic Outlook (April 2005) projects the deficit to surpass US\$700.0 billion in 2005 with its ratio to GDP remaining about as high as it was in the preceding year. In contrast, Japan is a country of a current account surplus, which stood at US\$170.0 billion, an amount equal to 3.7% of the country's GDP, in 2004.

A fiscal deficit is also expanding in the United States, creating Twin Deficits (Fig. 1). The US government budget was in a deficit over a number of years before a tax revenue increase, resulting from a protracted economic boom of the 1990s and fiscal reconstruction efforts, improved the country's fiscal standing to a surplus position between 1998 and 2000. Soon thereafter, however, a deficit returned and grew to 4.3% of GDP in 2004. Today's massive current account deficit is even more pronounced than the deficits in the second half of the 1980s, when the Twin Deficits were looked upon with alarm. Back then, the deficit represented only 3.4% of GDP even in the peak year of 1987 (compared with 5.7% of GDP in 2004).

Fig. 1 Twin Deficits of The United States



Note) Current Account Balance (2005-2006) is estimated by IMF. Fiscal Balance (since 2005 fiscal year) is estimated by OMB.

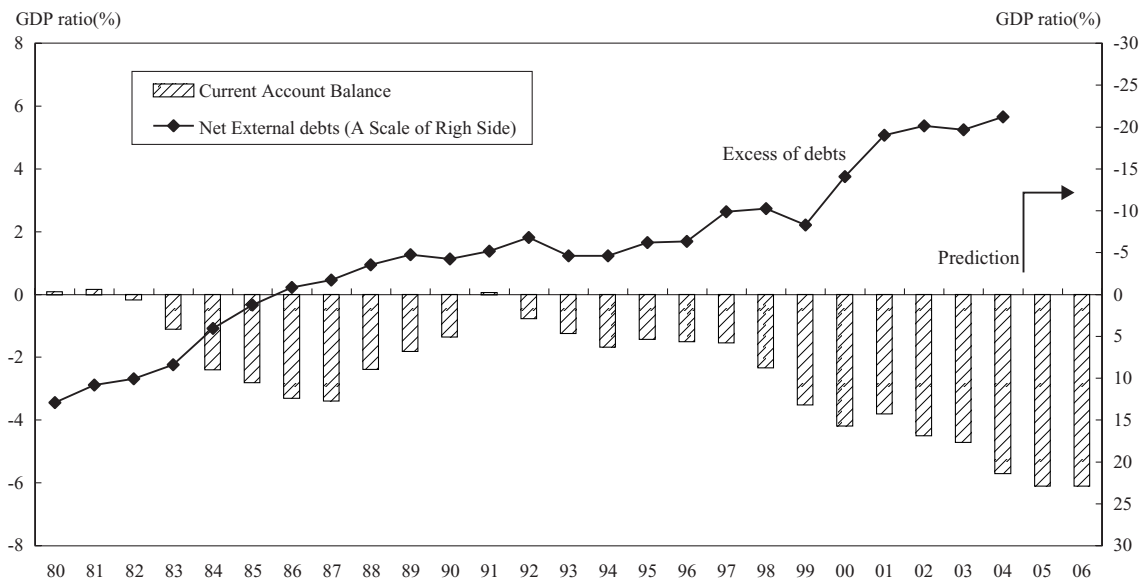
As the result of the ballooning current account deficit, the net external debt of the United States (the outstanding balance of external debts - the outstanding balance of external assets) has also grown. A look at the long-term trend of the external investment position of the United States reveals that the country, which used to hold external claims, became an external debtor in the mid-1980s and has now become the largest borrower economy of the world (Fig. 2). This is a reflection of the fact that the United States has nearly consistently posted a current account deficit since 1982. (The only exception occurred in 1991, when a small current account surplus was posted.) The outstanding balance of net external debt in 2004 was US\$2.4 trillion, or 21.2% of GDP. In 1980, the United States had held net external assets worth 12.9% of its GDP. The country’s external investment position has therefore been dramatically altered over the past quarter century³.

The net external debt level in excess of 20% of GDP is strikingly high both internationally and

historically. The Latin American countries that fell into external debt crises in the 1980s (Argentina, Brazil, Mexico, etc.) held net external debt that was equivalent to between 20% and 30% of GDP immediately before they plunged into crises. The current US net external debt level is thus approximately as high as the levels that these Latin American countries experienced back then.

Nonetheless, there have been some cases where countries accumulated external debt that exceeded the current level of the US net external debt. In the 1990s, Canada, Sweden and Australia posted net external debt that equaled to between 40% and 60% of GDP. In the 1980s, the net external debt of Ireland at one time climbed to approximately 70% of GDP. All of these countries, however, are small economies. The United States, on the other hand, is a major economy that accounts for approximately 30% of the global GDP. The impact that its massive net external debt exerts on the world economy is beyond comparison. Historically speaking, today’s

3 There are two types of published data on the US external investment position. The difference is in the methods of valuation used to determine the outstanding balance of foreign direct investment. One is based on the replacement price and the other is based on the market value. The data used here are based on the replacement value. Although market price-based data are somewhat different, the picture is fundamentally the same.

Fig. 2 The US Current Account Balance and Net External Debts

Note) Current Account Balance (2005-2006) is estimated by IMF. Net External Debts are based on acquisition cost.
Sources) IMF "World Economic Outlook" (September, 2005), BEA.

level of US net external debts can be said to be already in a hazard zone.

(Why is the Current Account Problem of the United States, a Single Country, Referred to As Global Imbalances?)

The US current account deficit problem is often referred to as a global imbalance problem. Why is the problem of one country treated as a global problem? To understand this, the following two important points should be considered:

First of all, the US current account deficit problem can be called a global problem because of the presence of the current account imbalance (surplus) problems of other countries in its backdrop.

Any good that is exported by one country on the globe is imported by another country. Exports and imports thus always balance out when we look at the world economy as a whole. Similarly, capital inflows and capital outflows balance out, causing net capital flows to be always zero.

Furthermore, for investment to take place, someone must save money first. Thus, saving and investment are always equal to each other for the world economy as a whole. In other words, current account is always in balance for the world economy⁴.

Consequently, the fact that the United States posts a current account deficit implies that another country or countries elsewhere have a current account surplus. The imbalance caused by the US current account deficit is thus paired with current account surplus imbalances of other countries. This makes the US current account deficit problem not only a problem of the United States but also a global problem.

Secondly, the US current account deficit problem exerts a large impact on the world economy, due to the sheer size of its economy and the role played by the US currency, the dollar. For this reason, it is a global problem.

As stated earlier, Ireland experienced persistent

⁴ The sum of all current account balances (positive figures for surpluses and negative figures for deficits) of all countries in the world should be zero, or in balance. In reality, however, the sum of the published data of all countries does not equal to zero because of statistical errors.

current account deficit problems in the 1980s, which led to a massive excess of external debt. The Irish current account deficit problem and its external debt problem were extremely serious for Ireland. However, they had little impact on the world economy because of the small size of the Irish economy. The United States, on the other hand, is the largest economy of the world, and the US dollar is the key currency of the world. Correction of the US current account deficit with a hard landing would exert substantial undesirable effects on the world economy. In this regard, as well as for the first reason, the US current account deficit problem is global in nature.

A current account deficit is the difference between exports and imports, the difference between capital outflows and inflows, and the difference between saving and investment. Global imbalances are therefore (i) imbalances of international trade, as well as (ii) imbalances of international capital flows, and (iii) imbalances of international saving and investment (saving insufficiencies and saving excesses).

(Sustainability of the US Current Account Deficit)

The sustainability of the US current account deficit is a major concern for the world economy, as well as for the US economy. As stated earlier, the history of the widening current account deficits among industrialized economies and the experience of their adjustments had a fundamental element of being part of business cycles. Deficits grew in the economic expansion phases and shrank as the economy entered a recession, induced by monetary tightening or other measures. However, the current account deficit of the United States has been growing almost consistently for approximately ten years, which included periods of economic contractions. It is thus difficult to view the US current account deficit in the framework of business cycles.

Ordinarily, reversal of a large deficit toward contraction can take one of two routes in addition to being part of a business cycle. One such route is followed when an increase in debt repayment burden dampens domestic expenditure, which causes a current account deficit to contract. In the other route, concerns about a country's ability to repay its debt slow down the inflows of capital and lowers the value of the country's currency, which in turn reduces the size of the current account deficit.

As for the first route of a current account deficit contraction by way of a rise in debt repayment, which has an effect of curtailing domestic expenditure, such a scenario is not expected to take place in the United States in the near future. The United States is the world's largest borrower but the US receipts of investment profits still surpass investment payments by a small margin. This is because the foreign direct investment portion of the US investment abroad has very high yields, and as a result the yield of US investment in foreign countries as a whole is higher than the yield from domestic investment⁵. Consequently, the scenario in which heavy debt obligations reduce US domestic expenditure is not a source of immediate concern.

What about concerns about the United States' debt repayment capability? The US situation is unique in that the major part of its external debt is denominated in its own currency (the US dollar). The United States therefore has the option of printing more of its currency if debt repayment becomes a burden. Some maintain that the country's becoming unable to repay its debt is not a viable scenario precisely for this reason and that the country's massive current account deficit can thus be sustained. However, such a view is erroneous. Surely, the United States is capable of printing more of its currency for repayment and generating inflation if debt

5 The annual rate of return of US domestic investment has averaged at approximately 3% in years since 1980. In contrast, the annual rate of return of foreign direct investment by the United States has averaged approximately 10%.

repayment becomes a problem. Should such a possibility emerge, however unlikely it might be, foreign investors can be counted on to pull their funds out of the United States all at once. The foreign exchange market would then see a rush of dollar sell-off, which in turn would cause the dollar to plunge. The result would be a contraction of the current account deficit. However, the possibility of debt repayment by way of inflation should not be a source of concern at this time because of (i) profound trust held by both domestic and international investors in the US central bank (Federal Reserve System) as an inflation fighter, and (ii) the US debt repayment burden is not likely to become excessive for a good while as stated earlier.

The US current account deficit is believed to be unsustainable, not along the routes described above but along a different route. This relates to portfolio choices made by foreign investors (foreign financial institutions, corporations, governments, etc.). If the current account deficit continues, the net external debt of the United States will further grow. This means that foreign investors will build up their holdings of dollar-denominated assets. To what extent foreign investors will continue to invest in dollar-based assets is dependent on a number of factors, including the risk-return relationships of US assets relative to those of non-US assets, the pace at which investors expand their portfolios, asymmetry of information about investees, and differences in government regulations. Data on global asset portfolios are essentially non-existent. Furthermore, it is extremely difficult to estimate the optimum share of dollar-denominated asset holdings. Nonetheless, one thing is certain. Countries invest only a portion of their saving in foreign assets, and not all of such foreign asset holdings can be dollar-denominated assets.

In particular, saving of a country is most likely to be invested within its own national boundaries (a home bias). Brakes are thus applied on the accumulation of dollar-denominated assets by foreign investors. Saving of the residents of

Aomori, Japan may be invested and utilized anywhere in Japan in total disregard for the prefectural boundaries. In contrast, high walls of national boundaries still exist for the utilization of international saving. Although the home bias has become somewhat lessened in the recent years, foreign investors will eventually begin to hesitate about building up colossal dollar-based assets year after year as long as the bias is present. When this eventuality strikes, capital inflows to the United States will taper off and cause the dollar to depreciate. Imports will decrease while exports increase and the reversal of the current account deficit will then be initiated.

This process will occur although it is not possible to predict its timing. There will not be any problem if the dollar gradually softens and the current account adjustments proceed at a moderate pace. If, however, an unpredictable economic or political event triggers foreign investors to suddenly change their mind, and capital inflows to the United States plummet sharply or are reversed, the dollar will plunge. In such an event, the US economy will likely hit a recession as the US stock market takes a nose dive and interest rates surge. Such chaos in the US economy will naturally negatively affect the global market. The inevitability of such a hard landing is not highly likely but cannot be ruled out either. This is why the US current account deficit has become a potential trigger for world economic instability. Reduction of the US current account deficit is therefore an important task not only for the US economy but also for the world economy.

II. Causes and Financing of Global Imbalances

1. What Factors Have Expanded the US Deficit?

(Two Analytical Approaches)

Fundamentally, two approaches can be pursued to analyze the reasons for the rise in the US current account deficit. One focuses on the

changes in imports and exports. The other focuses on the saving and investment trends, as well as international capital flows.

It is difficult to explain the growth of the US current account deficit over the past ten years by using the first approach, which focuses on the import and export trends. Would it be possible to say that the US productivity declined and US exports lost advantages? Or would it be possible to say that the international trade policies of the United States or those of its trading partners have undergone major changes with a result that US exports were curtailed or that imports to the United States were encouraged? Such changes in the international competitiveness of imports and exports and those in the international trade policies do not offer ready explanations for the massive increase in the US current account deficit. Rather, US trade imbalances (the excess of imports over exports) should be viewed as having been passively brought about by changes in saving and investment trends.

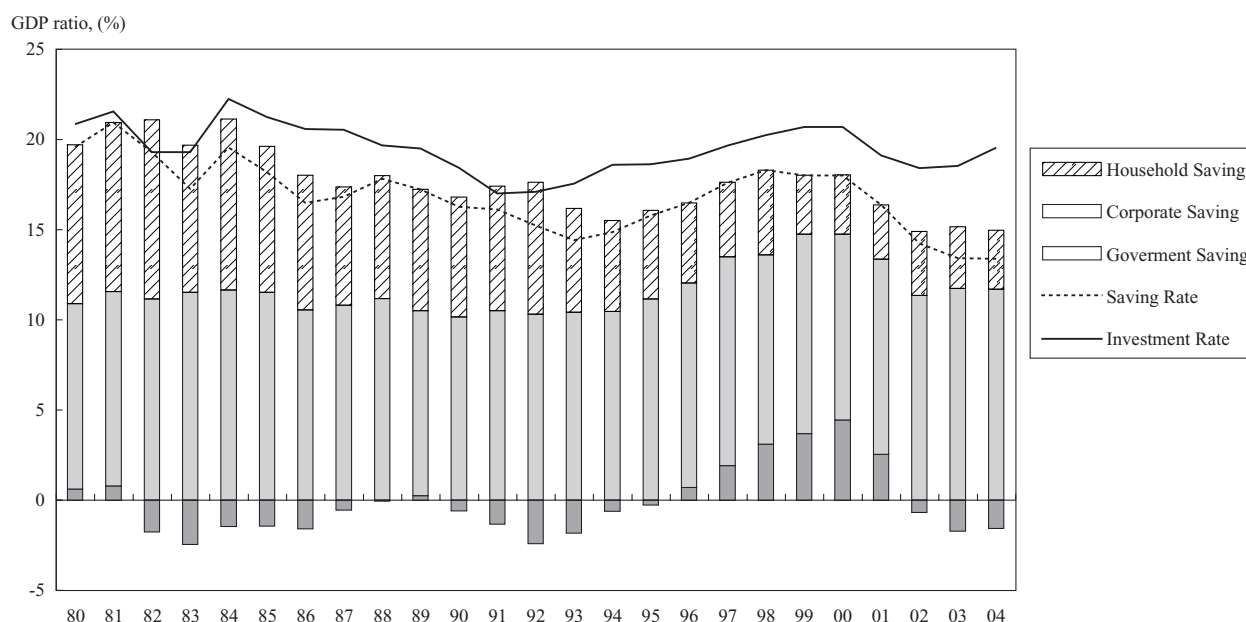
(Analysis of Causes of the Deficit Growth, Due to a Saving-Investment Balance)

Let us analyze the causes of the US current

account deficit growth using the second approach, which focuses on the saving and investment trends. First, we take a look at the changes in the saving and investment rates over the long run, starting in the 1980s (Fig. 3). Saving and investment rates are computed by dividing the saving and investment of the entire economy by GDP. Saving includes household saving, corporate saving (= retained earnings), government saving (= tax revenues – government consumption). Investment includes private capital expenditure, housing investment and public investment. The saving and investment rates as used here are gross saving and investment rates before any deductions for capital depreciation are taken.

The investment rate bounces with business fluctuations. However, no rising or falling trend is observed. It is stable at around 20% on average. On the other hand, the saving rate shows a declining trend, falling from 19.7% in 1980 to 16.2% in 1990 and further down to 13.6% in 2004. As stated earlier, a current account deficit implies a shortage of saving (i.e. domestic investment exceeds domestic saving). It can be said that the continual current account deficit of the United States since the early 1980s is due

Fig. 3 Saving and Investment of the United States



Note) Saving and Investment ratios are calculated from Gross Saving and Investment data.
Source) BEA

not to rising investment but to falling saving, which created a saving shortage in the US economy.

Fig. 3 reveals that the long-term falling trend of the saving rate in the US economy as a whole is fundamentally a result of a long-term declining trend of the household saving rate. The reason for the long-term decline in the US household saving rate has not yet been understood fully. However, the following two points are thought to be important:

The first is the aging of the population. The US population is growing increasingly gray although not as quickly as its Japanese counterpart. Generally, people save money during their productive years for retirement years and dig into their saving once they retire. For this reason, a country with a graying population tends to see its economy-wide household saving rate fall because the population of its senior citizens grows faster than that of its workers. This is also the fundamental reason for the declining trend of Japan's household saving rate since the beginning of the 1990s.

Secondly, Americans are thought to have an optimistic outlook about their future income, thanks to the continued buoyancy of the US economy. The US economy enjoyed a protracted boom that lasted nearly ten years in the 1990s. Its growth slowed down temporarily in the early 2000s, when the IT bubble burst. Starting in 2003, however, the economy began to achieve strong growth once again. Such a long-term sustained boom of the US economy led Americans to develop an optimistic view about their future income gains. This is thought to be the major reason for the drop in the household saving rate. Another and more recent trend is a rise in housing prices, now referred to as the

housing bubble. There is a possibility that this is contributing to the decrease in the saving rate. This point will be discussed later in connection with a theory of global saving glut.

After gaining understanding of the above-described long-term trends of the saving and investment rates since the 1980s, we will analyze in detail the changes in the saving and investment rates over a roughly ten year-long period starting in the mid-1990s, during which time the current account deficit widened greatly. From the point of view of a saving-investment balance, the ten-year period of current account deficit growth can be broken down to two phases: the second half of the 1990s and the first half of the 2000s.

During the second half of the 1990s, the saving rate climbed at a conspicuous pace. This was an exceptional period in the otherwise long-term declining trend of the saving rate. The increase in the saving rate during this period was largely due to a reversal of government saving (tax revenues — government consumption) from negative to positive. A tax revenue increase, resulting from the protracted economic boom that lasted throughout the 1990s, combined with the on-going fiscal reconstruction efforts, enabled the government to turn its fiscal deficit to a fiscal surplus in the second half of the 1990s, and reversed government saving to a positive figure. (See note 6 for explanation of the relationship between fiscal balance and government saving.)

In spite of a rise in government saving, which boosted the economy-wide saving rate, the current account deficit increased. This was because the investment rate climbed faster than the saving rate. The second half of the 1990s was a period of an IT boom, when private-sector investment in plant and equipment surged. In other words, the economy-wide saving increased during this

6 Fiscal balance is defined to be tax revenue, etc. - government expenditure. Likewise, government saving is defined to be tax revenues, etc. - government consumption. Because government expenditure equals government consumption plus public investment, fiscal revenue and expenditure can be expressed as government saving less public investment. Consequently, fiscal balance signifies net government saving, and a fiscal deficit is a negative net government saving.

period but investment grew at an even faster pace. The saving shortage (= current account deficit) thus grew instead of falling. As a result, the fiscal balance improved and a surplus was generated during this period while the current account deficit increased. The “Twin Deficits” relationship therefore did not materialize.

The growth of the current account deficit in the first half of the 2000s was primarily due to a fall in the saving rate. With the start of the 2000s, the investment rate plunged when the IT bubble burst. However, the saving rate declined even more sharply and widened the saving shortage, which was tantamount to an increase in the current account deficit. In 2004, adjustments to the investment glut of the bubble era were complete and the investment rate rebounded, causing the current account deficit to grow even wider. The major reason for a drop in the saving rate was the recurrence of large negative government saving, which resulted from a rapid contraction of a fiscal surplus and a reversal to a deficit in the years starting in 2000. A continued declining trend of the household saving rate also added to the fall in the economy-wide saving rate.

To recap the trends of current account balance and those of saving and investment in the ten-year period starting in the mid-1990s, the fundamental reason for the widening current account deficit in the second half of the 1990s was a saving shortage that resulted from an IT boom-induced surge in private-sector investment in plant and equipment in spite of a fiscal improvement. The fundamental reason for the widening deficit in the first half of the 2000s was a saving shortage that resulted from a drop in the saving rate, which was induced by deterioration of the fiscal balance.

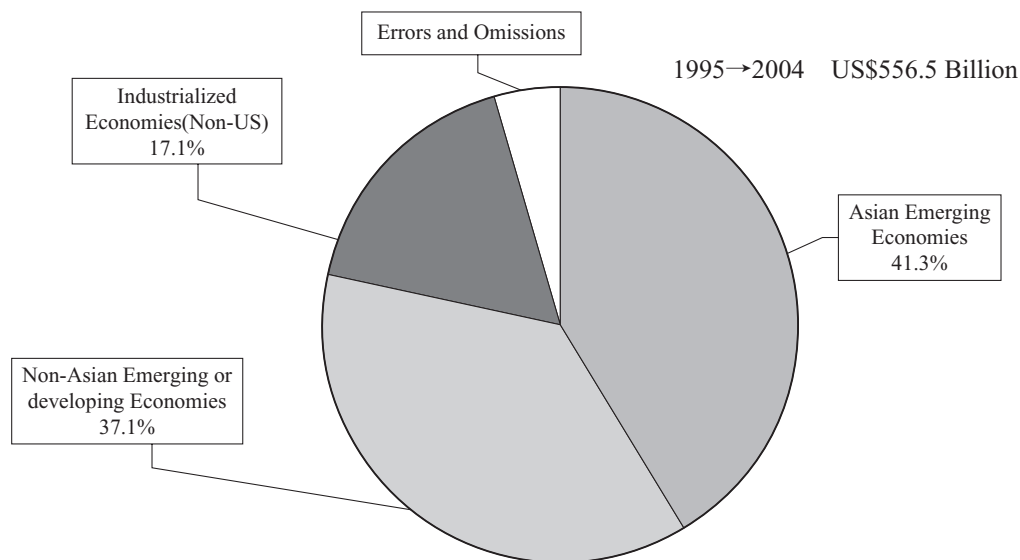
(Examination of the Global Saving Glut Theory in Connection With a Fall in the US Household Saving Rate)

There is a view that maintains that a global saving glut is a key reason that explains the fall

in the US household saving rate in the recent years (Bernanke 2005). According to this view, the current account balance of scores of emerging economies swung from a deficit to a surplus in the wake of the Asian financial crises, and their surpluses have grown to be sizable. In other words, these emerging economies moved from being economies with a saving shortage to economies with a saving surplus. (The background of this change will be analyzed in detail in Chapter 2.) Furthermore, petroleum prices began to rise around 2000, and caused the current account surpluses of oil producing economies to expand. It is pointed out that these events led to the development of a global saving glut.

The global saving glut theory asserts that this excess saving in emerging economies flows mainly to the United States and keeps the long-term interest rates in the United States at low levels. Low interest rates on housing loans have stimulated investment in housing, which in turn has boosted housing prices. Americans refinance their housing loans by mortgaging their homes, whose value has appreciated. They then use part of the newly-obtained loans for consumption. The consequence is a fall in the household saving rate.

How should this global saving glut theory be evaluated as an explanation of the scant US saving? Emerging economies’ current account balances moving toward a surplus position and their colossal growth is a change that has profound implications on the world economy. Excess saving of the emerging economies (and that of oil producing countries) is believed to be one of the main reasons that long-term interest rates are at low levels throughout the world. Likewise, there is no denying the fact that low interest rates have raised housing prices, which in turn have buoyed US household consumption. As examined earlier, however, the US household saving rate has been on a long-term declining trend since the 1980s. It did not start to fall in the 2000s all of a sudden. The global saving glut

Fig. 4 Financing of a Rise of The US Current Account Deficit

Note) US\$ 556.5 billion is a difference between deficits of 2004 and deficits of 1995.

is certainly one of the factors that pull the long-term trend downward, but it cannot be said to be the main reason for the recent fall in the saving rate. As pointed out earlier, the optimistic future outlook that is held by US households is the main reason for the long-term decrease in the saving rate. It can also be said that households are expanding their consumption by borrowing more against the increased value of their homes precisely because of such an optimistic future outlook.

2. Asian Economies as Major Financiers of the US Deficit (Who is Financing the US Current Account Deficit?)

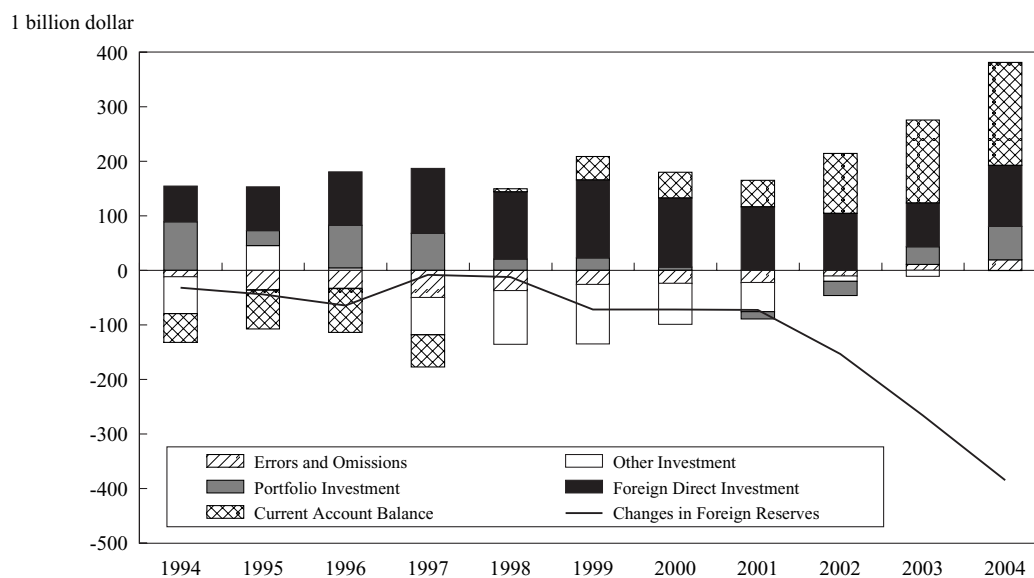
A current account deficit of one country is always matched by current account surpluses of other countries in the same amount. Stated differently, a country with a current account deficit imports capital from countries that are in surplus positions to augment its domestic saving shortage. Over the past ten years or so, the United States has greatly expanded its current account deficit. Which countries have financed such an increase in the US deficit?

The current account deficit of the United States

in 2004 grew by US\$556.5 billion from the 1995 levels. Fig. 4 reveals the economies that financed this increase. Non-US industrialized economies collectively financed 17% of the increase (11% of which was accounted for by Japan) whereas developing economies as a group financed 78% of the increase. Due to statistical errors, the percentage figures of the two groups do not add up to 100%. The majority of these developing economies are emerging economies. Asian emerging economies, in particular, financed 41% of the US deficit growth.

(A Transition from Emerging Economies to Capital Exporters)

A dramatic shift occurred in the current account balance trends among emerging economies in the wake of the Asian financial crises. There is no universal agreement as to which economies should be regarded as emerging economies. In this paper, 21 economies were chosen. They consisted of nine Asian economies (China, Korea, Taiwan, Philippines, Thailand, Indonesia, Malaysia, India and Pakistan), seven Latin American economies (Mexico, Columbia, Venezuela, Brazil, Argentina, Chile and Peru) and four East European economies (Czech, Hungary, Poland and Turkey) in addition to Russia⁷.

Fig. 5 International Balance of Payment of Emerging Countries

Note) 21 Emerging Countries

Sources) IMF "International Financial Statistics", Each Country

As a group, the emerging economies posted a current account deficit until 1998 but began to generate a surplus in 1999. The size of their surplus has been growing (Fig. 5). This trend is most notable among Asian emerging economies. Since 1998, these economies have shown large current account surpluses. In contrast, emerging economies of Latin America began to post current account surpluses only in 2003.

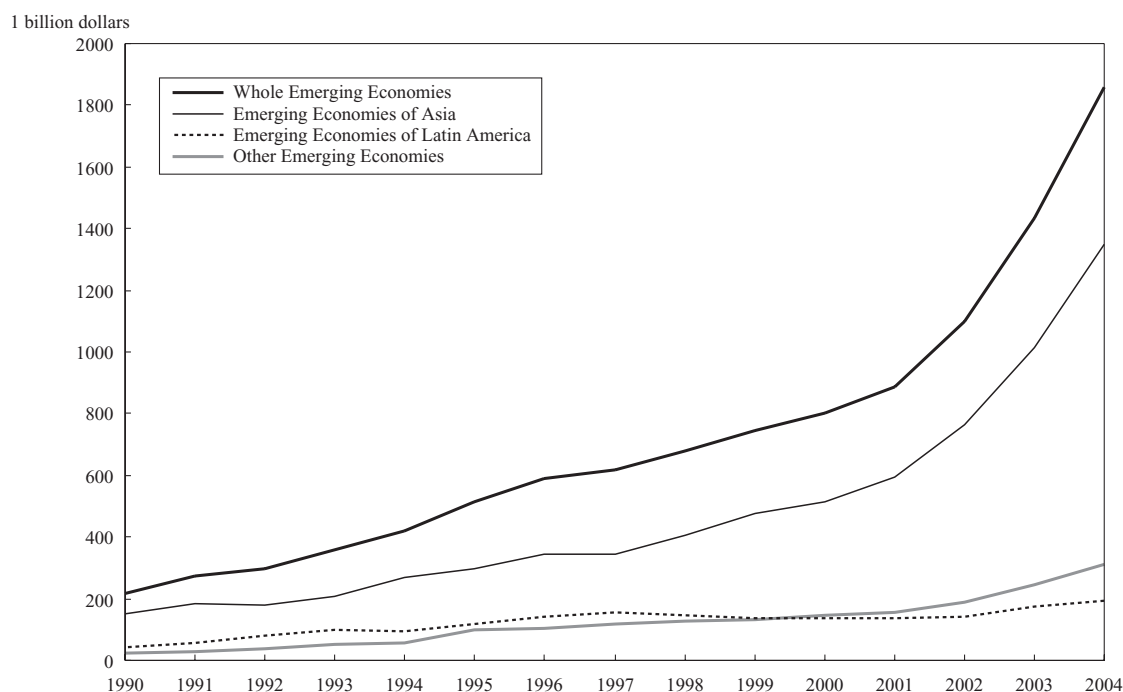
Collectively, the emerging economies achieved a major transformation from being capital importers to capital exporters following the Asian crises. As examined earlier, the picture is that of the excess saving of the emerging economies financing the growth of the US current account deficit. The core issue of the global imbalances is the US current account deficit but emerging economies, and especially the emerging economies of Asia, also play a key role in supporting the global imbalances.

A marked increase in foreign currency reserves of emerging economies, together with a transition of their current account balances to surplus positions, is another major change that followed

the Asian crises. Here again, increases in foreign currency reserves of Asian emerging economies are conspicuous (Fig. 6). A comparison of foreign currency reserves in 2004 with their levels in 1996, the year which immediately preceded the Asian crises, reveals China's 5.7-fold increase, Korea's 5.9-fold increase, Taiwan's 2.8-fold increase, and Malaysia's 2.5-fold increase. Indonesia, Thailand and the Philippines show increases that range between 1.3 and 1.9 folds. Some among non-Asian emerging economies also posted massive increases, including Russia, which had a 10.7-fold increase, and Mexico, whose increase was 3.3 folds. Brazil was the only country among the 21 emerging economies that saw its foreign currency reserve decline (to 90%) over this period.

Foreign currency reserves expanded because the governments of the emerging economies intervened in the foreign exchange market by buying foreign currencies and selling their own. The reason that these governments intervened to buy foreign currencies will be examined in detail in Section 1 of Chapter 2.

7 The 21 emerging economies used here are the 22 economies that are classified as emerging economies by the annual reports of the BIS with the exception of Hong Kong for which some data were not available.

Fig. 6 Foreign Currency Reserves of Emerging Economies

Note) 21 Emerging Countries

Source) IMF "International Financial Statistics"

Chapter 2: Changing Capital Flows in Asian Economies

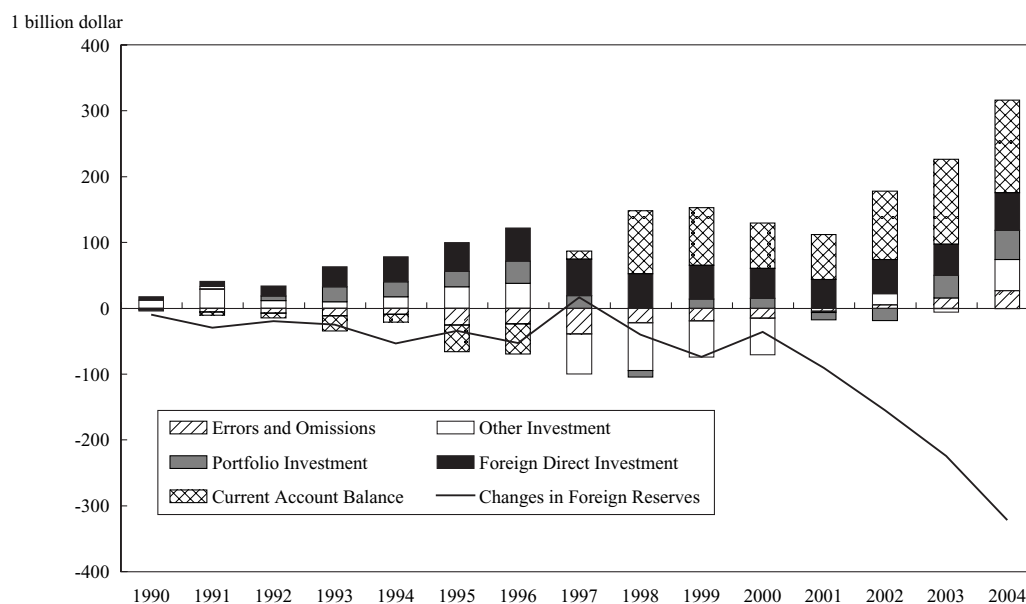
I. Emergence of Asian Economies as Major Capital Exporters

1. Changed Patterns of Capital Exports

In Chapter 2, changed flows of capital that turned the current account balances of Asian economies into surpluses and transformed these economies into capital exporters are analyzed. To pinpoint the characteristics of the changes in the capital flows of the Asian economies, comparisons are made as appropriate with situations in emerging economies of geographical regions outside of Asia. The Asian economies that are used in the analyses that follow are the nine Asian emerging economies mentioned in Section 2 of Chapter 1.

A change in a current account balance from a deficit to a surplus means that in terms of capital flows, which are the flip side of the current account balance, net capital inflows to the country (capital imports) are replaced by net capital outflows (capital exports). Capital flows

can be broken down roughly to capital account transactions, the main part of which are private-sector transactions, and changes in the foreign reserves, which represent transactions of the public-sector (monetary authority). The capital account balance includes foreign direct investment, portfolio investment (stocks, bonds, etc.) and other investment (bank loans, bank deposits, etc.) The capital account balance also includes loans to the government from overseas development assistance organizations in addition to private-sector capital transactions. However, the major part of the capital account balance of the Asian economies is private-sector transactions. Accordingly, analysis will be performed in the remainder of this paper assuming that changes in the capital account balance are indicative of the changes in private-sector transactions. An increase in foreign reserves occurs as the public sector purchases foreign assets (US Treasury Bonds, etc.). It therefore represents a capital outflow initiated by the government. Underneath the current account in the international balance of payment table are items such as the capital account balance and changes in foreign reserves.

Fig. 7 International Balance of Payment of Asian Economies

Note) 21 Emerging Countries

Sources) IMF "International Financial Statistics", Each Country

There is also an item termed "statistical errors and omissions." Suspected to be contained in the statistical errors and omissions of developing economies, including those in Asia, are substantial amounts of underground capital flows. For this reason, errors and omissions are deemed to represent flows of underground funds in the remainder of this paper.

Asian economies as a group began to post a massive current account surplus in 1998. Looking at the patterns of capital outflows that match the current account surplus, the period between 1998 and 2004 can be roughly broken down to the following two phases (Fig. 7):

The first phase ran from 1998 to 2000. Net capital outflows during this phase are attributed to (i) a massive net outflow of other investment, as well as underground capital outflows, and (ii) an increase in foreign reserves. In other words, both the private and public sectors took part in capital exports during this phase. The second phase spanned from 2001 to 2004. During this phase, net outflows of private-sector funds either contracted or turned into net inflows while foreign reserves continued to increase. Governments thus played a key role in capital

outflows. Another notable feature of this phase was a dramatic rise in the size of increases in foreign reserves compared with the first phase. Throughout the two phases, no major changes occurred in the inflows of foreign direct investment to the Asian economies as a whole. In Section 2 of this chapter, the trends of foreign direct investment will be discussed.

2. 1998–2000: Capital Exports by the Private and Public Sectors

Let us analyze in detail the capital flows during the two phases. We begin with the first phase (1998–2000). Other investment had a net inflow prior to the Asian financial crises. This changed to a net outflow in 1997, the year in which crises erupted. Massive net outflows continued until 2000. Portfolio investment showed relatively large net inflows until right before the Asian crises. Starting in 1998, however, the account showed either small inflows or net outflows. Underground fund flows, observed in statistical errors and omissions figures, had net outflows throughout the first phase (= capital flight). Incidentally, more than half of the statistical errors and omissions for all of the Asian economies was accounted for by China's errors and omissions.

To summarize the flows of private-sector capital during the first phase, foreign direct investment continued to post stable net inflows even after the crises. However, massive net outflows of other investment, a decrease in the net inflows of portfolio investments and underground fund outflows caused total private-sector capital (foreign direct investment + portfolio investments + other investments + underground funds) to register a net outflow. An increase in foreign reserve gave an additional boost to capital outflows. Thus, the capital outflows during this phase, equaling in size the massive current account surpluses, consisted of net outflows of private-sector capital (other investment and underground funds, in particular) and capital exports by governments.

Other investments includes bank loans and deposits, financing of international trade and other various types of capital transactions, other than foreign direct investment and portfolio investment. Of special importance are the flows of bank loans. It is believed that the net inflows of other investments in Asian economies prior to the Asian crises were reversed to massive net outflows in the wake of the crises mainly because of a dramatic fall in bank loans made by foreign countries.

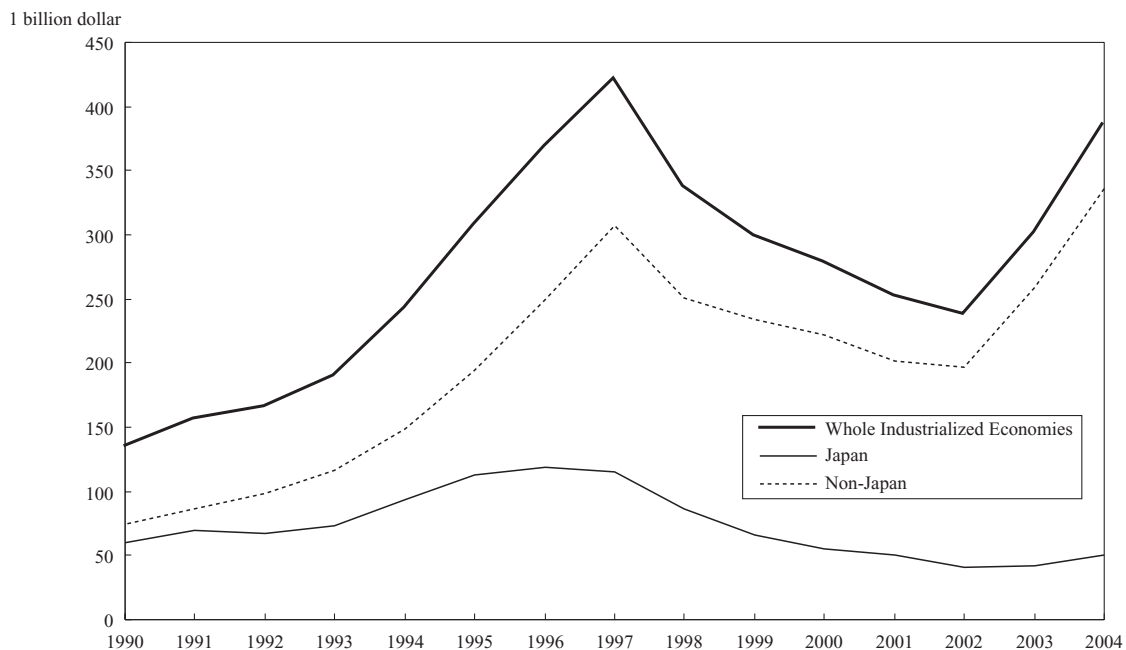
According to international credit statistics of the Bank for International Settlements (BIS), the outstanding balance of credit extended to developing economies of the Asia Pacific region by banks of 30 industrialized economies plummeted after the Asian crises and continued to decrease until 2002⁸. The credit balance in 2002 was as much as 43.6% lower than the peak 1997 levels (Fig. 8). A drop in loans by Japanese banks was especially dramatic. Their outstanding balance of credit in 2002 fell to approximately one third of the 1996 peak levels (a 65.7% decrease).

A huge decrease in loans made by Japanese banks to Asia was partly a result of higher risks faced by borrower corporations in the post-Asian crises era. Nevertheless, factors attributable to lenders were significant - the hardship faced by Japanese banks, which had neglected to solve their bad loan problems over a lengthy period of time and trapped themselves in a position of inadequate equity. Between 1997 and 1998, Japan too experienced financial crises as some major financial institutions failed. In 1997, Yamaichi Securities, Sanyo Securities and Hokkaido Takushoku Bank were bankrupt. In 1998, Long-Term Credit Bank of Japan and Nippon Credit Bank also collapsed. The failures of major banks suddenly pushed to the surface the seriousness of the bad loan problems, which had been left neglected until then. All banks then came under pressure to dispose of their bad loans. In 1998 and 1999, public funds were injected in all major banks so as to strengthen their equity. One means of avoiding a fall in the equity ratio (= bank's equity, etc. / risky assets) in the accounting for bad loan write-off is to compress risky assets. This led to banks' reluctance to make new loans and their refusal to renew old ones. Lending to Asia, where risks were heightened by the Asian crises, was especially severely cut back.

3. 2001—Present: Governments as the Sole Capital Exporters (Capital Outflows Caused by Massive Increases in Foreign Reserves)

In the second phase, which started in 2001, primarily governments were engaged in capital outflows as they increased their foreign reserves. Between 2001 and 2002, net inflows of other investments, portfolio investments, and underground funds contracted or were replaced by small net outflows. Private-sector capital, including foreign direct investment, saw a large net inflow. In 2003 and subsequent years, other investment and portfolio investments reverted to

8 "Credit" in the international credit statistics of the BIS includes cross-border loans and bond purchases by banks. These statistics do not provide separate data for loans and bond purchases. In the case of Asian economies, however, the major part of international credit is believed to be loans.

Fig. 8 Outstanding Balance of Credit to Developing Countries of the Asia Pacific Region

Note) A cross border credit is provided by bank of industrialized economies and credit balance is a foreign-currency for local countries (Based on the year end location of each country. Whole Industrialized Economies consist of main 30 countries.)

Source) BIS "International Banking Statistics"

large inflows, and the private-sector capital had an even greater net inflow.

Examination of the trends of bank loans, which account for a major portion of other investments, based on the BIS data found that the outstanding balance of credit extended by banks of industrialized economies to developing economies of the Asian-Pacific region reversed its declining trend in 2003 and began to increase sharply. In particular, the outstanding credit balance of banks in industrialized economies other than Japan rebounded rapidly and in 2004 surpassed the peak levels that had been reached in the pre-Asian crises era. The outstanding credit balance of Japanese banks also began to increase in 2003. However, the pace of recovery has been very moderate, clearly testifying to Japanese banks' retreat from Asia.

As the result of a massive net inflow of private-sector capital, which started in 2001, foreign reserves grew by a large margin in the second phase. This is attributed to the relationship of "a current account surplus + net inflow of private-sector capital (including statistical errors and

omissions) = an increase in foreign reserves." In addition to an inflow of foreign currencies resulting from of a massive excess of imports (a current account surplus), private-sector capital vigorously flowed in. Against this backdrop, governments devoted themselves to exporting capital in the form of an increase in foreign reserves. A comparison of this with capital flows prior to the Asian crises reveals that private-sector capital flowed in vigorously both before and after the Asian crises. However, an increase in foreign reserves was relatively modest prior to the Asian crises because the current account was in a deficit position. After the crises, foreign reserves grew massively because the current account was in a surplus. During the 2003-2004 period, in particular, private-sector capital inflows grew even greater while a current account surplus continued to expand, resulting in an astonishing increase in foreign reserves.

Underground funds, estimated by statistical errors and omissions figures, were in a net outflow position both before and after the Asian crises but changed to a net inflow in the 2003-2004 period. This was primarily due to a massive

inflow of underground funds to China, which was driven by concerns that China was about to revalue yuan.

(Causes of a Major Increase in Foreign Reserves)

The direct reason for an increase in foreign reserves is the foreign exchange market interventions by governments of Asian economies to buy up foreign currencies (mainly US dollars). Why do they intervene to purchase large quantities of foreign currencies?

Governments of developing economies in general adopt a policy of either a fixed foreign exchange rate or maintaining its foreign exchange rate stably within a narrow range. Such a policy is adhered to by intervening in the foreign exchange market or regulating capital transactions. Asian economies are no exceptions to this practice although some stick to the practice more closely than others do. The foreign exchange rate of the majority of the countries has been stable in the post-Asian crises era (Fig. 9). Main reasons for the governments to maintain such policies include the lack of depth in their foreign exchange markets (= limited transactions), which can cause foreign exchange rates to gyrate if the determination of the rates is left to the forces of supply and demand in the marketplace. Another reason is the difficulties faced by domestic corporations in hedging against foreign exchange risks, due to underdevelopment of their domestic financial markets.

The increase in foreign reserves of Asian economies implies that the foreign exchange rates are maintained by their governments through their foreign currency buying interventions at levels below foreign exchange rates that would be set by supply and demand in the marketplace. When we examine the reasons for such a policy, we must separate China from other economies.

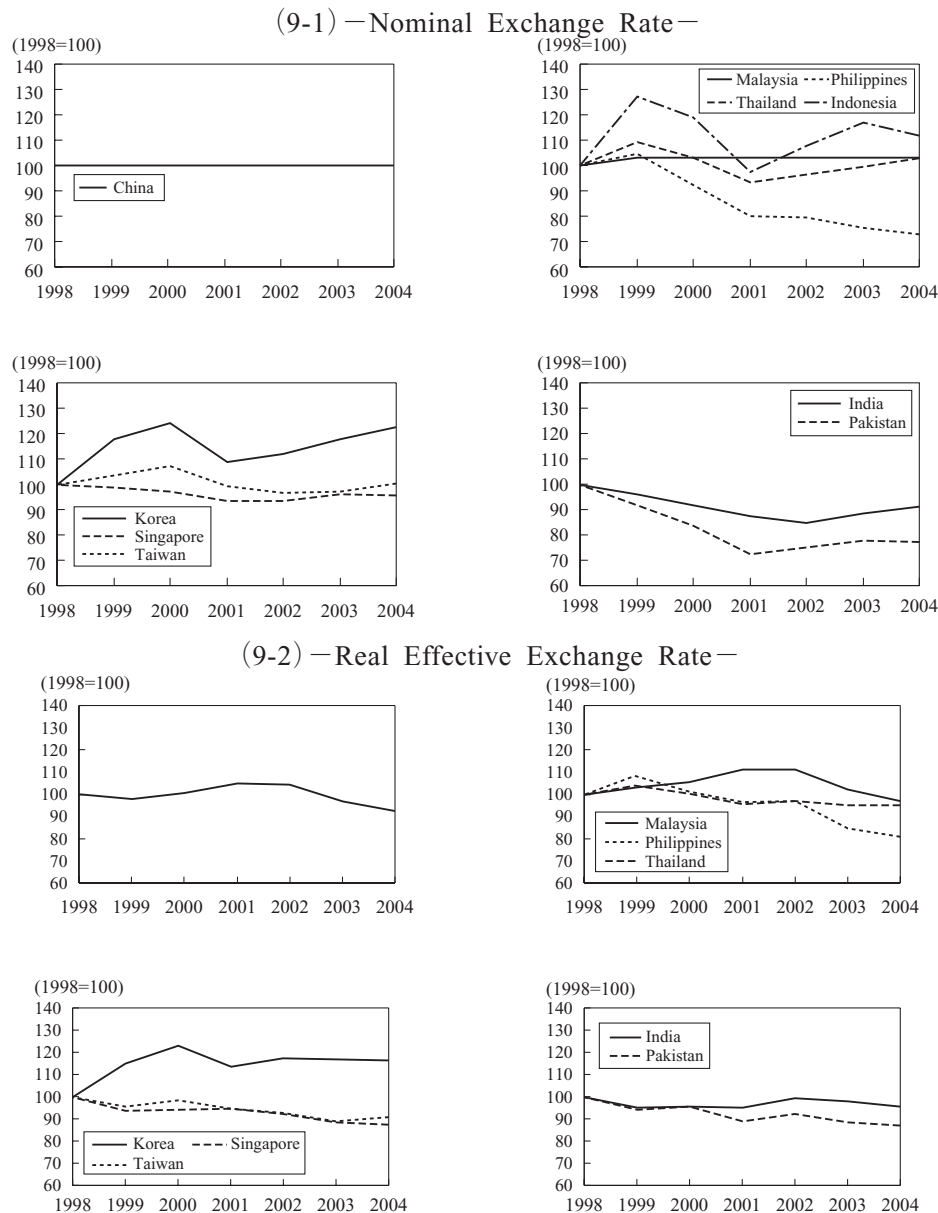
First, two fundamental motives can be considered for all Asian economies with the exception of China. The first motive is to encourage export-

led growth by maintaining a low foreign exchange rate. The second is to ready the country for future international financial crises by holding sizable foreign reserves (self-insurance).

The Asian crises dealt a heavy blow on the ASEAN countries and Korea. In the event of a sudden future outflow of private capital as occurred during the Asian crises, the presence of adequate foreign reserves makes it easier to stabilize the currency of one's own country. Furthermore adequate foreign reserves help prevent international financial crises as they deter capital flight and speculative investment. Immediately after the Asian crises, Feldstein, a prominent US economist, stated that it is important for developing economies to build adequate foreign reserves before a crisis strikes as a protection measures, considering that no international mechanism to prevent international financial crises similar to the Asian crises can be hoped to be established anytime soon (Feldstein 1999). Foreign currency buying interventions fulfill both a policy objective of ensuring export-led growth and a policy objective of self-defense against future international financial crises. The two policy objectives can thus be said to be mutually complementary.

In contrast, China's accumulation of foreign reserves has been pursued in a circumstance that is different from that of other Asian economies (Taniuchi, 2004). For the following reasons, China is not believed to be heavily motivated by a desire to guard against future international financial crises: First, capital flows to and from China are still heavily controlled. This makes it difficult for an international financial crisis to be triggered by a sudden reversal of flows of short-term capital. In fact, China was never directly sucked into the Asian financial crises. Secondly, China is believed to have already accumulated more than adequate foreign reserves in preparation for crises although it is difficult to determine just how big the optimal size of foreign reserves should be, as we will discuss later.

Fig. 9 Exchange Rate After The Asian Crises



Note) Korea uses a nominal effective exchange rate. “Numerical Increase” indicates an appreciation of each currency.
 Sources) IMF “International Financial Statistics”, OECD “Main Economic Indicators”, Bank of Thailand, Reserve Bank of India

Yuan would be quite strong by now had it not been for the Chinese government pouring huge amounts of money to intervene in the foreign exchange market. One of the main basic reasons for the upward pressure on yuan is found in the skewed structure of China’s capital flows. China has substantially relaxed its control on foreign direct investment. As a result, foreign direct investment has been flowing into China at a vigorous pace. In contrast, capital outflows (= external investment) are still regulated rigorously although controls are beginning to be relaxed in

some areas. As a result, capital outflows are extremely limited. In addition to this skewed structure of capital flows, the country’s current account continues to be in a surplus position. Moreover, speculative funds in anticipation of an upward revaluation of the yuan have been flowing in since around 2003. These factors combine to exert heavy upward pressure on the yuan.

China has two basic options if it wants to keep its foreign reserves from rising. The first is to stop intervening in the foreign exchange market

while leaving the existing controls on capital transactions intact. If this is done, yuan is bound to appreciate greatly. Unemployment is then feared to rise as exports decelerate. Furthermore, the severity of employment issues that confront China, and especially those faced by state-owned corporations, which are already under pressure for restructuring, is likely to intensify. The second option for China is to either completely remove or greatly relax regulations on investment abroad to ease the upward pressure on yuan. If this causes massive capital outflows, there is even a possibility that the pressure on yuan will turn downward. However, there is a concern that the fragile domestic banking system, which has such serious governance issues as bad loans and corruption, may not be able to endure massive capital outflows, should they occur.

As a consequence, neither option is an easy one for China to pick. That is why its government intervenes in the market to buy foreign currencies in an attempt to stably maintain its foreign exchange rate. The result is foreign reserves that keep building up.

(What are the Optimal Levels of Foreign Reserves?)

A marked rise in the levels of foreign reserves that are held by Asian economies since the days immediately prior to the Asian crises was discussed previously. Let us now examine what levels of foreign reserves are optimal for individual countries and whether or not the current levels of Asian economies' foreign reserves are excessive in comparison with the optimal levels.

There is a rule of thumb for the optimal levels of foreign reserves for a country, which puts them at an amount approximately equal to three to six months of its imports (Fig. 10). Based on these countries' import figures for goods and services, the current foreign reserves of the Asian economies are either roughly optimal (3.1 months for the Philippines and 5.3 months for Pakistan) or far surpass the optimal levels (15.4 months

for Taiwan, 12.1 months for China, etc.). This rule was created when foreign reserves played the role of a safeguard against volatility of imports and exports during the 1970s and 1980s. Back then, many developing economies adopted a fixed foreign exchange rate system and capital transactions were heavily restricted. However, developing economies relaxed their control on capital transactions in the 1990s. As a result, capital transactions became active. Today, capital transactions are more significant than international trade as a cause of fluctuations in the supply of and demand for foreign currencies.

An alternative to this criterion that is based on the value of imports is one that asks if foreign reserves cover (in other words at least one time) the outstanding balance of short-term debt (payable within a year) of the country. Asian economies' foreign reserves far exceed their short-term debt. China's foreign reserves cover its short-time debt 5.6 times over. Taiwan's ratio is 4.3 and Korea's is 2.6. Among ASEAN members, Malaysia and Thailand have especially high ratios of 5.0 and 3.8 respectively. South Asian ratios are even higher. India's is 20.9 times and Pakistan's is 8.8 times. This criterion, which is based the outstanding balance of short-term debt, also suggests that the current foreign reserves of Asian economies are excessive.

In addition to these traditional rules of thumb, optimal foreign reserve levels are estimated by using quantitative techniques. IMF estimates the optimal size of foreign reserves for individual countries, based on a regression analysis that uses an economic scale (GDP), fragility indicators of capital account transactions (the degree of openness of the financial market, the ratio of the amount of currency to GDP, etc.) and the fragility indicators of current account transactions (the ratio of imports to GDP and export fluctuations) (IMF 2003). According to this analysis, foreign reserves of Asian economies have been excessive since 2002.

However, the levels of foreign reserves that can

Fig. 10 Foreign Reserves of Asian Economies

	2004/1996 (Times)	Cover Ratio of Import (Months)	Short-Term Debts/Foreign Reserves (Times)
China	5.7	12.1	5.6
Korea	5.9	8.9	2.6
Taiwan	2.8	15.4	4.3
Philippines	1.3	3.1	2.2
Indonesia	1.9	8.3	1.5
Thailand	1.3	5.9	3.8
Malaysia	2.5	6.7	5.0
India	6.3	11.0	20.9
Pakistan	17.9	5.3	8.8

Note) Each country of import goods use by the amount of services and goods. A cover ratio of import is on 2004.

(Indonesian import goods use by the amount of import.)

A Short-Term Debts/Foreign Reserves is 2003. (Korea data is 2002.)

Sources) IMF "International Financial Statistics," World Bank "Global Development Finance,"

ADB "Key Indicators," Central Bank of China Taiwan

withstand panic outflows of capital, such as those that were seen during the Asian crises, may be far higher than what are suggested by these traditional rules of thumb or the optimal levels that are based on quantitative analyses. Once an international financial crisis erupts, immense economic and social costs are felt. During the Asian financial crises, the economic growth rate of Thailand fell to negative 10 percent in 1998, and claimed huge casualties in the form of high unemployment and rising bankruptcies. Considering the formidable economic and social costs of financial crises, the optimal levels of foreign reserves as insurance are believed to be substantially higher than the optimal levels that are suggested by traditional indicators.

4. Revival of Private Capital Inflows Since 2003

Since 2003, private-sector capital has been flowing in at a vigorous pace. Portfolio investment reversed course and began to post large net inflows in 2003. In 2004, other investment (bank loans, etc.) followed suit. Foreign direct investment also posted an increase in all major Asian economies in 2004. Underground funds, tracked by statistical errors and omissions figures, were traditionally in a net outflow position. In 2002, however, they posted a net inflow. This was followed by large net inflows in 2003 and 2004. In contrast, inflows

of private-sector capital to Latin American emerging economies never returned. Both the other investment account and the portfolio investment account continue to show relatively large net outflows. The fact that net inflows of private-sector capital have been growing at an accelerated pace while current account surpluses have grown in Asian economies means a massive additional increase in foreign reserves.

Generally speaking, flows of private-sector capital in the form of bank loans to and portfolio investment in Asian and other emerging economies have a tendency to fluctuate widely. Causes for such fluctuations of private-sector capital flows can be broken down to factors attributable to lenders (pull factors) and those that are attributable to borrowers (push factors). The central bank of the United Kingdom analyzed the reasons for large changes in private-sector capital flows to and from emerging economies between the pre-Asian crises era and the post-Asian crises era by separating pull factors from push factors (Bank of England 2004). Pull factors included the emerging economies' economic trends, ratios of their external debt to GDP, and the ratios of their current account balances to GDP. Push factors included industrialized economies' economic trends, interest rates and global stock earnings ratios. According to this analysis, changes in bank loans to emerging

economies were influenced nearly equally by both pull factors and push factors. In contrast, push factors played a more important role in the changes in portfolio investment in emerging economies than pull factors.

What sort of pull factors and push factors were at play in the expansion of private-sector capital inflows to Asian economies in 2003 and subsequent years? As for pull factors, improvement in the growth performance of Asian economies can be mentioned first and foremost. The average rate of growth among all Asian emerging economies bottomed out at 4.5% in 2001 and rebounded to over 6% in 2002. In 2004, it climbed to 7.3%. Current account surpluses that are posted by the Asian economies, as well as the massive build-up of their foreign reserves, mitigate the risks of future financial crises and contribute to the recovery of private-sector capital inflows. As for portfolio investment, stock prices have been rising in the markets of emerging economies since the beginning of 2003, and portfolio investment of emerging economies, including those in Asia, has become active (Fig. 11). Between January 2003 and December 2004, US stock prices (S&P 500) climbed 41.6%. Surpassing even this fast rate of increase, emerging economies' stock market index (MSCI Emerging Markets) surged 86.7%.

One of the push factors was the low interest rate, which resulted from continued monetary relaxation in industrialized economies. This encouraged capital to flow to bank loans to and portfolio investment in Asian economies, where return on investment is relatively high. The United States has gradually raised its policy interest rate in succession since the middle of 2004. However, long-term interest rates have remained low. The low interest rate situation still continues in the United States and other industrialized economies. The spread between the international interest rates of emerging economies and the yields on US Treasury Bonds has shrunk to a very narrow band. Risk appetite of investors in industrialized economies is thus believed to

have been heightened.

II. Foreign Direct Investment in Asia in the Context of Global Trends

1. Sea Changes in Capital Flows to Developing Economies

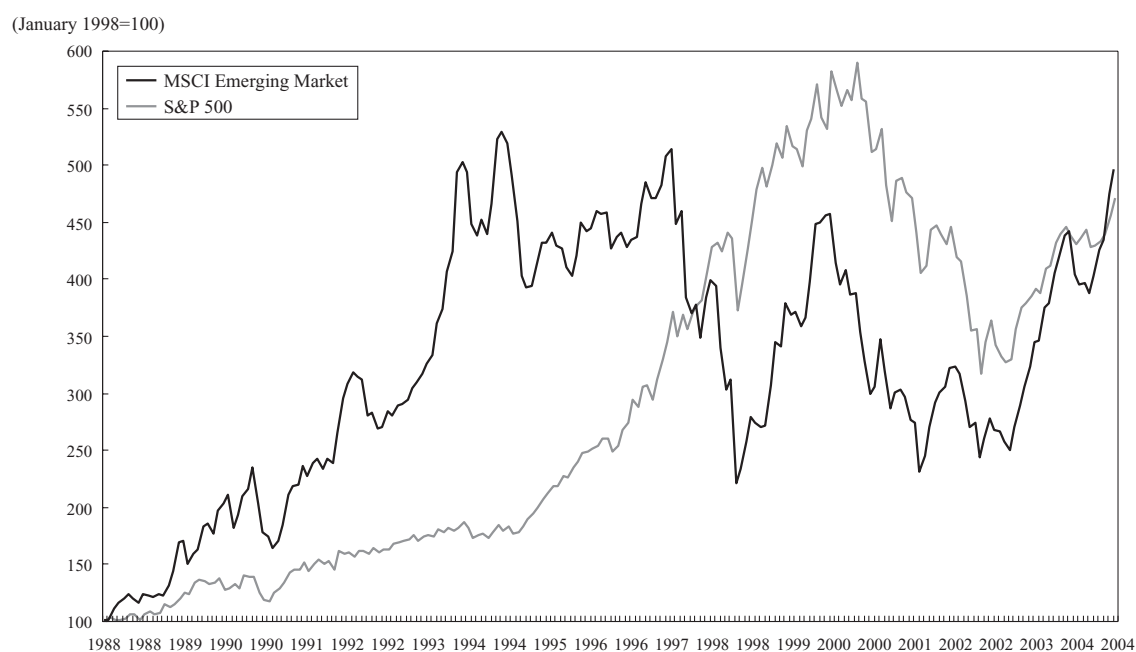
In this section, foreign direct investment in Asia in the context of global trends will be analyzed. In order to understand the significance of foreign direct investment as part of capital inflows to developing economies, the characteristics of long-term changes in capital inflows to developing economies will be first analyzed.

Capital flows to developing economies have undergone dramatic changes since the 1980s. The following three points represent the key changes and characteristics (Fig. 12):

- (i) Private-sector capital inflows have expanded greatly and the relative importance of public funds has decreased;
- (ii) Private-sector capital gyrates wildly with a result that fund flows to developing economies fluctuate widely; and
- (iii) The weight of foreign direct investment in private-sector capital has increased.

(An Expanded Role of Private-Sector Capital)

The most notable characteristic is the expanded role played by private-sector capital. Until the 1980s, public funds, supplied by the governments of industrial economies and international organizations, accounted for a large part of capital inflows to developing economies. Starting in the 1990s, however, the inflows of private-sector capital grew dramatically whereas public fund inflows changed very little. As a consequence, the relative importance of public funds substantially decreased. Public capital represented 57.4% of capital inflows to developing economies in the 1980s. The ratio decreased to 22.1% in the 1990s and fell further down to 14.0% in the early half of the 2000s. It should be noted that private capital flows only to developing economies that either have achieved rapid growth or are expected to grow in the

Fig. 11 Emerging Economies and The US Stock Price Index

Sources) Bloomberg

future. Private capital inflows to such countries as those in Africa, where economies have been stagnant over long periods of time, are still limited. Reliance on public funds continues in these countries.

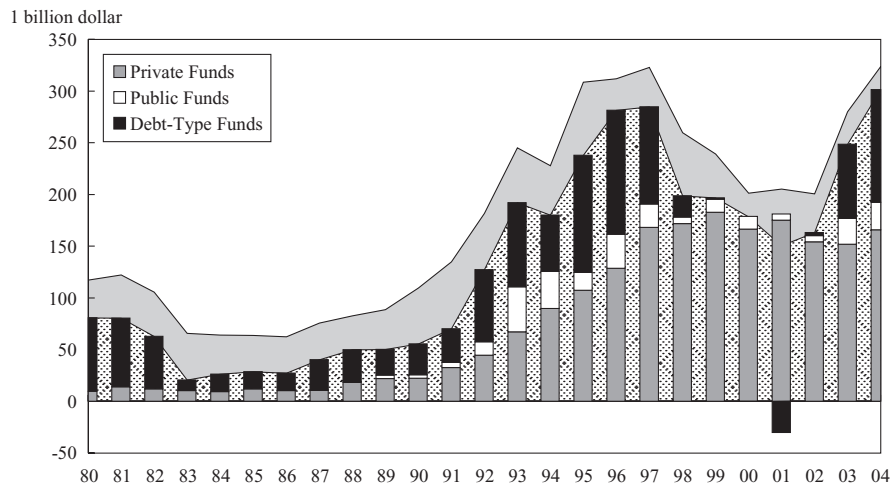
(Changes in Private Capital Greatly Altered Capital Inflows to Developing Economies)

The second characteristic of capital flows to developing economies is that private capital flows to these economies tend to change dramatically, and as a consequence, capital inflows to developing economies as a whole are greatly altered. Impacted by the debt crises of Latin American economies in the 1980s, inflows of private capital to developing economies decreased between the start of the 1980s and the second half of the decade. With the start of the 1990s, private capital to developing economies rapidly expanded. It then saw a massive cutback after the Asian crises of 1997 and 1998. Private capital, however, recovered rapidly in 2003 and consequent years, and in 2004 surpassed the previous peak, which had been reached in the second half of the 1990s. These wide gyrations in private capital swayed the overall capital flows to developing economies (private + public funds)

as public funds fluctuated little. Consequently, protecting the domestic economy from being tossed into chaos by such widely fluctuating capital flows has become a major task for such developing economies as emerging economies, where private fund inflows have become very important.

The bar graph in Fig. 12 breaks down private capital into three modes, namely (i) foreign direct investment, (ii) debt-type funds (bank loans, investment in bonds, etc.) and (iii) portfolio investment, and examines change in their respective flows. Investment in bonds takes up a relatively small portion of private capital in developing economies. Much of debt-type funds are taken up by bank loans. Portfolio investment is not driven by any desire for management control. Acquisition of stocks with an intent to acquire management control, on the other hand, is classified as foreign direct investment⁹.

A look at the three modes of private capital flows reveals that the size of fluctuations of private capital is determined mainly by large fluctuations in debt-type funds and portfolio investment. In contrast, foreign direct investment fluctuates relatively little and a decline after the Asian

Fig. 12 Capital Flows to Developing Economies

Note) Each item of capital flow is a net of non-resident fund (The amount of Inflow – The amount of Outflow).
Does not include a capital flow of resident like a foreign direct investment.
Source) World Bank “Global Debt Finance Online Database”

crises has been moderate. Portfolio investment, which is traded in the market, is known to be affected greatly by investor sentiments. In truth, bank loans also fluctuate widely. Bank loans to developing economies are mainly rollovers of short-term loans (follow-up financing). Once events similar to Asian crises occur, banks stop rolling over their loans and potentially trigger a flood of capital flight.

Portfolio investment in developing economies was essentially non-existent until the 1980s but expanded rapidly in the 1990s. The securities markets of the developing economies whose securities foreign investors bought up were called emerging markets. Its trends attracted the attention of international investors. The term “emerging economies” refers to these economies. Capital inflows in the form of portfolio investment occur only in a small number of economies. The majority of developing economies sees either zero or nearly zero investment in their stocks even today.

Much of foreign direct investment in developing

economies takes place in the form of new factory construction to initiate local manufacture (green field investment). Fluctuations are relatively small because such investment is made under a long-term commitment. Foreign direct investment in industrialized economies, in contrast, is made mostly for M&A that straddle across national borders. (Frequently, both the investor’s and investee’s economies are industrialized.) Substantial fluctuations are frequent unlike foreign direct investment in developing economies. M&A activities were actively carried out among corporations of industrialized economies during the second half of the 1990s, a period of an IT boom. When the IT bubble burst, foreign direct investment in industrialized economies plummeted 67% between 2000 and 2003.

(An Increased Weight of Foreign Direct Investment in Private Capital)

The third characteristic of capital flows to developing economies is an increased weight of foreign direct investment in private capital. Foreign direct investment expanded phenomenally

9 In the international balance of payment statistics, investment in stocks and investment in bonds are classified to be portfolio investments whereas bank loans are classified to be other investment. The IMF manual for the preparation of the international balance of payment table requires stock purchases that represent 10% or more of the outstanding shares to be classified as foreign direct investment instead of portfolio investments.

with the start of the 1990s. It decreased gradually after the Asian crises but accounted for more than half the total capital inflows (private capital + public capital) to developing economies, due to a drastic fall in debt-type funds and portfolio investment. However, debt-type funds and portfolio investment rebounded sharply, starting in 2003.

The characteristics of foreign direct investment trends are analyzed in the following section, based on these characteristics of long-term trends of capital flows to developing economies, and the positioning of foreign direct investment:

2. What Features Stand Out in Global Trends

Foreign direct investment in developing economies has been characterized by (i) a phenomenal increase in the 1990s and subsequent adjustments in the post-Asian crises era, (ii) clustering of investee economies, and (iii) the fact that green field investment (construction of new plants through local subsidiaries, etc.) accounts for the major part of foreign direct investment whereas M&A-related investment accounts for a very small part of foreign direct investment. Foreign direct investment by developing economies (in industrialized economies and other developing economies) was traditionally very small. It should be noted, however, that this type of foreign direct investment has been rapidly expanding since 2003.

(A Phenomenal Increase of Foreign Direct Investment Since the 1990s)

First of all, a look at the long-term changes in foreign direct investment in developing economies reveals that the pace of an increase in foreign direct investment in developing economies quickened in the 1980s. With the start of the 1990s, the increase became phenomenal. Looking at how the amount of investment multiplied every ten years, based on UNCTAD (United Nations Conference on Trade and Development) data, investment is found to have multiplied by 2.4 times in the 1970s, 4.4 times in the 1980s and

by as much as 6.8 times in the 1990s. However, foreign direct investment in developing economies decreased 37% by 2002 from the peak 2000 levels. Since 2003, foreign direct investment has been increasing again.

Fig. 12, presented earlier, was prepared using the World Bank data. The World Bank data show a smaller decrease in foreign direct investment in the early part of the 2000s than the UNCTAD data do (a 17% fall between 1999 and 2003). The UNCTAD data and the World Bank data were collected from different sets of developing economies, which led to some differences between the two. With the exception of the early part of the 2000s, however, no major differences are found. According to the UNCTAD data, the major cause of a relatively large decrease in foreign direct investment in developing economies as a whole was a significant decrease in investment in Hong Kong, which has a large foreign direct investment amount, for reasons that will be discussed later. (Hong Kong is included among developing economies in the UNCTAD data but not in the World Bank data.)

The rapid expansion of foreign direct investment in the 1990s occurred against the backdrop of growing inflows of total private capital, including bank loans and portfolio investments. In its background were several factors: sustained rapid growth of emerging economies, most notably of East Asian economies; relaxation of controls on capital transactions and privatization of state-owned corporations in emerging economies as a whole; and an increase in the number of corporations of industrialized economies that became multinational. Throughout the 1990s, foreign direct investment in Asia greatly increased. Starting in the second half of the 1990s, however, foreign direct investment in Latin America also increased massively, due to such factors as the inflow of foreign capital to take advantage of privatization of state-owned corporations.

After the Asian financial crises erupted in 1997,

inflows of bank loans and portfolio investments contracted rapidly. Foreign direct investment also decreased at the beginning of the 2000s. However, the size of a drop in foreign direct investment was smaller than that of a decrease in bank loans and portfolio investments. The decrease in foreign direct investment was influenced by heightened risks to investors in emerging economies as the result of the Asian crises. According to an analysis by the BIS, foreign direct investment in the “crisis economies” (Thailand, Indonesia, Brazil, etc.) that experienced financial crises as the result of the Asian crises and their ripple effects decreased while foreign direct investment in “non-crisis economies” changed little (BIS 2004). Foreign direct investment has been rebounding since 2003, just as other modes of private capital have. Here again, the recovery of foreign direct investment is moderate in comparison with a rapid recovery of bank loans and portfolio investment.

(Clustering of Foreign Direct Investment in a Small Number of Economies)

The second characteristic of foreign direct investment in developing economies is the fact that only a small number of economies are recipients of such investment. UNCTAD publishes data on the amounts of investment received by the top ten recipient economies, and the ratio of the total investment received by the ten economies to the total investment made in all developing economies in each of the years starting with 1990. The ratio generally hovers between 70% and 80% with some year-to-year fluctuations. When we focus on the top five recipient economies, the ratio is roughly 50% to 60%.

China ranks at the top and accounts for 24.6% of the total, based on averages between 2000 and 2004. In other words, China absorbed one quarter of all foreign direct investment in developing economies. At the start of the 1980s, when China began to shift toward a market economy, foreign direct investment in China amounted to a meager 1%. The leap that China has made since then as

a recipient of foreign direct investment is thus remarkable. Such economies as Hong Kong, Singapore, Mexico and Brazil take up the remaining four places on the top five recipient list, although some changes occur from year to year.

(Small M&A Investment)

The third characteristic is that very little of foreign direct investment in developing economies is M&A investment and that the majority is for green field investment. New investment in the form of foreign direct investment can be broken down roughly to green field investment, which is for construction of new plants through local subsidiaries, etc., and M&A investment, which includes cross-border corporate acquisitions. Data on foreign direct investment include additional investment in and long-term loans to local subsidiaries that were set up in previous years and foreign corporations whose stocks were acquired in the past. In addition, stock acquisitions that amount to 10% or more of the outstanding shares of a corporation are treated for statistical purposes as foreign direct investment with an intent to acquire management control rather than portfolio investment.

UNCTAD publishes foreign direct investment and M&A investment data for each year. Strictly speaking, the M&A investment amounts included in the UNCTAD data cannot be said to represent some of foreign direct investment, due to conceptual differences. However, it does show approximately what size share M&A investment occupies in foreign direct investment. (See note 10 about the conceptual differences.) Among developing economies, M&A investment accounts for roughly 30% while the remaining 70% is made up of new green field investment and additional investment (Fig. 13). In industrialized economies, the M&A investment portion is quite high, representing about 80%. This contrasts sharply with situations in developing economies.

M&A investment fluctuates wildly in part because it has an aspect of financial investment and also

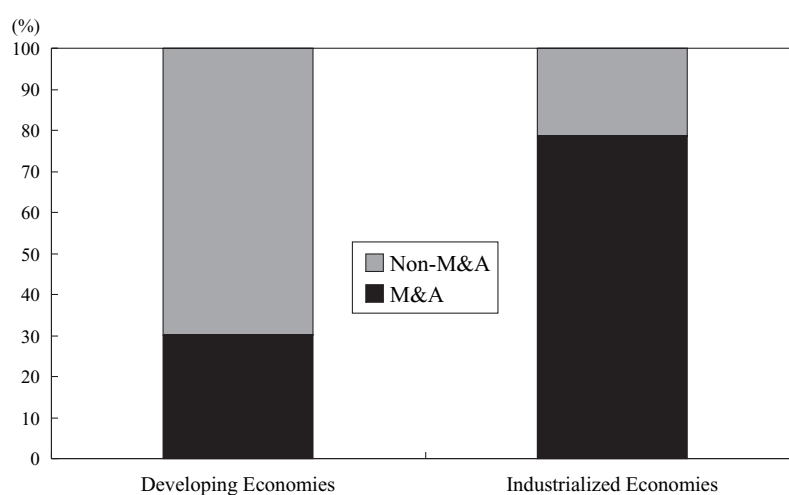
because multinational corporations make M&A investment flexibly in accordance with their international strategies and business conditions. As a result, foreign direct investment in industrialized economies, where M&A investment weighs heavily, has fluctuated wildly. As described earlier, foreign direct investment in industrialized economies decreased as much as 67% between 2000 and 2003. Green field investment fluctuated relatively little because it involves physical investment, such as factory construction, and requires long-term commitment. It is therefore affected little by short-term economic trends. Green field investment weighs heavily in foreign direct investment in developing economies. Thus, its fluctuations are mild compared with similar investment in industrialized economies and portfolio investment. However, foreign direct investment in developing economies too is expected to have wide fluctuations if M&A investment in developing economies increases in the future.

(New Development: A Rapid Expansion of Foreign Direct Investment by Developing Economies)

Up to this point, trends of foreign direct investment in developing economies have been examined. One of the important characteristics of foreign direct investment involving developing economies is a remarkable recent increase in foreign direct investment that is made by developing economies. Foreign direct investment by developing economies in industrialized economies and other developing economies has been growing gradually since the 1990s, albeit at low levels. It, however, took off in 2003. According to World Bank's report (2005), it amounted to US\$5.0 billion in 1990, US\$16.0 billion in 2002 and US\$40.0 billion in 2004.

Compared with the levels of foreign direct investment in developing economies (US\$165.5 billion in 2004), foreign direct investment by developing economies is still small. Nevertheless,

Fig. 13 M&A Investment Portion in Foreign Direct Investment



Note) This figure is average from 1995 to 2004. The definition of developing countries we use is a definition of UNCTAD (172 economies)

Sources) UNCTAD "World Investment Report 2005"

10 Major conceptual differences between FDI and M&A investment in UNCTAD data are as follows: Annual FDI data provide the amount that was invested in the year under review. In contrast, annual M&A investment data provide the amount agreed upon in negotiations during the year under review. This amount does not necessarily get paid during the same year. Furthermore, M&A investment figures include, for example, shares of a corporation operating in country A, whose stock is listed in a US stock exchange market and bought by a US corporation or a corporation in a third country. In such an acquisition, funds do not necessarily flow to country A. However, this latter conceptual difference is not believed to be critical because very few corporations of developing economies have their stocks listed in international stock markets.

the recent surge is worth mentioning. China, in particular, has lately been making aggressive foreign direct investment. Large-scale acquisitions are now frequently reported by global news media. Acquisition of IBM's personal computer operation by Lenovo, an aborted attempt by CNOOC Ltd. to buy out Unocal, a major US oil company, and an agreement by China Petroleum & Chemical Co., on the purchase of PetroKazakhstan, a Canadian oil company, can be mentioned as some examples.

3. Recent Developments of Foreign Direct Investment in Asia

Let us now analyze the trends of foreign direct investment in Asian economies since 1990, based on the overall trends of foreign direct investment in developing economies that were examined in the preceding section (Fig. 14).

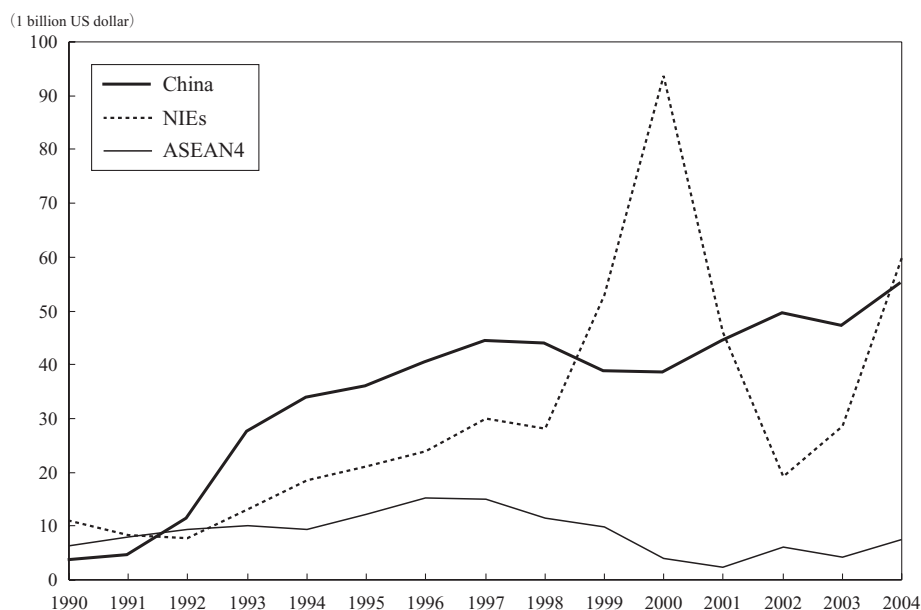
The fact that foreign direct investment in China is of a large scale was discussed earlier. Another important characteristic is its nearly consistent growth since 1990 until the most recent year. This contrasts sharply with trends of foreign direct investment in developing economies in general, and those of investment in other Asian

economies in particular. Foreign direct investment in China decreased marginally for a few years as it felt the ripple effects of the Asian crises but has since increased steadily. The amount that was invested in 2004 was 36.7% greater than that immediately prior to the crises (1996). Moreover, the 2004 amount was approximately 16 times the size of the investment made in 1990.

In comparison, foreign direct investment in the four main ASEAN countries (the Philippines, Indonesia, Thailand, and Malaysia) grew during the 1990s but at a much more moderate pace than in China. After the Asian crises, the amount stayed low. In sharp contrast to China, the main ASEAN countries' foreign direct investment amount in 2004 was 50.2% lower than the amount invested immediately before the Asian crises, and was only slightly above the 1990 levels.

Among the four major ASEAN countries, the drop is especially pronounced in Indonesia. Foreign direct investment in Indonesia posted a large negative figure between 1999 and 2001 in the wake of the Asian crises, and has remained essentially non-existent since 2002. The data for foreign direct investment that were used here

Fig. 14 Direct Investment in Asian Countries



Note) FDI into NIEs rapidly increased at 2000 by reason of a rapid increase into Hong Kong by various of factors.
Sources) IMF "International Financial Statistics", UNCTAD, Each Country Statistics

represent net inflows of direct domestic investment. Negative figures thus indicate withdrawals by foreign investor corporations (such as by sale of local subsidiaries). This is an indication that foreign corporations shun Indonesia because of the country's political instability and widespread corruption.

Foreign direct investment trends of Asian NIEs (Korea, Taiwan, Hong Kong and Singapore) as a whole are heavily influenced by investment trends in Hong Kong, which enjoys high levels of investment. (Hong Kong is frequently counted among the top five investee economies of the world, based on UNCTAD data.) Investment in Hong Kong rose especially sharply in 2000. This was due to such temporary factors as multinational corporations parking their investment funds in Hong Kong in anticipation of China's joining the WTO, and large-scale M&A investment in the telecommunications industry. Foreign direct investment in the other three economies has been generally stagnant since the Asian crises. China is therefore the "only winner" among the major Asian economies at this time.

As for the most recent trends, foreign direct investment was on a gradual upward trend also in Asian economies other than China between 2003 and 2004. Earlier, we examined the fact that inflows of private capital in the form of bank loans and portfolio investments in emerging economies, including Asian economies, began to rebound in 2003. Recovery of foreign direct investment in Asia is believed to be taking place as part of the global restoration of private capital inflows to emerging economies.

Chapter 3: Redressing Global Imbalances

In this chapter, the question of why global imbalances are problems for both the US economy and the world economy will be examined. In addition, discussion will be made of proper policy responses to be taken by the United States and Asian economies to harness the global imbalances.

I. What Are the Problems of Global Imbalances?

The following four points can be raised as the main problems of global imbalances:

- (i) The possibility of a hard landing as the result of a dollar plunge cannot be ruled out if adjustments to the US current account deficit are delayed.
- (ii) Even with gradual adjustments through depreciation of the dollar, which would be a result of a US debt repayment burden and weakening of export industries, the US economy will still be confronted by such problems as a decrease of future disposable income and a rise in frictional unemployment.
- (iii) The ideal situation is for Asian economies that have future growth potential to become capital importers (= economies with a current account surplus). In that regard, global imbalances stand in the way of efficient allocation of global resources.
- (iv) Foreign reserve accumulation by Asian economies has merit in that it can prevent financial crises. On the other hand, it imposes certain costs to Asian economies.

(Possibility of a Hard Landing)

The possibility of a hard landing mentioned in (i) above poses a serious danger not only to the US economy but also to the world economy. For this reason, the US current account problems are a cause of world economic instability.

As we saw earlier, adjustments to reduce the US current account deficit are expected to take place through depreciation of the dollar, which would be initiated by portfolio adjustments by overseas investors. If adjustments of the current account deficit are delayed and a massive current account deficit of the magnitude that is seen today continues for an extended period of time, the ratio of US net external debt to its GDP will further rise. To halt or reverse the rise of this ratio, large-scale import reductions and export increases, i.e., a drastic reduction of the current account deficit or its reversal to a surplus, will

be necessary. Depreciation of the dollar to realize a large adjustment to the current account balance will have to be also substantial.

If this necessary and substantial depreciation of the dollar occurs within a short period of time and the dollar plummets, the US economy will decelerate as the stock market plunges and interest rates soar. Hard landing of the US economy can lead to hard landing of the world economy. This is because of (i) the risks that national economies will stagnate as a decrease in US demand for imports and a rise in the value of various economies' currencies will dampen exports of non-US economies, and (ii) the risks of a global stock market crash, due to today's increasingly close interconnectedness among stock markets of the world, and the likelihood that such a stock market crash in individual economies will cause their national economies to come to a screeching halt.

It should be noted that such a hard landing scenario is not inevitable. First of all, even a required large adjustment to the dollar may exert only a small shock effect on the US and world economies if the adjustment progresses gradually over time. Secondly, depreciation of the dollar has an effect of lowering the net external debt of the United States through "valuation effects of exchange rate adjustments," thereby creating a possibility that no massive current account adjustments or massive dollar depreciation will take place.

Valuation effects of exchange rate adjustments mean the following: In general, external debt of an industrialized economy is mostly denominated in its own currency whereas many of its foreign assets are denominated in foreign countries'

currencies. In the case of the United States, essentially all of its external debt is denominated in its currency because of the dollar's role as the key currency. Consequently, depreciation of the dollar does not affect the size of its external debt, which is valued in the dollar, but the size of its external assets grows when their values are translated to the dollar. The result is a decrease in the US net debt. This effect, where changes in foreign exchange rates alter the valuation of external debt and assets when expressed in the country's' own currency, and change the country's external investment position, is called the valuation effects¹¹. The valuation effects of exchange rate changes have become increasingly important because of growing financial internationalization in the recent years. Particularly since the 1990s, capital flows have become active in both directions -- outflows and inflows. External assets and external debt of countries have grown hand in hand at a phenomenal pace. As a result, exchange rate changes, through their valuation effects, exert a greater impact today on a country's external investment position than they used to.

The United States is believed to be subject to substantial valuation effects as the country has more of its external debt denominated in its own currency than other industrialized economies do. The dollar depreciated between 2002 and 2003. According to an IMF estimate, approximately three quarters of an increase in the net external debt that is attributed to a massive current account deficit during this period were offset by the valuation effects of a softer dollar (IMF 2005). Looking ahead, foreign investors are expected to apply brakes on the growth of their dollar asset holdings at some point, which should trigger depreciation of the dollar. A soft dollar

11 In the case of emerging economies (such as those in Latin America) that have large net external debt, much of which is denominated in currencies of foreign countries (such as the US dollar), depreciation of their currencies causes their net external debt to increase because of valuation effects. This is the opposite of what happens in industrialized economies. For this reason, adjustment will be much more difficult when the current account deficit balloons in these emerging economies. Although depreciation of a country's currency has an effect of reducing its current account deficit and curbing the growth of its net external debt, it also causes its net external debt to increase through valuation effects, forcing a massive currency depreciation and current account adjustments.

will immediately reduce the net debt of the United States. There is therefore a possibility that the ratio of the United States' net external debt to its GDP will stabilize and the dollar depreciation will be less than dramatic even in the absence of a massive current account adjustment.

Adjustments through valuation effects mean "wealth transfer" from the economies that hold US assets to the United States. This is because a softer dollar raises the dollar-denominated value of external assets that are held by the United States while US assets (such as the US government bonds) that are held by Asian economies and Japan, which have financed the US deficit with their current account surpluses, have lower values when translated to their countries' currencies.

Thus, the possibility of a hard landing being averted is not trivial. However, it is dangerous to continue to hold a large current account deficit as the United States does today while counting on a gradual depreciation of the dollar and valuation effects. The possibility that the dollar will plummet as the result of a sudden sway in investors' psychology and a subsequent unanticipated reversal of today's capital inflows cannot be ruled out. The Asian crises revealed the transitory nature of international investors' psychology. For this reason, it is necessary to quickly nip the bud of a risk factor, which is the US current account deficit problem, so as to keep the world economy safe.

(Future Cost to the US Economy)

The second set of issues relates to problems of the US economy itself. The longer will an adjustment to the current account balance be delayed, the more likely it will be that the US economy will have to bear a heavy cost even without a sudden dollar plunge. For one thing, there is a problem associated with the country's debt repayment capability. The United States has been importing capital in an amount equal to its current account deficit every year. However,

the funds that flow in do not increase investment in plant and equipment of US corporations. Rather, they are believed to be providing support for high levels of housing investment and consumption. Resources that are allocated to housing investment and consumption will not help boost the future income of the United States. For this reason, disposable income of Americans, which is income less debt repayment, will be all the more reduced. What this means is that the more delayed a current account adjustment will be, the greater will the future cost of debt repayment. Another problem is that the costs of adjustment to US employment, etc. will be substantial. For the United States to be able to repay its external debt in the future, it will have to expand its exports. However, a delay in making a current account adjustment will result in the withering of the manufacturing and other export-oriented industries in the interim while the dollar remains perched high. When the dollar eventually depreciates to the point where transfer of resources from domestic demand-oriented industries to industries that are oriented toward external demand will occur, adjustment costs of industrial transformation, such as unemployment and corporate bankruptcies, will be high.

(Inefficient Global Resource Allocation)

The third problem is inefficient global resource allocation. Emerging economies, such as those in Asia, are believed to have high latent rates of return on investment and high growth potential. This is due to the fact that (i) their capital-labor ratios are still lower than those of industrialized economies (i.e., there is a shortage of capital equipment), and that (ii) their environment for investment (e.g., legal systems, transparency, and efficient financial systems) is far more improved than that of other low income economies. In contrast, capital-labor ratios of industrialized economies are already high (i.e., there is a surplus of capital equipment). Furthermore, their labor pools are shrinking as their population ages. This will cause their capital-labor ratios to continue to rise and their returns on investment to decline.

However, industrialized economies have well-established investment environments. This is one of the major reasons for the high rates of return on investment in these economies. The United States of America, in particular, has a more favorable investment climate than that of emerging economies or even other industrialized economies, and is believed to be capable of maintaining relatively high rates of return. In the ideal world, it would be desirable for emerging economies, with their high latent rates of return on investment, to develop current account deficits to import capital, and achieve high investment levels and boost their future income. What that would indicate is an improved efficiency of global resource allocation. On the other hand, it would be desirable for the United States to lower the ratio of its current account deficits to its GDP to approximately 2% to 3% and halt an increase in the ratio of its net external indebtedness to its GDP.

(Demerits of Rising Foreign Reserves)

The fourth issue involves demerits of growing foreign reserves. As we examined earlier, one of the important motives behind the build-up of foreign reserves by Asian economies is preparedness against international financial crises, which would be triggered by sudden capital outflows. Raising the size of foreign reserves is but one of the means of averting financial crises. Nonetheless, the fact that abundant foreign reserves reduces the risks of financial crises, if only marginally, is a merit granted by large foreign reserves. In the case of China, foreign currency buying interventions (= an increase in foreign reserves) to keep yuan from appreciating are believed to be worthwhile as a time-buying ploy. This is because China will need time to tackle such structural reforms as correction of its skewed capital flow structure and overcoming the fragility of its domestic financial system.

There are also several demerits of accumulating large foreign reserves.

The first of such demerits is a capital loss that

would have to be incurred when the dollar depreciates in the future. The major part of Asian economies' foreign reserves is managed in such dollar-denominated assets as US government bonds. If an adjustment to the US current account deficit causes the dollar to weaken at some point in the future, Asian governments will run the risk of suffering massive capital losses.

The second demerit is a harmful effect of sterilization. When carrying out foreign currency buying interventions, central banks sell their own countries' currencies and buy foreign currencies in the foreign exchange market. When these interventions are made, domestic supply of currency increases. Sterilization is an operation carried out by a central bank, which sells government bonds and central bank debenture in the market so as to absorb the increased supply of currency and prevent inflation that would result in the absence of a remedial action on the increased currency supply. Sterilization can entail fiscal cost. Foreign currencies that are bought by the central bank are set aside as part of foreign reserves and invested in foreign assets, such as US government bonds. If the investment yields of foreign assets (mainly US interest rates) are lower than the yields on domestic bonds that were sold by the central bank for the sterilization operation, the difference has to be borne by the government. This is the fiscal cost of sterilization. Moreover, there is a risk of inflation when foreign currency interventions balloon to a colossal magnitude and prevents sterilization to be conducted adequately. Excess currency supply then results.

However, a look at China, which has conducted heavy foreign currency interventions, suggests that harmful effects of sterilization so far have not been too serious. According to analyses that have been performed, China's fiscal cost of sterilization has been estimated to be either marginally positive or negative (i.e. profitable) (Goldstein 2004). Risks of accelerating inflation were feared briefly around 2004. However, the Chinese government contained an increase in the

supply of its currency through sterilization and also restricted investment and lending by means of administrative guidance so as to prevent acceleration of the inflation. As a result, inflation was not feared in 2005.

The third demerit is the possibility that inefficient resource allocation will be perpetuated if the foreign exchange rate is kept depressed over an extended period of time by means of foreign currency interventions. Such economic resources as labor and capital equipment end up being allocated too heavily to the trade good segment (the export industry and the import replacement industry).

II. Concerted Efforts to Lessen Global Instability

1. What Should the US Do?

What sort of policy responses is necessary to correct global imbalances? Consideration is given to possible responses by the United States, which holds a massive current account deficit, and those by Asian economies, which finance the deficit.

The United States must correct its saving shortage (Saving < Investment). A reduction of its budget deficit is especially important for the interest of correcting the country's saving shortage. A budget deficit means a negative net government saving (See⁶ mentioned earlier).

The US fiscal balance deteriorated sharply in the first half of the 2000s. The fiscal balance of the Federal government in the 2000 fiscal year had a surplus that equaled to 2.4% of GDP. In the 2004 fiscal year, it had a deficit equaling 3.6% of GDP. The budget thus deteriorated by as much as 6% of GDP in only four years. The main reason was a massive drop in revenue. Over this period, the revenue decreased from the highest level in the post-World War II period (20.8%) to the lowest level (16.8%).

According to an analysis by the Congressional Research Service of the US Library of Congress,

61% of the revenue reduction was due to lower tax revenues and the remaining 39% was attributed to economic factors (Congressional Research Service 2005). Between 2001 and 2004, the United States passed tax reduction bills (Bush tax cuts) every year. These tax cut measures have time limits, which vary from item to item. The longest-lasting measure will expire in 2010. The tax cut package that was introduced in 2001 was especially large, and slashed tax burden by US\$1.3 trillion over a ten-year period. In order to reduce a budget deficit, tax cut measures will have to be either trimmed or rescinded before they expire. On the expenditure side, subsidy to the agricultural industry and expenditure for public medical care (Medicare) must be reduced.

The Bush administration claims that it will meet the goal of halving the budget deficit by the 2009 fiscal year (from the 2004 levels). However, the Bush administration is not considering trimming or rescinding its tax cuts. Instead, it proposed in its 2005 Budget Message to perpetuate the tax cuts that had been effected in the 2001 fiscal year. On the expenditure side, realization of the goal to halve the budget deficit looks extremely difficult in light of numerous factors that would increase expenditure, including the cost of keeping troops in Iraq, that of domestic counter-terrorism measures and Hurricane Katrina-related restoration cost. According to the projections of the US Congressional Budget Office (August 2005), which performs budget analyses independently of the administration so as to provide information to the US Congress for its deliberation, the goal of slashing the budget deficit by half will not be met. Instead the deficit will likely stay flat from the 2005 fiscal year until the 2009 fiscal year.

In order to boost US saving, it is important to raise the household saving rate too. However, effective policy measures do not come by easily. Past incentive policies, including tax breaks for saving, have been ineffective. Some argue that it is necessary to adopt a compulsory saving

program, such as the public pension program used in Singapore (Bergstein 2005).

2. What Should Asia Do?

For the correction of global imbalances, policy responses of Asian economies, which have financed a substantial portion of the growing US current account deficit, are also important. As we analyzed earlier, motives to accumulate foreign reserves are somewhat different for China from other Asian economies.' Nevertheless, the fact that the strengthening the domestic financial system of individual countries will contribute to the correction of global imbalances holds true for all countries.

Asian economies with the exception of China are believed to be motivated by their desire to be on guard against future international financial crises as they build up their foreign reserves through interventions in the foreign exchange market to buy foreign currencies. If the necessity for accumulating foreign reserve were mitigated, foreign currency buying interventions would be less frequently used and the countries' own currencies would appreciate. Appreciation of their currencies would lower their current account surpluses and help correct the global imbalances.

One of the most important lessons learned from the Asian financial crises was that a combination of a fragile domestic financial system and liberalization of short-term capital transactions fosters a risk of triggering an international financial crisis. If domestic financial institutions are weak and lack the ability to conduct stringent reviews of borrowers when capital flows become liberalized and substantial amounts of capital begins to flow in, funds that come from abroad may be loaned carelessly to projects that have a shaky prospect of future recovery. If corporate bankruptcies and failures of financial institutions begin to erupt as a result, foreign capital that has poured in with a bullish outlook about the growth prospect of the country can suddenly start flowing in the opposite direction.

Thus, a sound banking system must be constructed by establishing a system of financial supervision and by strengthening corporate governance. These steps will help prevent the eruption of an international financial crisis. In addition, encouraging the development of a domestic bond market, which has not fully developed in Asian economies, is another important measure of protection to guard against future international financial crises. Once abundant domestic saving begins to be invested in the bond market that is denominated in the local currency, the domestic bond market can be an alternative means of fund procurement for corporations in the event a capital outflow occurs and bank loans decrease. The availability of the bond market will mitigate the negative impact of major changes in capital flows on the domestic economy. In short, the strengthening and developing a domestic financial system will serve as a precaution against international financial crises as well, and have the effect of lowering the necessity to build large foreign reserves.

China's continued build-up of its already massive foreign reserves by means of foreign currency buying interventions has to do more with its skewed capital flow structure than its need to prepare against international financial crises. In order to alleviate today's upward pressure on yuan, it is necessary to liberalize external investment (capital outflows). However, the prerequisite for such a step is a strong domestic banking system in China, which today is fraught with serious governance issues, such as the low capability for lending reviews and corruption, not to mention bad loan problems. Additionally, reform of national corporations will help boost the resistance of the economy against yuan's appreciation. If controls on capital transactions are relaxed in step with progress achieved to strengthen its domestic banking system and reform its national corporations, the yuan rate can become greatly flexible. China's rapid growth is likely to continue. Because rapid growth provides the power to raise the value of the currency over a long time, the flexibility added

to the yuan rate is expected to allow the yuan to appreciate. If the stronger yuan causes China's current account surplus to contract or turn into a deficit, the change will contribute to the correction of global imbalances.

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