International Financial Markets as Viewed from BIS Statistics: Changes in the International Flow of Funds in the 1990s

I. Introduction

The volume of international capital flows has surged since the 1980s, in line with the progress of globalization in financial markets. For example, the gross international capital flows of the G-7 countries[1] as a percentage of GDP remained around 2-3 percent from the 1970s through the mid-1980s, but then briskly accelerated and has recently been above the 10 percent level (Chart 1). It is estimated that, if international risk transfers employing derivatives trading are also included, the volume of international capital flows and risk transfers is growing exponentially. Given these developments, an accurate understanding of the international capital flows and risk transfers is becoming essential to the consideration of each country's macroeconomic and financial system and the stable development of the global economy and financial system. While various types of information are required for this purpose, these may be broadly divided into information on the volume and the pricing of international capital flows and risk transfers. In recent years, there has been a growing recognition of the necessity for comprehensive analyses of international financial markets that cover both categories of information, and the importance of such analyses will continue to increase in the future.

Based on this understanding, the central banks of the major countries and the Bank for International Settlements (BIS) have been compiling statistics on the volume of international financial transactions with the cooperation of the authorities and financial institutions concerned, and have been making further efforts to improve these statistics following the currency and financial crises in emerging economies that began in mid-1997. In addition to cooperating in the compilation of international financial statistics centered around the BIS, the Bank of Japan is releasing these statistics pertaining to Japan on its own initiative.

[1] The G-7 countries are Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

This paper is designed to promote greater understanding of the BIS statistics by presenting an outline of these statistics on international financial markets, examining how the effects of important international financial developments in recent years – including the decline in the credit standing of Japanese banks, the currency and financial crises in emerging economies, and the introduction of the euro – are reflected in these statistics, and indicating the types of analyses that are feasible using these statistics. This paper also briefly outlines the ongoing efforts to improve the BIS statistics.

II. Outline of the BIS Statistics

Table 1 presents an outline of the BIS statistics. Among the statistics on international financial markets presently aggregated by the BIS with the cooperation of the central banks and/or monetary authorities in each reporting country, four particularly important statistics are the Quarterly Locational International Banking Statistics, the Semiannual Consolidated International Banking Statistics, the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, and the Regular Derivatives Market Statistics. The first two statistics focus on the international assets and liabilities recorded on banks' balance sheets (see Box 1), and show the characteristics of capital flows that accompany cross-border transactions – that is, the international flow of funds. The two statistics differ in terms of the categories of financial transactions, the breakdown items that can be used, the coverage of financial institutions, and the reporting frequency. In contrast, the last two statistics contain important information for grasping the risk transfers accompanying international capital flows via changes in off-balance sheet assets and liabilities from derivatives trading. The last two also differ from the first two in that they are not limited to cross-border transactions, but cover domestic transactions as well. In conducting analyses, it is important to use the data from each statistics appropriately, making the necessary distinctions in accordance with the differences among each statistics.

A. Quarterly Locational International Banking Statistics

The Quarterly Locational International Banking Statistics were first compiled at the beginning of the 1970s along with the expansion of the Eurocurrency market. These statistics are designed to clarify changes in the international assets and liabilities of banks located in the 24 countries and regions participating in the statistics[2] on a locational basis (see Box 2),[3] categorized by

[2] The 24 countries and regions are *Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Spain, Sweden, Switzerland, the United Kingdom, the*

counterparty country or region including those that do not participate in these statistics. The transactions are also categorized by banks including items recorded in interoffice accounts and nonbanks, and by currency used.

B. Semiannual Consolidated International Banking Statistics

The Semiannual Consolidated International Banking Statistics were first compiled in the early 1980s following the Latin American debt crisis. These statistics are designed to clarify the credit conditions of the international assets of banks with head offices located in the 18 reporting countries[4] on a consolidated basis, including overseas branches and subsidiaries, categorized by counterparty country or region. Given the historical development of the statistics compilation process, these statistics were originally designed to cover only credits to emerging economies, but the BIS considers collecting and releasing data on credits among the reporting countries as well.[5] The statistics categorize credits by remaining maturity (up to one year, one to two years, and over two years) and by sector of counterparty (banks, public sector, or nonbank private sector).

The Quarterly Locational International Banking Statistics and the Semiannual Consolidated International Banking Statistics both cover the credits recorded on banks' balance sheets. Comparing the two, the former statistics have the following merits: (1) they provide a comprehensive grasp of the international flow of funds via the banking market, including transactions among the reporting countries;[6] (2) they are the only statistics that provide data on the use of each currency in international bank transactions; and (3) because the use of locational basis data is consistent with the balance of payments statistics, analyses can easily be conducted combining these two statistics. On the other hand, the latter statistics have the following merits: (1) they make it possible to grasp the extent of credit risk held by the reporting banks vis-à-vis a specific country or region on a consolidated basis; and (2) they provide more detailed information by remaining maturity and by sector of counterparty.

United States, the Bahamas, Bahrain, the Cayman Islands, Hong Kong, the Netherlands Antilles, and Singapore. (Countries in italics are also reporting countries for the Semiannual Consolidated International Banking Statistics.)

[3] For example, "banks located in Japan" indicates the domestic offices of Japanese banks and the Japanese branches of foreign banks. For certain countries, the statistics also include the international assets and liabilities of securities companies and postal services.

[4] See Footnote 2.

[5] For Japanese figures, the Bank of Japan began compiling the statistics on credits to reporting countries from the end of December 1997, and has begun releasing these statistics.

[6] The Quarterly Locational International Banking Statistics provide data on credits among the reporting countries, which are the major developed countries. In contrast, as noted above, the Semiannual Consolidated International Banking Statistics presently do not aggregate or release data on credits to the reporting countries.

C. Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity

The Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity has been implemented once every three years since 1995, following the expansion of the derivatives market in the late 1980s. It is designed to provide a grasp of the market volume and structure by expanding the prior survey on foreign exchange turnover.[7] The derivatives transactions portion of this survey (hereinafter referred to as the "Derivatives Survey")[8] reports the derivatives turnover on a locational basis and the derivatives outstanding on a consolidated basis for derivatives trading in the world's major markets (43 countries and regions).[9] The survey categorizes the data by type of instrument, currency, counterparty, and maturity. The derivatives outstanding data are released in terms of both notional amount and market value.[10]

D. Regular Derivatives Market Statistics

The semiannual Regular Derivatives Market Statistics were first compiled in June 1998 based on the "Proposals for Improving Global Derivatives Market Statistics (Yoshikuni Report)," to supplement the above-mentioned Derivatives Survey. These statistics are designed to acquire information on the derivatives outstanding held by the world's leading derivatives dealers on a consolidated basis (73 dealers as of December 1998, including 18 Japanese dealers). Specifically, the statistics present the derivatives outstanding data in terms of both notional amount and market value, and are categorized by type of instrument, currency, counterparty, and maturity.[11]

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[7] A survey on foreign exchange turnover alone has been implemented once every three years since 1986. The Bank of Japan's International Department releases the survey results on the foreign exchange turnover portion for Japan. For the results of the most recent survey conducted in 1998, see "Summary of Results of the Tokyo Foreign Exchange Market Turnover Survey (April 1998)" in the December 1998 edition of the *Nippon Ginko Chousa Geppo* (Bank of Japan Monthly Bulletin; only a Japanese version is available).

[8] For the results of the most recent survey on Japan conducted in 1998, see "Volume and Structure of the Japanese Derivatives Market (Aggregate Results of the 1998 Derivatives Survey)" in the January 1999 edition of the *Nippon Ginko Chousa Geppo* (Bank of Japan Monthly Bulletin; only a Japanese version is available) .

[9] The derivatives turnover indicates the total amount (flow) of new contracts concluded within a specified period, and the derivatives outstanding indicates the total amount (stock) of contracts that are still active and have not yet been settled at a specific point in time.

[10] The notional amount is the principal estimated to calculate the cash flows of the derivatives transactions that are actually delivered, and the market value is the value of derivatives transactions assessed on a current market price basis.

[11] The first results of these statistics pertaining to Japan conducted at the end of June 1998 were released by the Bank of Japan in September 1998, and were released on a global basis by the BIS in December 1998. The second results pertaining to Japan conducted at the end of December 1998 were released by the Bank of Japan in February 1999.

The Derivatives Survey and the Regular Derivatives Market Statistics are both surveys of derivatives transactions. Comparing the two, the former has the following merits: (1) it has wide-ranging coverage; and (2) it presents figures not only on derivatives outstanding, but also on derivatives turnover. On the other hand, the latter has the merit of providing data on the conditions of derivatives market more frequently (every six months) by limiting the reporting institutions to the primary dealers.[12]

III. Exemplary Analyses Using BIS Statistics

This section introduces analyses regarding the influence of recent important international financial developments on the international flow of funds, primarily using the Quarterly Locational International Banking Statistics and the Semiannual Consolidated International Banking Statistics, as concrete examples of the types of analyses that can be conducted using the BIS statistics.

A. Changes in the International Flow of Funds of Japanese Banks

1. Decline in the share of Japanese banks in the international banking market

The international assets of Japanese banks on a gross basis increased rapidly during the 1980s. These assets were gradually reduced from 1990 due to the collapse of the "bubble" economy in Japan and the accompanying increase in the banks' nonperforming assets. To better understand this development, the share of Japanese banks' international assets among the total for all reporting banks is analyzed on a nationality basis[13] using the Quarterly Locational International Banking Statistics (Chart 2). This share declined rapidly from 36 percent at the end of March 1990 to 28 percent at the end of December 1992, remained at essentially the same level until mid-1995, and then declined rapidly again from the

[12] In Japan, the Regular Derivatives Market Statistics cover about 90 percent of the notional amount outstanding and the gross positive value outstanding of the Derivatives Survey.

[13] As noted above, the Quarterly Locational International Banking Statistics are fundamentally prepared on a locational basis, but these statistics can also be rearranged on a nationality basis following the same consolidated basis approach used for the Semiannual Consolidated International Banking Statistics classified by the country where each bank's head office is located. This particular analysis utilizes the figures aggregated on this nationality basis. It should be noted that, up until the end of September 1996, the nationality basis figures for the Quarterly Locational International Banking Statistics only covered banks located in 18 countries among the 24 countries and regions participating in the statistics (excluding the six offshore centers) in the consolidated figures, and thereafter these figures covered banks located in 19 countries and regions with the addition of Hong Kong. The nationality basis statistics are discontinuous due to the addition of banks located in Hong Kong to the consolidated figures at the end of December 1996. In particular, the figures for Japanese banks indicate a sudden expansion of assets at that time. This is because the assets of the Hong Kong branches of Japanese banks, which provide large amounts of loans to nonbanks located in Japan, became recognized as international assets of Japanese banks.

second half of 1997 to 17 percent at the end of September 1998. In contrast, the shares of European banks, notably German and Swiss banks, increased along with the active provision of credits to emerging economies as well as the active transactions within Europe preceding the introduction of the euro. In particular, the share of German banks has increased almost continuously since 1990, from 8 percent at the end of March 1990 to 17 percent at the end of September 1998, and is now comparable to the share of Japanese banks.

Breaking down Japanese banks' international assets on a gross basis by sector of counterparty (Chart 3 [1]) – namely, banks and nonbanks – during the first period of rapid decline in their international share from 1990 to 1992, the decline mostly took place in the assets for banks, including interbank dealings, while the decline in the assets for nonbanks was minimal. In contrast, during the second decline in their international share from mid-1995, while the assets for banks consistently declined, the assets for nonbanks, including lending to customers, also declined substantially from the end of 1997.

When interpreting this development, however, it should be noted that Japanese banks' international assets include a substantial amount of assets for the Japanese domestic market. Specifically, the net assets for nonbanks (as of the end of September 1998, this was US$644.0 billion in assets minus US$164.8 billion in liabilities for a net figure of US$479.2 billion; Chart 3 [2]) substantially exceed the net liabilities for banks (at the same month-end, this was US$465.9 billion in liabilities minus US$369.7 billion in assets for a net figure of US$96.2 billion). This implies that Japanese banks procured a substantial amount of funds from the domestic yen market for financing the international assets, and recycled a large portion of these funds into Japan in the form of "euro-yen impact loans," which are yen-denominated loans from Japanese banks' overseas branches to nonbanks in Japan.[14] Accordingly, the recent large decline in Japanese banks' international assets for nonbanks does not necessarily indicate a decline in lending to nonbanks located outside Japan, and may be largely attributed to a decline in euro-yen impact loans to nonbanks located in Japan.

[14] Under the nationality basis figures for the Quarterly Locational International Banking Statistics, euro-yen impact loans financed by domestic branches of Japanese banks appear only as an increase in the Japanese banks' international assets. This results from the following statistical practices: (1) the procurement of yen funds by the domestic offices of Japanese banks is not recorded as an increase in the banks' international liabilities because it is considered as a "domestic transaction denominated in local currency"; (2) the transfer of yen funds from the domestic offices to the overseas branches of Japanese banks is considered as an "international transaction," so this is recorded as an increase in the international assets of the banks' domestic offices and an increase in the international liabilities of the banks' overseas branches (ultimately, these figures are net out); and (3) euro-yen impact loans by the overseas branches of Japanese banks are considered as "international transactions" and are recorded as an increase in the Japanese banks' international assets (see Box 1).

2. Increase in the funds outflow by banks located in Japan[15] during the period of heightened anxiety regarding the Japanese financial system

As noted above, from the second half of 1997 amid the growing anxiety regarding the Japanese financial system, Japanese banks made positive efforts to reduce their international assets. In this process, as Japanese banks encountered difficulties in procuring foreign currency, the funds outflow from the domestic offices of Japanese banks to their overseas branches increased greatly to help cover the funds demand at their overseas branches.

To better understand this development, the international flow of funds of banks located in Japan is analyzed on a locational basis using the Quarterly Locational International Banking Statistics (see Box 3).[16] In the fourth quarter of 1997, when large financial institutions went bankrupt in Japan, the net funds outflow increased suddenly to US$68.1 billion. Breaking this down by sector of counterparty into banks and nonbanks (Chart 4 [1]), along with the decline in corporate lending by Japanese banks, the net funds outflow to nonbanks was just US$14.0 billion, while that to banks was a large US$82.1 billion.

By currency used (Chart 4 [2]), the yen-denominated outflow (US$35.2 billion) and the foreign currency-denominated outflow (US$32.9 billion) were both large in the same quarter, while the yen-denominated figure notably increased compared with previous periods. By region (Chart 4 [3]), the funds outflow to North America and Europe – areas where Japanese banks conduct many transactions with foreign banks – accounted for over half of the total. This indicates that, as Japanese banks' branches located in North America and Europe experienced difficulties in directly procuring foreign currency, they obtained the funds through foreign exchange swap trading[17] with foreign banks, using yen-denominated funds transferred from their domestic offices.[18]

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[15] "Banks located in Japan" includes the domestic offices of Japanese banks as well as the Japanese branches of foreign banks.

[16] This analysis employs figures for banks located in Japan after adjustment for foreign exchange fluctuation factors. The breakdowns by sector of counterparty (banks and nonbanks) and by the currency used adopt the figures released by the BIS which are adjusted for foreign exchange fluctuation factors. On the other hand, the figures by region are estimated independently by the Bank of Japan because the BIS does not release figures adjusted for foreign exchange fluctuation factors for each reporting country. The method for estimating these figures is as follows: (1) it is assumed that only yen-denominated transactions are influenced by exchange rate fluctuations; (2) the difference between the yen-denominated transaction amount for the present period ($period_t$) using the yen-U.S. dollar exchange rate from the previous period ($period_{t-1}$) and the yen-denominated transaction amount for the previous period ($period_{t-1}$) is calculated; and (3) the difference in the amounts of foreign currency-denominated transactions between the present period and the previous period (based on the assumption in [1], this is not influenced by fluctuations in foreign exchange rates) is added to the amount calculated in (2).

[17] According to the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity on a global basis, the daily turnover of yen-U.S. dollar foreign exchange swap trades and currency options during April 1998 was US$36.0 billion on a notional amount basis, showing a large increase from the previous survey

Looking at the subsequent developments in the first quarter of 1998, the trend reversed from the fourth quarter of 1997 as there was a large funds inflow of US$58.1 billion to Japan. This was apparently because (1) the financing activities of foreign banks turned active in the interbank market, due to the close of their fiscal year at the end of December, which somewhat improved the environment for the overseas branches of Japanese banks for procuring foreign currency; and (2) the pressure to procure foreign currency for Japanese banks' overseas branches decreased, due to the further reduction of their overseas branches' assets in preparation for the close of their fiscal year at the end of March, and the funds outflow to their overseas branches declined. This flow of funds from Japanese banks' overseas branches to their domestic offices also occurred in the third quarter of 1998 prior to the close of their fiscal half-year at the end of September. But during the fourth quarter of calendar 1998, the funds outflow from the domestic offices of Japanese banks to their overseas branches increased once again.

Thus, during the period of heightened anxiety regarding the Japanese financial system since the second half of 1997, the changes in the international flow of funds of banks located in Japan have been influenced by two opposing factors: the funds inflow due to the decrease in Japanese banks' international assets, and the funds outflow due to the transfer of funds from Japanese banks' domestic offices to their overseas branches.

B. The Outbreak of the Currency Crisis and Changes in the International Flow of Funds of Emerging Economies

1. Increase in credits to emerging economies, especially in Asia

The rapid increase in credits to emerging economies[19] was one distinctive characteristic of international financial markets during the 1990s. To better understand this development, the amounts outstanding of credits provided by banks of the reporting countries to the emerging economies[20] are analyzed using the

(US$14.0 billion in April 1995). One of the factors for this increase seemed to be the active foreign exchange swap trading by Japanese banks to procure foreign currency.

[18] Conversely, the foreign banks that obtained yen-denominated funds overseas via foreign exchange swap trading with Japanese banks apparently returned a portion of these funds to Japan through their interoffice accounts and invested it in Japanese treasury bills, and so on. As a result, this inflow of funds from foreign banks offset a portion of the funds outflow from the domestic offices of Japanese banks.

[19] "Emerging economies" refers to those located in three regions: Asia (excluding Japan), Latin America, and Eastern Europe.

[20] It should be noted that the national classification of borrowers in the Semiannual Consolidated International Banking Statistics is on a locational basis. For example, the credits from a Japanese bank to the Bangkok branch of a U.S. bank are recorded as credits to Thailand, not the United States. Thus, strictly speaking, some cases do not accurately reflect the risk originated by the borrower's location.

Semiannual Consolidated International Banking Statistics (Chart 5 [1]). The statistics show a nearly continuous increase in credits to emerging economies from 1990. In fact, the rate of this increase accelerated from the mid-1990s, surpassing that of credits to the domestic private sector in many reporting countries. In the aftermath of the Asian currency crisis that began in mid-1997, however, the overall amounts outstanding of credits to the emerging economies have recently turned to a decline.

Looking at the annual growth rate by region (Chart 5 [2]), there was a particularly conspicuous increase in the credits to Asia,[21] with a high annual growth rate of 19 percent from 1990 to 1996, just prior to the outbreak of the crisis, and 27 percent from 1994 to 1996. As a result, the share of Asia in the amounts outstanding of credits provided to all emerging economies increased from 32 percent at the end of June 1990 to a historical peak of 52 percent at the end of June 1996. However, as the Asian crisis that began in Thailand spread to neighbor countries including Indonesia and South Korea, the amounts outstanding of credits to Asia declined rapidly from US$391.2 billion at the end of June 1997 to US$324.8 billion at the end of June 1998, and the share of Asia consequently declined substantially from 51 percent to 43 percent during the same period.

Meanwhile, Latin America posted its highest share (48 percent) at the end of June 1990, but the growth rate in the amounts outstanding of credits remained at a low level from 1990 until just before the outbreak of the Asian crisis, the annual growth rate from 1990 through 1996 was 5 percent, due to the lasting effects of its debt crisis during the 1980s, and the share of Latin America declined to 33 percent as of the end of June 1997. However, the growth rate has increased since the outbreak of the Asian crisis, as some of the funds withdrawn from Asia have been transferred to Latin America.

The amounts outstanding of credits to Eastern Europe temporarily increased in the early 1990s following the unification of Germany, and also increased in the latter half of the 1990s mostly from the expansion of credits to Russia. As a result, the annual growth rate in the amounts outstanding of credits to Eastern Europe since 1990 has been 7 percent, slightly surpassing that to Latin America, which was 6 percent during the same period.

This expansion of credits to emerging economies, primarily in Asia, reflected the surging expectations of high economic growth. In fact, there is a strong

[21] Under BIS statistics, Hong Kong and Singapore are classified as offshore centers, and are not included in the Asia category.

correlation between the real GDP growth rates in emerging economies and the growth rates of the amounts outstanding of credits of all reporting banks to these countries and regions (Chart 6). There is a synergistic effect between the increase in international credits and the economic growth in the regions concerned, and it is difficult to judge beforehand the extent to which the increase in international credits reflected sustainable growth backed by strong economic fundamentals.

2. Increase in the share of European banks' credits to emerging economies

Examining the credits of banks of each reporting country[22] to emerging economies by region (Chart 7), Japanese banks allocated a high percentage of their total credits to Asia and the U.S. banks did so to Latin America, respectively, reflecting the close relations of their real economies. In contrast, the credits by European banks[23] did not show any such pattern.[24] As for the banks' shares of the total credits provided to each region, the share of credits of Japanese banks to all three regions (Asia, Latin America, and Eastern Europe) declined throughout the 1990s, while the share of European banks increased rapidly from the mid-1990s. As of the end of June 1998, European banks accounted for the highest share of credits to all three regions.[25]

As a background to this increase in the credits to emerging economies by European banks, amid expectations of intensifying competition among financial institutions within Europe prior to the introduction of the euro, it seemed that the

[22] The comparison is limited to banks whose head offices are located in Japan, the United States, and Europe. The amounts outstanding of credits provided by these banks to Asia, Latin America, and Eastern Europe accounts for over 80 percent of the total credits provided by all reporting banks to each of these regions.

[23] Banks with their head offices located in the following 14 countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Spain, Sweden, and the United Kingdom.

[24] As of the end of June 1998, the regional breakdown of the credits provided to emerging economies by Japanese, U.S., and European banks was as follows.

Percent

	Credits to Asia	Credits to Latin America	Credits to Eastern Europe	Total
Japanese banks	84	13	3	100
U.S. banks	23	65	12	100
European banks	37	40	23	100

[25] As of the end of June 1998, the shares of Japanese, U.S., and European banks in the total credits to each region were as follows.

Percent

	Japanese banks	U.S. banks	European banks	Total
Credits to Asia	36	8	56	100
Credits to Latin America	6	26	68	100
Credits to Eastern Europe	4	11	85	100

European banks took a positive stance toward the provision of credits as a means of seeking new profit opportunities. Nevertheless, all major European countries' banks did not increase their credits to emerging economies across the board. Rather, there were various gradations among European banks in their stance toward the provision of credits to emerging economies. For example, looking at their credits to Asia, which posted the highest growth rate among all emerging regions (Chart 8), from the mid-1990s, French and German banks posted high growth rates in their credits to Asia amid the flat growth in their credits to private sector in their own countries, reflecting the domestic economic stagnation. In contrast, during the same period, the provision of credits to Asia by the U.K. banks was flat amid favorable growth in the credits to domestic private sector, reflecting the firm undertone of the domestic economic fundamentals.[26]

3. Composition of the credits to Asia and outbreak of the currency crisis

During the Asian crisis, amid the worsening of the economic fundamentals in Thailand and other Asian countries, the deterioration of the Asian economies was perceived among market participants, triggering the plunges in the values of the local currencies, and a rapid and massive outflow of international funds. The exceptionally fast speed at which international funds flowed out of Asia was largely because the credits provided to Asia included a very high proportion of short-term loans. Examining this in comparison with the composition of credits provided to Latin America and Eastern Europe (Chart 9), the percentage of short-term loans (with a remaining maturity of up to one year) in total credits gradually increased in all three regions from 1990, but it was at a comparatively high level in Asia just before the outbreak of the crisis at over 60 percent, versus just over 50 percent for Latin America and around 40 percent for Eastern Europe. In particular, in both Thailand, where the crisis first appeared, and South Korea, where the capital exodus was fastest, the proportion of short-term loans was over 70 percent – a conspicuously high level even among the Asian economies.

The difference in the counterparties may be cited as one reason for this high proportion of short-term loans in the credits to Asia. A high proportion of the credits to Latin America were loans to the public sector, mainly medium- or long-term loans. In contrast, most of the credits to Asia were loans to private banks and nonbanks, which tended to be short-term loans. Consequently, the percentage of

[26] The provision of credits to Asia decelerated in 1997 due to the increasingly cautious stance by each country's banks following the outbreak of the Asian crisis.

short-term loans in the total credits to Asia was relatively high.[27] For example, in South Korea, because the activities of foreign financial institutions within South Korea were severely restricted, the majority of loans to South Korea by the banks of the developed countries were extended not directly to companies but rather mostly to local banks. Because of this, when the deterioration of the South Korean economy was perceived, the banks of the developed countries turned to collecting their loans to local banks, which resulted in an extremely harsh drop of 22 percent in the amounts outstanding of credits to South Korea over the half-year from the end of December 1997 to the end of June 1998.[28] In the case of Thailand, where loans to the nonbank private sector accounted for a high percentage of all loans, the banks of the developed countries set short repayment periods to minimize their credit risk, and the loans included a large amount of trade credits, which generally have a short maturity. Since there was a high proportion of short-term loans in the total credits, the withdrawal of funds by the banks of the developed countries rapidly increased as soon as the crisis occurred. The shortened repayment maturity in loans to emerging economies themselves were not the cause of the currency and financial crises; however, this apparently increases the risk that crises may occur in the countries concerned when the market loses its belief in the credibility of the economic fundamentals of the borrowing countries. In this regard, the Semiannual Consolidated International Banking Statistics offer useful information for managing country risk in that they provide a breakdown of the composition of lending to emerging economies by maturity.

4. Flow of funds through the banking market and the securities market

While the amounts outstanding of international securities[29] issued in emerging economies are less than half the amount of bank borrowings, the importance of the flow of funds via the securities market has been increasing along with the further progress of securitization, primarily in the developed countries, in recent years. Using the Quarterly Locational International Banking Statistics along with separate securities statistics aggregated by the BIS, it is possible to divide the flow of funds in emerging economies into that via the banking market

[27] As of the end of June 1998, loans to the public sector accounted for 9 percent of all amounts outstanding of credits to Asia and 20 percent of those to Latin America. Thus, the share of lending to the public sector in Asia was less than half that in Latin America.

[28] Looking at the shares by sector of counterparty in total loans of all reporting banks to South Korea, at the end of June 1997, just prior to the Asian crisis, the share of loans to banks accounted for 65 percent, while that to the nonbank private sector accounted for 30 percent. By the end of June 1998, the share of loans to banks had declined considerably to 57 percent, while that to the nonbank private sector had risen to 36 percent.

[29] "International securities" refers to bonds issued overseas and bonds and other instruments denominated in foreign currencies, but excludes foreign stocks.

and that via the securities market (Chart 10).[30] This categorization shows that in the early 1990s the flow of funds via the securities market was on such a small scale that it could essentially be ignored compared with that via the banking market, but the inflow of funds via the securities market began to increase from around 1994, particularly in Latin America. Subsequently, during the Mexican crisis of 1995, there was a brief, small withdrawal of funds via the securities market in emerging economies; however, from the time the Mexican crisis was resolved until immediately prior to the outbreak of the Asian crisis, the total inflow of funds via the securities market, primarily to Latin America and Asia, grew to surpass that via the banking market.

On the other hand, looking at the changes in the flow of funds to Asia following the outbreak of the Asian crisis, there are distinct differences between the flow of funds via the banking market and that via the securities market. In the banking market, there was a large outflow of funds following the crisis, and while the volume has contracted, a substantial amount of funds is still flowing out of Asia. In contrast, to date, the securities market has not recorded the type of large-scale outflow seen in the banking market following the crisis. This difference may primarily be attributed to the short-term nature of the reporting banks' assets related to the Asian economies.

5. Off-balance sheet credits developments

In recent years, as derivatives trading has rapidly become very active, off-balance sheet credits (see Box 4) from financial institutions in the developed countries to Asia have reached a volume so large that they can no longer be ignored. At present, however, the only major country that releases figures on the amount of the off-balance sheet credits of its banks by counterparty country or region is the United States. Thus, it is difficult to grasp the overall extent to which off-balance

[30] The analysis utilizes the figures in the Quarterly Locational International Banking Statistics for the flow of funds via the banking market and the figures in the "securities market" section of the *BIS Quarterly Review* "International Banking and Financial Developments" for the flow of funds via the securities market. Accordingly, for the flow of funds via the securities market, the criterion defining "international transactions" is that the bonds or other instruments are categorized as "international securities," regardless of whether the investors are residents or nonresidents. Thus, for example, when Japanese investors purchase U.S. government bonds, this is considered as an investment in domestic U.S. bonds and is not recorded as an "international transaction."

In contrast, for the flow of funds via the banking market, all loans to U.S. entities by banks located outside the United States are recognized as "international transactions." In this respect, the definition of "international transactions" is narrower in the securities market than in the banking market. Additionally, for the flow of funds via the securities market, the value of newly issued bonds is calculated as the net issuance value after subtracting the redemption value. Moreover, it should be noted that the Quarterly Locational International Banking Statistics include bank investment and fund-raising via securities, and thus, when calculating the flow of funds using these statistics, there may be some overlap between the flow of funds via the banking market and that via the securities market.

sheet credits played a role in the Asian crisis. Using the data from U.S. banks, the developments in their off-balance sheet credits to Asia may be compared with the developments in their on-balance sheet credits (Chart 11). The U.S. banks' on-balance sheet credits to Asia had already turned to a decline in the third quarter of 1997, just as the crisis was emerging in Thailand, but their off-balance sheet credits continued to expand through the end of 1997 and only turned to a decline from 1998. (See Box 5 for the characteristics of the off-balance sheet credits of U.S. banks overall.) While it is impossible to confirm statistically the reasons why the decline in the off-balance sheet credits took place after that in the on-balance sheet credits, the following hypothetical reasons may be considered. (1) Amid the rapid decline in the value of Asian currencies, the market positions that the U.S. banks were holding prior to the crisis (futures contracts to purchase U.S. dollars and sell local currencies) rapidly increased in market value.[31] (2) As the crisis spread, Asian banks actively raised foreign currency through foreign exchange swap trading and other transactions with U.S. banks,[32] because of the increased difficulties in procuring the funds on the interbank deposit market.

C. Changes in the Flow of Funds Accompanying the Introduction of the Euro

1. Increase in international capital transactions in Europe

In Europe, a unified currency (the euro) was introduced on January 1, 1999. It is too early to make a comprehensive evaluation of the long-term effects on international financial markets from the introduction of the euro. Nevertheless, various changes were already apparent from around 1997, prior to the actual launch of the new currency.

The international flow of funds in the 11 European countries[33] that introduced the euro (hereinafter referred to as the "euro zone") may be examined using the "financial account" figures of the balance of payments statistics (see Chart 12 and Box 6). The net balance of the financial account has remained essentially at the same level since 1990, so at a glance it appears as if no major changes have occurred. An examination of the financial assets and liabilities separately,

[31] For example, let us assume that before the outbreak of the Asian crisis, a U.S. bank held a futures option to buy U.S. dollars at an exchange rate of 26 baht per U.S. dollar. When the baht depreciated after the outbreak of the crisis and the exchange rate reached 47 baht per U.S. dollar, the value of the U.S. bank's market position increased by 21 baht per U.S. dollar (equivalent to 40 cents).

[32] However, the fact that Asian banks moved to active fund-raising does not necessarily result in an increase in the off-balance sheet credits of U.S. banks. In addition to the increased fund-raising, this assumes that the value of the underlying assets changed in a manner resulting in a positive market value for the U.S. banks. (See Box 4.)

[33] The 11 countries are Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain.

however, shows that there has been a large increase in both amounts since 1997,[34] and the banking[35] and securities markets have been active in both types of transactions.

2. Characteristics of the flow of funds via the banking market

Looking at the flow of funds via the banking market using the Quarterly Locational International Banking Statistics on a global basis, the gross amounts outstanding of external assets and liabilities vis-à-vis the euro zone of all reporting banks have both been increasing in recent years,[36] and the net inflow of funds to the euro zone has rapidly increased from US$73.5 billion in 1996 to US$222.1 billion in 1997 and US$256.9 billion in the first three quarters of 1998. This increase may be attributed to both transactions with countries outside the euro zone and transactions among the major countries within the euro zone.

a. Increase in transactions with countries outside the euro zone

The developments in transactions between the euro zone and countries outside the euro zone may be examined using the figures on external assets and liabilities by country, for banks located in Japan, the United States, and the United Kingdom, which are publicly released (Chart 13).[37] First, the net flow of funds

[34] The figures of financial assets and liabilities for the major countries in the euro zone are a simple sum of each country's data, so cross-border transactions among the major countries within the euro zone are counted twice. For example, portfolio investment from Germany to France is counted as both portfolio investment assets of Germany and portfolio investment liabilities of France. Thus, an increase in these types of transactions within the euro zone may have contributed to the increase in both financial assets and liabilities of the euro zone.

[35] The "other investment" category in the "financial account" mostly reflects transactions in the banking market.

[36] Cross-border interbank transactions within the euro zone are double-counted in the figures for the amounts outstanding of assets and liabilities vis-à-vis the euro zone. For example, a loan from a bank located in Germany to a bank in France is recorded both in the assets of the bank in Germany vis-à-vis the euro zone and the liabilities of the bank in France vis-à-vis the euro zone. Thus, an increase in these types of transactions within the euro zone may have contributed to an increase in the amounts outstanding of both assets and liabilities vis-à-vis the euro zone.

[37] The gross figures for the amounts outstanding of external assets and liabilities vis-à-vis the euro zone and the net figures for the flow of funds to the euro zone are as follows.

US$ billions

		CY 1996	1997	1998
Japan	Change in gross external assets	- 11.3	+7.5	+38.4
	Change in gross external liabilities	+1.3	-35.2	-13.8
	Net flow of funds to the euro zone	-12.6	+42.7	+52.1
United States	Change in gross external assets	+9.5	+17.5	+17.6
	Change in gross external liabilities	-0.1	+19.8	-0.5
	Net flow of funds to the euro zone	+9.7	-2.3	+18.1
United Kingdom	Change in gross external assets	+19.9	+71.3	+141.8
	Change in gross external liabilities	-9.4	+12.6	+30.6
	Net flow of funds to the euro zone	+29.4	+58.7	+111.2

from Japan to the euro zone turned positive in 1997 and increased further in 1998. Examining the breakdown into gross external assets and liabilities during 1997 and 1998, however, along with the increase in the amounts outstanding of gross external assets, there was also a decrease in the amounts outstanding of gross external liabilities. This indicates that the increase in the net flow of funds from Japan to the euro zone during this period was not only due to active credit provision by banks located in Japan into the euro zone, but may also be largely attributed to the decrease in fund-raising by banks located in Japan from the euro zone.

Next, the net flow of funds from the United States to the euro zone shows relatively small fluctuations, with an inflow of US$9.7 billion in 1996, an outflow of US$2.3 billion in 1997, and an inflow of US$18.1 billion in 1998.

In contrast, the net flow of funds from the United Kingdom to the euro zone continues to increase, and greatly surpassed that from Japan and the United States in 1998. Breaking this down into gross external assets and liabilities, both figures increased rapidly in 1997 and 1998.

This analysis demonstrates that the recent increase in flow of funds via the banking market between the euro zone and countries outside the euro zone is primarily due to the increase in transactions with banks located in the United Kingdom. Besides, in 1998, when there was the greatest inflow of funds from the United Kingdom to the euro zone, there was a substantial flow of funds from Japan and offshore centers into the United Kingdom, and this suggests that the provision of credits from these regions to the euro zone may have occurred via banks located in the United Kingdom.[38]

b. Increase in transactions within the euro zone

The trends of transactions within the euro zone may be identified by estimating the gross amounts outstanding of assets and liabilities vis-à-vis each major country in the euro zone held by other countries within the euro zone (Chart 14).[39] While there were no substantial changes in 1996 and 1997,[40] from 1998,

[38] For example, the head office of a Japanese bank sends funds to its London branch through the interoffice accounts and then the London branch provides the loan to an enterprise located in Germany.

[39] The gross amounts outstanding of assets and liabilities vis-à-vis each major country in the euro zone held by other countries within the euro zone are estimated by subtracting the amounts outstanding of assets and liabilities vis-à-vis each major country in the euro zone by Japan, the United States, and the United Kingdom from those held by all reporting countries. Thus, it should be noted that the resulting figures do not provide a pure estimate of transactions among the euro zone countries but also include transactions between offshore reporting centers and the major countries in the euro zone. Looking, however, at the "other investment" category by counterparty country of the "financial account" in the German balance of payments statistics, offshore centers accounted for just 6.7 percent of financial liabilities and 3.2 percent of financial assets on

there were large increases in the amounts outstanding of both assets and liabilities. These increases were apparently due to the rapid increase in cross-border transactions within the euro zone, especially by Germany and the Netherlands.

The increase in transactions conducted in euro zone currencies may provide additional evidence of the increase in transactions within the euro zone. This is because the deutsche mark, the French franc, and other euro zone currencies account for a relatively high share of the transactions conducted within the euro zone. Looking at the figures released by the BIS for the amounts outstanding of external assets and liabilities denominated in six euro zone currencies[41] held by all reporting banks, the assets and liabilities are both increasing greatly after adjustment for foreign-exchange factors. The amounts outstanding of external assets denominated in euro zone currencies increased by US$178.2 billion in 1996, US$232.9 billion in 1997, and US$347.0 billion in the first three quarters of 1998, while the amounts outstanding of external liabilities denominated in euro zone currencies increased by US$145.7 billion in 1996, US$197.2 billion in 1997, and US$250.5 billion in the first three quarters of 1998. These figures demonstrate that the amount of transactions conducted within the euro zone is increasing.

3. Characteristics of the flow of funds via the securities market[42]

The flow of funds via the securities market in the euro zone has certain distinctive characteristics as shown by each country's balance of payments statistics and other figures.

a. Increase in transactions with countries outside the euro zone

The Japanese and U.S. portfolio investment assets and liabilities data by region from 1996 consistently show a net flow of funds from Japan to the euro zone and a net flow of funds from the euro zone to the United States (Chart 15). The

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average during 1997 and 1998. Based on this, it may be assumed that the volume of transactions between the offshore reporting centers and the euro zone is relatively inconsequential.

[40] While the figures showed some decline in the amounts outstanding of assets and liabilities during 1996 and 1997, this was partially because the figures were denominated in U.S. dollars. That is, due to the appreciation of the U.S. dollar, the U.S. dollar-denominated value of the assets and liabilities held by each country in the euro zone, which included a high proportion of items denominated in non-U.S. dollars, declined on a U.S. dollar-equivalent basis.

[41] The six currencies are the Belgian franc, the deutsche mark, the Dutch guilder, the French franc, the Italian lira, and the ECU.

[42] The securities market refers, in principle, to the flow of funds under the "portfolio investment" category of the balance of payments statistics. As the flow of funds via the securities market includes investment and fund-raising by banks in the form of securities, it should be noted that there is some overlap between the figures presented in Section III.C.2 and Section III.C.3.

German portfolio investment assets and liabilities data by region also show a continuous net flow of funds from the United Kingdom to Germany from 1996.

Looking at these developments in Japan, the United States, and Germany, the flow of funds from Japan to the euro zone was over US$20.0 billion in 1996 and 1997, and increased to over US$50.0 billion in 1998 on an annualized basis. It should be noted, however, that approximately half of this net funds outflow from 1996 to 1998 reflects the withdrawal of funds that had been invested in Japan back to the euro zone.[43]

The net portfolio investment from the euro zone to the United States maintained a high level from 1997,[44] resulting in a large flow of funds from the euro zone to the United States. In particular, the net investment in equities, which posted a negative figure in 1996, changed to a large positive figure in 1997 and 1998, reflecting the favorable performance of U.S. equity markets.

Meanwhile, the flow of funds between the United Kingdom and Germany (Chart 16) shows increasing portfolio investment assets from Germany to the United Kingdom from 1997 as well as a high level of portfolio investment assets from the United Kingdom to Germany, demonstrating the increasingly active portfolio investment between the United Kingdom and Germany in both directions. In particular, portfolio investment from the United Kingdom to Germany accounted for 58 percent of all foreign portfolio investment into Germany in 1998. This suggests the possibility that the United Kingdom's securities market, like the banking market, is functioning as a gateway for channeling investment into Germany and other countries in the euro zone from the United States and other countries located outside the euro zone.[45]

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[43] The portfolio investment and the net flow of funds between Japan and the euro zone were as follows.
US$ billions

	CY 1996	1997	1998 (annualized basis)
Portfolio investment from Japan to the euro zone	+13.9	+13.4	+30.5
Portfolio investment from the euro zone to Japan	-11.4	-7.2	-26.6
Net flow of funds from Japan to the euro zone	+25.4	+20.6	+57.1

[44] The portfolio investment from the euro zone to the United States was as follows.
US$ billions

	CY 1996	1997	1998
Portfolio investment from the euro zone to the United States	+55.5	+88.4	+67.1
Of which: equity investment	-1.8	+28.5	+38.7

[45] For the details, see "Securities Investment in the London Market and the Flow of Funds between Japan and the United Kingdom" in the April 1998 edition of the *Nippon Ginko Chousa Geppo* (Bank of Japan Monthly Bulletin; only a Japanese version is available).

b. Increase in transactions among the major countries inside the euro zone

Looking broadly at the developments in transactions among the major countries inside the euro zone using the German portfolio investment data by region (Chart 16), the portfolio investment between Germany and other countries located inside the euro zone[46] has increased in both directions since 1997, demonstrating that the cross-border transactions within the euro zone are increasing. The breakdown by country shows that the increase in portfolio investment between Germany and other euro zone countries primarily reflects increased transactions with France and Italy.[47]

IV. Improvement of the BIS Statistics

Since the outbreak of the currency and financial crises in emerging economies, various discussions have taken place regarding the stabilization of the international banking and capital markets and the international financial system. Looking back on the causes and mechanisms of the currency and financial crises, it seems there was a complex interaction among numerous factors including macroeconomic policies, foreign exchange systems, bank regulatory and supervisory systems, corporate governance arrangements, and moral hazards. There is no single policy measure that could serve as a panacea for these problems. Nevertheless, there is a substantially widespread recognition that it is important to increase the transparency of markets to minimize the possibility of future currency and financial crises and to lessen the impact of such crises when they do occur.

The BIS is conducting various investigations based on this awareness of the problems and is moving to implement the necessary measures to increase transparency, and the improvements of statistics on international financial market represent part of this effort. While the necessary statistical improvements cover a number of areas, it has been noted that many aspects of the Semiannual Consolidated International Banking Statistics, which attracted the greatest attention when the crisis broke out, need to be improved including (1) the timing and frequency of publication; (2) the classification of borrowers by nationality; and (3) the treatment of off-balance sheet credits. The BIS and the central banks of the

[46] The data do not include Belgium and Luxembourg.

[47] During 1998, 59 percent of German portfolio investment to other countries within the euro zone went to France and Italy, and 69 percent of portfolio investment into Germany from other countries within the euro zone came from France and Italy.

major countries are moving forward with efforts to resolve these problems with the cooperation of the reporting financial institutions.

Examining each of these areas in somewhat greater detail: first, regarding the publication timing, starting with the figures for the end of June 1998, the BIS has moved up the release of the global statistics by approximately one month, to around five months after the base period. Furthermore, the Bank of Japan has begun releasing these statistics pertaining to Japan starting with the figures for the end of June 1998 on its own initiative, with the release taking place approximately four months after the base period, which is about one month earlier than the BIS release. As for the frequency, there is a plan to increase it on a global basis from the present semiannual release to a quarterly one.

Next, regarding the nationality classification of borrowers, because the credits to emerging economies include those not directly related to the countries' credibility, the BIS has begun compiling statistics on an "ultimate risk" basis (see Box 7) in accordance with the actual country risk in the countries receiving the credits. Regarding the treatment of off-balance sheet credits, amid the rapid expansion of derivatives trading, discussions are taking place as to whether such credits should be included within the framework of the Semiannual Consolidated International Banking Statistics.

Finally, the roles played by the Bank of Japan with regard to international financial market statistics may be briefly summarized as follows.

First, the Bank of Japan collects the data of the BIS international financial market statistics pertaining to Japan with the cooperation of the related authorities and the reporting financial institutions. As for the publication of these statistics, while the BIS releases the aggregate statistics for all the reporting countries, the Bank of Japan independently releases the statistics pertaining to Japan. Specifically, the Bank of Japan has been releasing the results of the Quarterly Locational International Banking Statistics and the Semiannual Consolidated International Banking Statistics starting with the figures for the end of June 1998, and in April 1999 provided the historical data for both statistics going back to 1990 along with the release of the figures for the end of December 1998. The Bank of Japan also releases the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity and the Regular Derivatives Market Statistics pertaining to Japan.[48]

[48] These statistics can also be downloaded from the Bank of Japan's home page (http://www.boj.or.jp).

Second, as one of the central banks of the major countries, the Bank of Japan is actively participating in the discussion toward the improvement of BIS statistics at the BIS Committee on the Global Financial System, which is chaired by Yutaka Yamaguchi, Deputy Governor of the Bank of Japan. While working toward the improvement of BIS statistics, this committee is also striving to gain a better grasp of the latent risks in international financial markets.

Box 1: Definition of International Assets and Liabilities in the Quarterly Locational International Banking Statistics and the Semiannual Consolidated International Banking Statistics

In the Quarterly Locational International Banking Statistics and the Semiannual Consolidated International Banking Statistics, banks' international assets and liabilities (only assets for the Semiannual Consolidated International Banking Statistics) are defined as cross-border transactions and transactions denominated in foreign currencies. Thus, transactions that do not cross borders (local transactions) and are denominated in local currencies are not included in the international assets and liabilities figures (Table for Box 1). For example, among the assets held by the domestic branches of Japanese banks, U.S. dollar-denominated loans and yen-denominated loans to overseas entities are included, but yen-denominated loans to domestic entities in Japan are not. For the U.S. branches of Japanese banks, loans denominated in non-U.S. dollar currencies and U.S. dollar-denominated loans to entities located outside the United States are included, but U.S. dollar-denominated loans to domestic entities in the United States are not. Conceptually, the international flow of funds is defined as the changes in cross-border transactions (see Box 3).

Table for Box 1
Range of International Assets and Liabilities in the BIS Statistics[1]

	Transactions denominated in foreign currencies	Transactions denominated in local currencies
Cross-border transactions		
Local transactions		

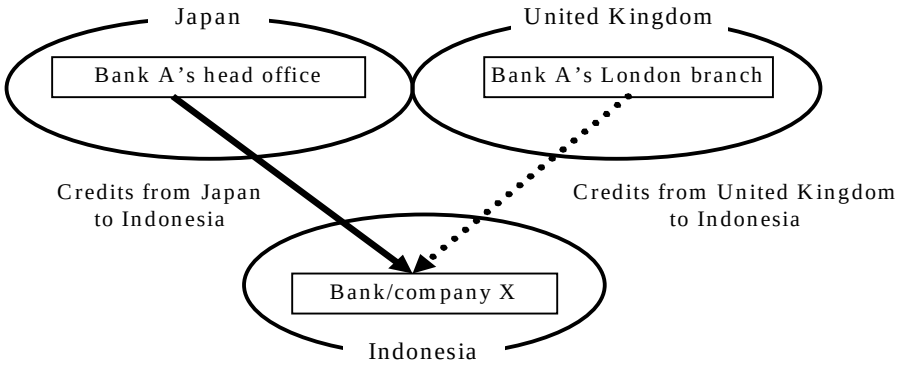
Note: 1. The shaded areas are recorded as international assets (or liabilities).

Box 2: Locational Basis and Consolidated Basis

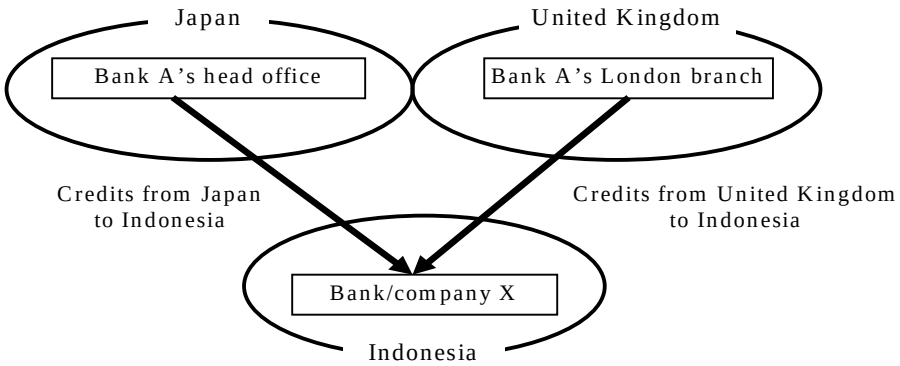
Statistics on a locational basis are designed to grasp the flow of funds between two countries. In contrast, those on a consolidated basis are designed to grasp the amount of credits provided by a given country's banks to another country, including credits to the bank's branches and locally incorporated affiliates. For example, if we consider the situation of the head office of a Japanese bank "A," its London branch, and an Indonesian bank/company "X" which is located in Indonesia, under the statistics on a locational basis only credits from bank A's head office to the Indonesian bank/company X are recorded as credits from Japan to Indonesia. In contrast, under the statistics on a consolidated basis, in addition to credits from bank A's head office, credits from its London branch to bank/company X are recorded as credits from Japan to Indonesia (Chart for Box 2).

Chart for Box 2
Locational Basis and Consolidated Basis

[1] Locational Basis[1] (Credits in the Quarterly Locational International Banking Statistics)



[2] Consolidated Basis[1] (Credits in the Semiannual Consolidated International Banking Statistics)



Note: 1. Solid arrows indicate the credits from Japan to Indonesia.

Box 3: Understanding the International Flow of Funds

1. Definitions

The international flow of funds (external capital flow) is a concept designed to grasp the final amount of capital outflows and inflows across borders. It is defined as the change in the amounts outstanding of external assets minus the change in the amounts outstanding of external liabilities. When the external flow of funds is positive, there is a net capital outflow, and when it is negative, there is a net capital inflow. Among the international assets and liabilities discussed in Box 1, the range of external assets and liabilities is limited to assets and liabilities from cross-border transactions.

2. Examples of the International Flow of Funds

The following transactions illustrate the factors that define the international flow of funds, using transactions between Japan and the United States from the Japanese perspective as an example (Chart for Box 3).

(1) Increase in the amounts outstanding of external assets (a factor for the outflow of funds)
When Japan extends a loan to the United States, this is recorded as an outflow of funds from Japan to the United States.

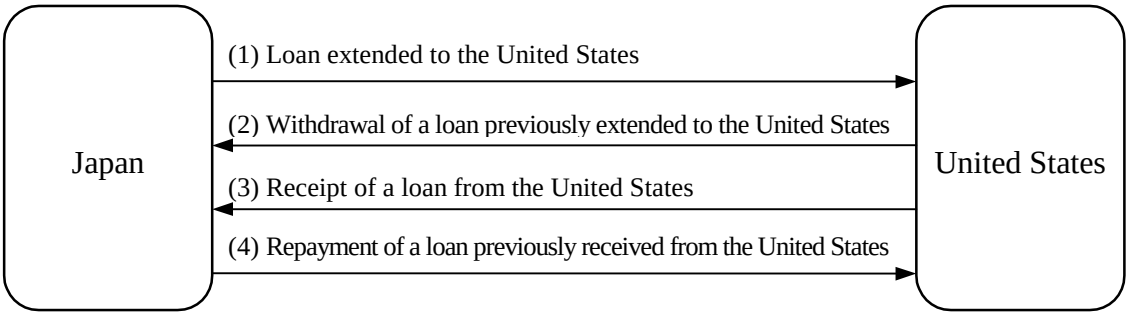
(2) Decrease in the amounts outstanding of external assets (a factor for the inflow of funds)
When Japan recovers a loan previously extended to the United States, this is recorded as an inflow of funds from the United States into Japan.

(3) Increase in the amounts outstanding of external liabilities (a factor for the inflow of funds)
When Japan receives a loan from the United States, this is recorded as an inflow of funds from the United States into Japan.

(4) Decrease in the amounts outstanding of external liabilities (a factor for the outflow of funds)
When Japan repays a loan previously received from the United States, this is recorded as an outflow of funds from Japan to the United States.

Chart for Box 3

International Flow of Funds between Japan and the United States from the Japanese Perspective[1]



Note: 1. The direction of arrows indicates the flow of funds.

Box 4: Off-Balance Sheet Credits

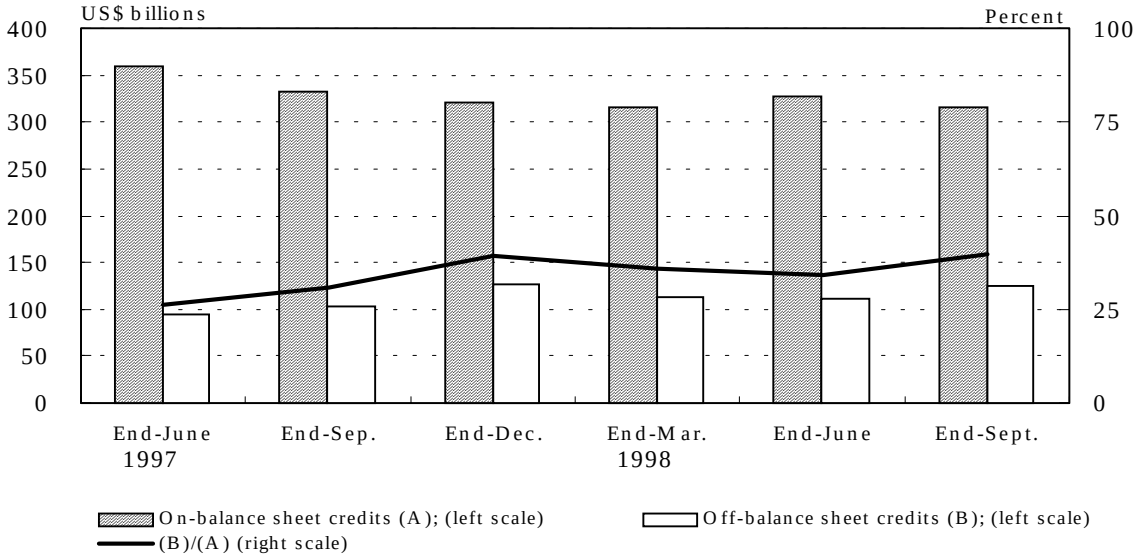
Off-balance sheet credits indicate the positive market value from derivatives trading where the receipt and payment amounts (cash flow) are determined by the future prices of specified financial assets or products as the underlying assets. When a derivatives transaction is established, the economic values of the cash flows exchanged in the transaction are considered to be of equal value by the two parties to the transaction. Thus, the market value (present value) of derivatives when the transaction is established is zero, but as time passes and the market environment changes (for example, if the price of the underlying assets rises), the market value becomes positive or negative. The "positive market value" is the amount by which the market value shows a net receipt for a bank, and this has the same economic effect as if the bank had extended the same amount of credits. In other words, if the counterparty goes bankrupt and becomes unable to pay its obligations, the bank will suffer a loss equivalent to this "positive market value."

Box 5: Characteristics of the Off-Balance Sheet Credits of U.S. Banks

In the United States, the Country Exposure Lending Survey,[1] which previously released the amounts outstanding of the overseas on-balance sheet credits of U.S. banks by country, began to release figures for the banks' overseas off-balance sheet credits as well from the end of June 1997. These figures for off-balance sheet credits utilize the positive market value deriving from derivatives transactions.

U.S. banks' off-balance sheet credits have recently reached 30-40 percent of their on-balance sheet credits, and thus cannot be ignored when determining the banks' counterparty risk (the credit risk of the counterparties); (Chart 1 for Box 5).

Chart 1 for Box 5
U.S. Banks' On- and Off Balance Sheet Credits

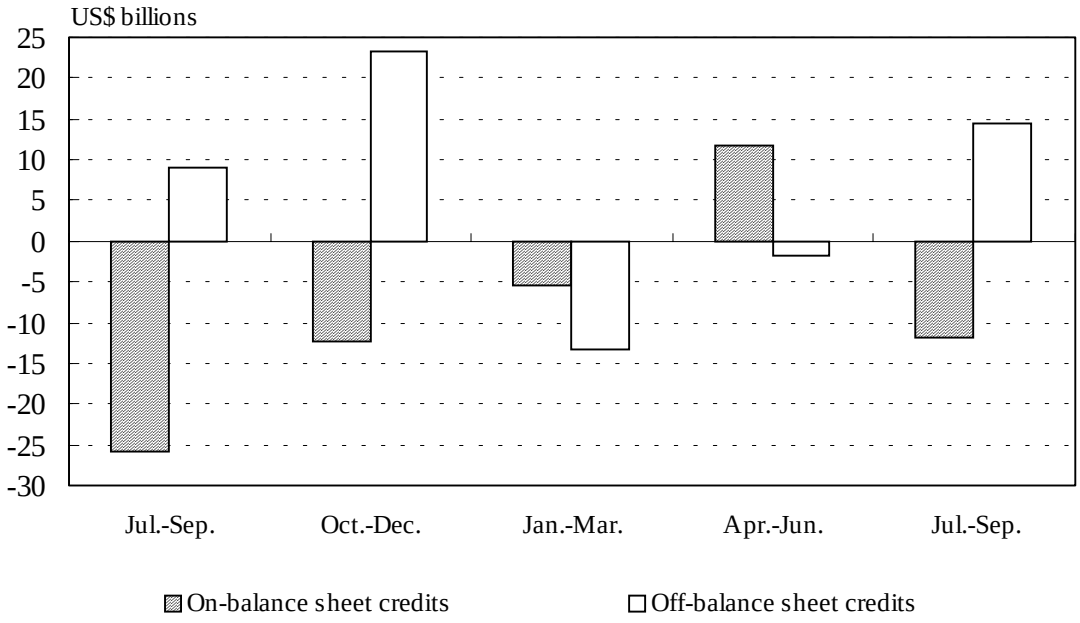


By region, 80-90 percent of the banks' total off-balance sheet credits are concentrated in the developed countries (compared with 60-70 percent of the on-balance sheet credits). Among emerging economies, Asia accounts for the highest percentage of the off-balance sheet credits, at around 5 percent of the total. (Latin America accounts for the highest percentage of the on-balance sheet credits among emerging economies, at nearly 20 percent of the total.)

[1] The Country Exposure Lending Survey is the basis for the U.S. portion of the Semiannual Consolidated International Banking Statistics, but it differs slightly from the U.S. figures in these statistics (which cover only U.S. banks) because, in addition to U.S. banks on a consolidated basis, this survey covers the U.S. branches of foreign banks.

A comparison of the changes in off-balance sheet credits with those of on-balance sheet credits show that both items do not necessarily move in the same direction, and that the fluctuations in the former are greater than those in the latter. This trend was particularly conspicuous during the second half of 1997 directly after the outbreak of the Asian currency crisis, when the prices of the underlying assets recorded large fluctuations (Chart 2 for Box 5). It is not possible to specify the causes of the fluctuations in off-balance sheet credits, because these statistics do not include a breakdown by financial product, and so on.

Chart 2 for Box 5
Changes in On- and Off-Balance Sheet Credits



Box 6: Differences in the Ways of Using the Quarterly Locational International Banking Statistics and Balance of Payments Statistics for Analysis of the International Flow of Funds

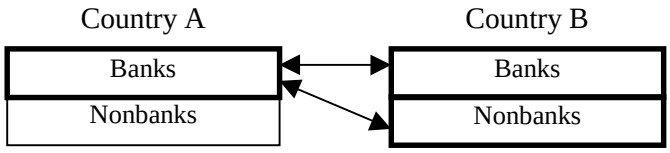
For the analysis of the international flow of funds, in addition to the Quarterly Locational International Banking Statistics, this paper utilizes the balance of payments statistics for each country. Critical differences between these two sets of statistics lie in the coverage and breakdown items.

1. Quarterly Locational International Banking Statistics (Aggregate Results for Japan)

The Quarterly Locational International Banking Statistics only cover transactions via the banking market, so their coverage is narrower than that of the balance of payments statistics, but they are useful for analyses focusing on the banking market in that they provide a breakdown of the international flow of funds by counterparty country, sector of counterparty (banks and nonbanks), and currency used.

In particular, by using statistics from countries that independently release their aggregate statistics such as Japan, it becomes possible to grasp the global flow of funds via the banking market. It should be noted, however, that when examining the flow of funds between two countries (country A and country B), the amount of assets (or liabilities) recorded from country A to country B may not match the amount of liabilities (or assets) recorded from country B to country A. This is because the statistics for country A cover the transactions of banks located in country A with banks and nonbanks located in country B, while the statistics for country B cover the transactions of banks located in country B with banks and nonbanks located in country A (Chart 1 for Box 6).

Chart 1 for Box 6
Quarterly Locational International Banking Statistics for Country A



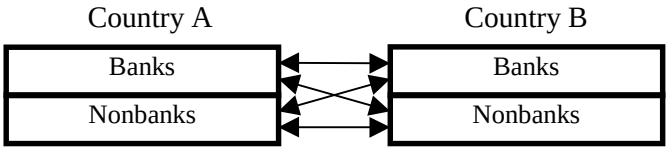
2. Balance of Payments Statistics

The balance of payments statistics facilitate a comprehensive grasp of the international flow of funds. Unlike the Quarterly Locational International Banking Statistics, however, the balance of payments statistics do not provide a breakdown

by sector of counterparty (banks and nonbanks) or by currency used, so it is not possible to grasp the detailed breakdown of the flow of funds using these statistics (Chart 2 for Box 6).

Chart 2 for Box 6

Balance of Payments Statistics for Country A

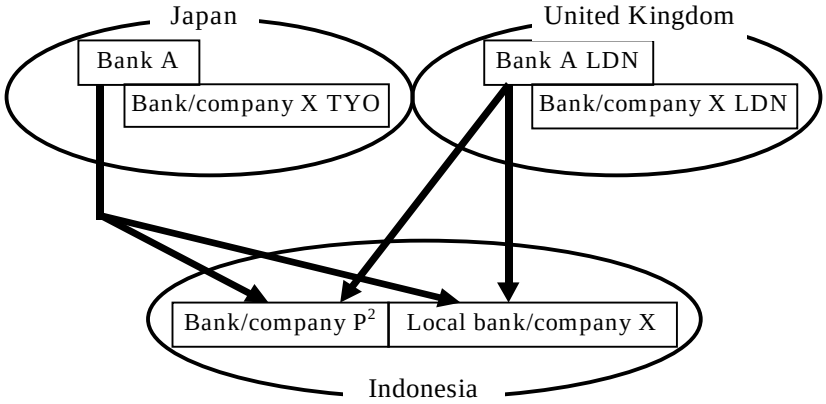


Box 7: Ultimate Risk Basis

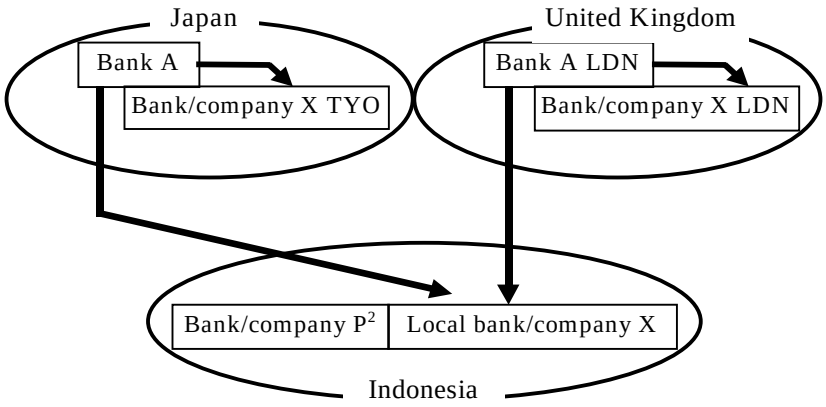
The present Semiannual Consolidated International Banking Statistics attempt to assess the risk that banks will be unable to recover their funds from debtor countries, if such countries suddenly introduce capital controls, for example. As was demonstrated by the Asian currency crisis, when a country falls into crisis, the overseas branches and subsidiaries of the country's entities will also lose their solvency. Statistics on an ultimate risk basis attempt to grasp the real country risk of the countries receiving credits, preparing against such an eventuality (Chart for Box 7).

Chart for Box 7
Ultimate Risk Basis

[1] Present Semiannual Consolidated International Banking Statistics



[2] Ultimate Risk Basis[1]



Notes: 1. Solid arrows indicate the credits from Japan to Indonesia.
2. "Bank/company P" is a Japanese bank/company.

Table 1 Outline of BIS Statistics (as of End-December 1998)

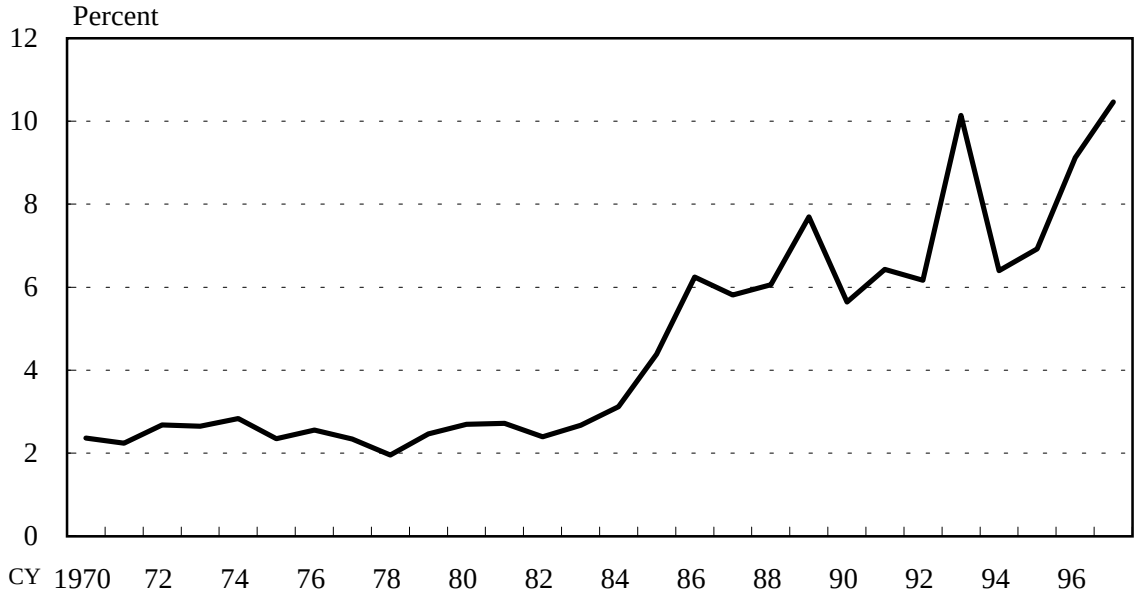
	Quarterly Locational International Banking Statistics	Semiannual Consolidated International Banking Statistics	Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity (the column below focuses on derivatives)	Regular Derivatives Market Statistics
Reporting institutions	Banks located in 18 developed countries and six major offshore centers	Banks with head offices located in 18 developed countries	Financial institutions located in 43 countries and regions	Internationally active derivatives dealers located in the G-10[1] countries (73 dealers)
Reporting frequency	Quarterly (end-March, June, September, December)	Semiannual (end-June, December)[2]	Triennial (turnover amount in April, outstanding amount in end-June)	Semiannual (end-June, December)
Reporting items	Amounts outstanding of international assets and liabilities (on-balance)	Amounts outstanding of international assets (on-balance)	Turnover (notional amount) and outstanding (notional amount and market value) of each derivatives product	Outstanding of each derivative product (notional amount and market value)
Reporting basis	Locational basis (includes interoffice accounts), with some figures also available on a nationality basis	Consolidated basis (excludes inter-office accounts)	Turnover: locational basis Outstanding: consolidated basis	Consolidated basis
Country breakdown	About 200 countries and regions	About 190 countries and regions	None	None
Risk factor breakdown	None	None	Turnover: FX and interest rate Outstanding: FX, interest rate, equity, commodity, and credit contracts	FX, interest rate, equity, commodity, and credit contracts
Maturity breakdown	None	Up to one year, one to two years, over two years	Turnover: up to one week, one week to one year, over one year Outstanding: up to one year, one to five years, over five years	Up to one year, one to five years, over five years
Currency breakdown	10[3] currencies	None	Turnover: 10 currencies Outstanding: FX and interest rate: six currencies Equity: none (categorized in six areas) Commodity: none Credit: none	FX and interest rate: 11 currencies Equity: none (categorized in six areas) Commodity: none Credit: none
Sector breakdown	Banks, nonbanks	Banks, public sector, private-sector nonbanks	Reporting financial institutions, other financial institutions, nonfinancial institutions (figures on both domestic and overseas turnover are available)	Reporting financial institutions, other financial institutions, nonfinancial institutions (figures on both domestic and overseas turnover are available)
Product breakdown	None	None	Forward, swap, option (long/short)	Forward, swap, option (long/short)

Notes: 1. The G-10 countries are Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

2. A move to quarterly reporting is under discussion.

3. Five currencies from data as of end-March 1999 due to the introduction of euro, while new currency categories in the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity and in the Regular Derivatives Market Statistics are under consideration.

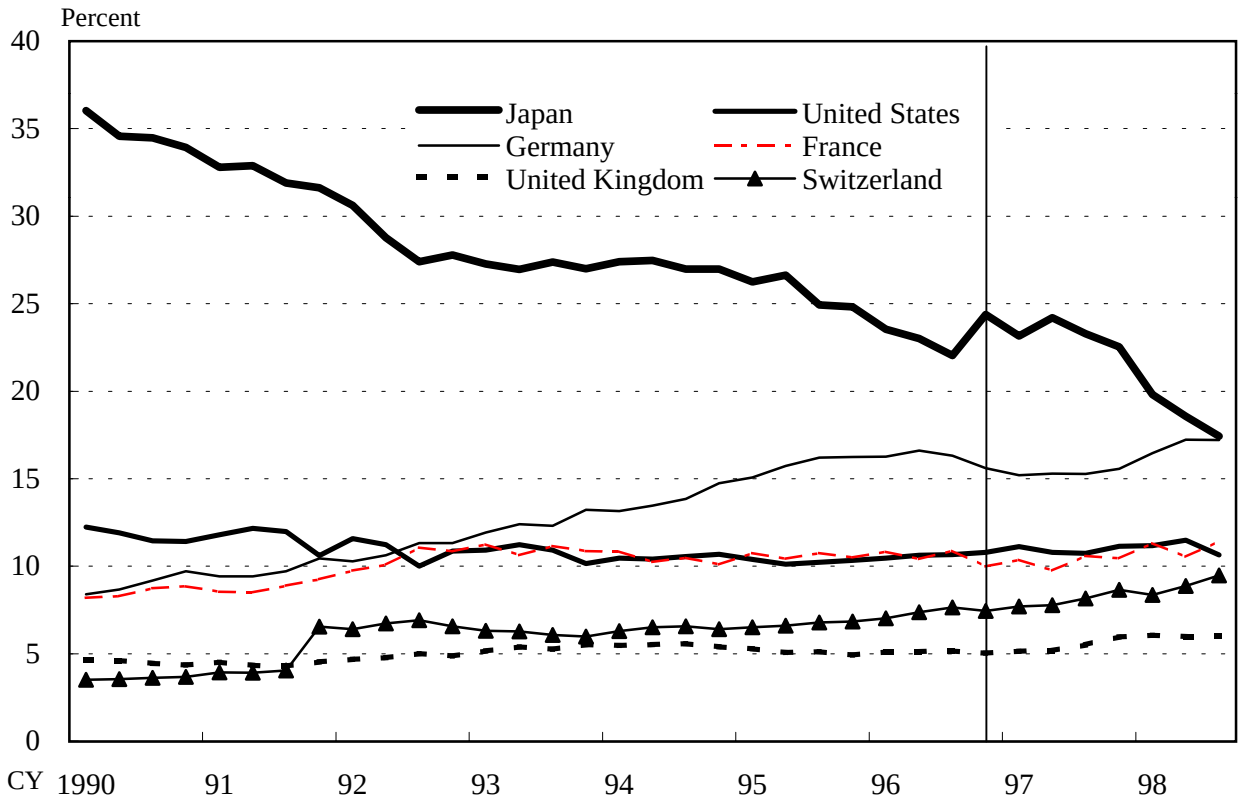
Chart 1 International Capital Flow of the G-7 Countries1



Note: 1. Figures are the ratio of the sum of direct investment and portfolio investment (each category's figure is the sum of the absolute value of assets and liabilities) against the notional GDP of the G-7 countries. The ratio is the arithmetical average of each G-7 country's ratio.

Source: International Monetary Fund, "International Financial Statistics."

Chart 2 Share of Major Countries' Banks in BIS Reporting Banks' International Assets[1] (Gross Basis)

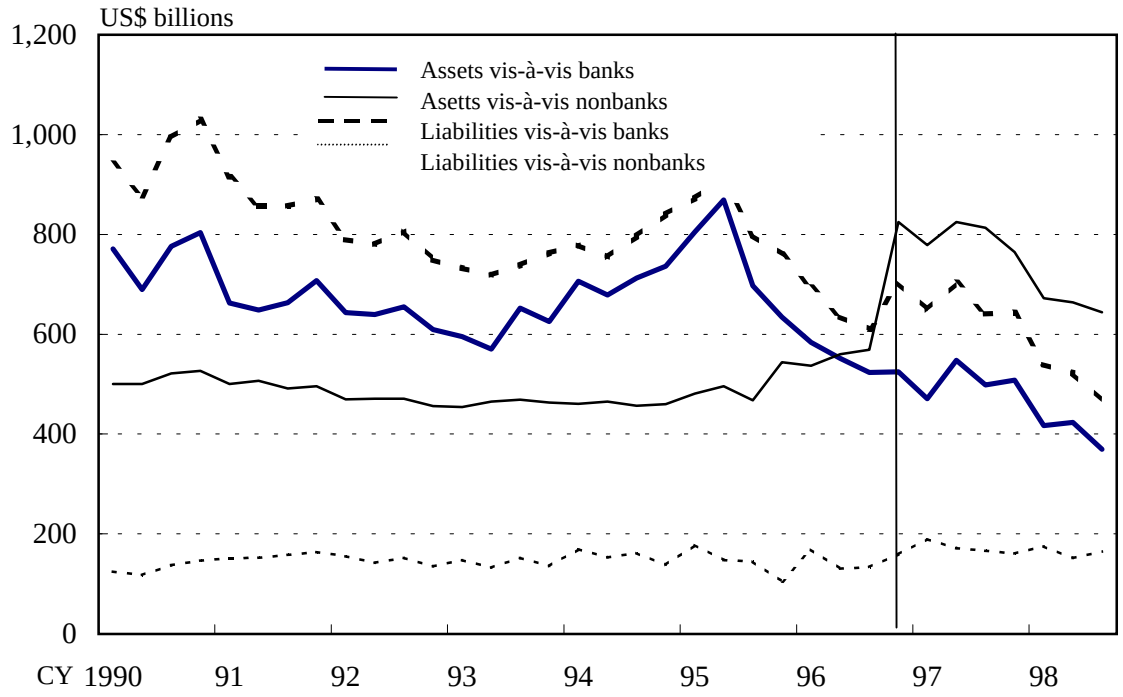


Note: 1. Figures are discontinuous at the end of December 1996 due to the addition of the data for banks located in Hong Kong (see Footnote 13).

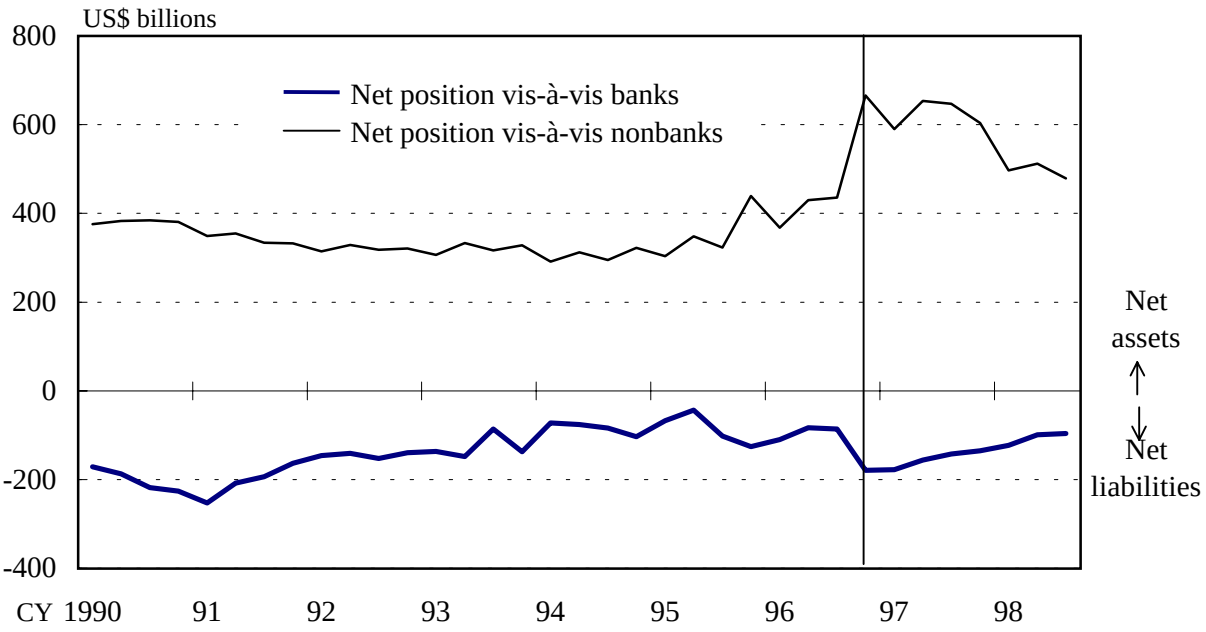
Source: Bank for International Settlements, "Quarterly Locational International Banking Statistics."

Chart 3 International Positions of Japanese Banks[1]

(1) Breakdown by Sector of Counterparty (Gross Basis)



(2) Breakdown by Sector of Counterparty[2] (Net Basis)



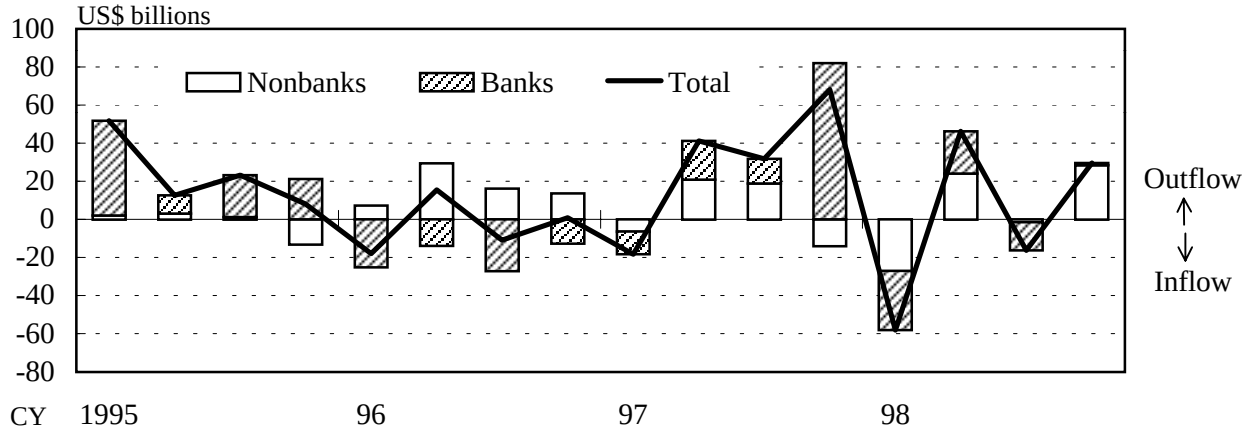
Notes: 1. Figures are discontinuous at the end of December 1996 due to the addition of the data for banks located in Hong Kong (see Footnote 13).

2. Net figures equal gross international assets minus gross international liabilities, with positive (+) figures indicating net funds and negative (-) figures indicating net fund procurement.

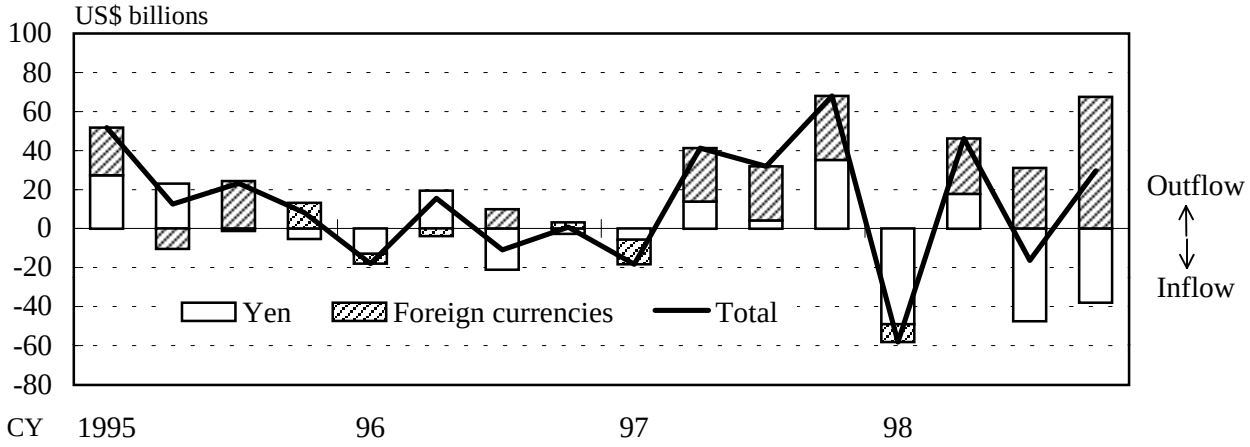
Source: Bank for International Settlements, "Quarterly Locational International Banking Statistics."

Chart 4 Net External Flow of Funds of Banks Located in Japan after Exchange Rate Adjustments[1]

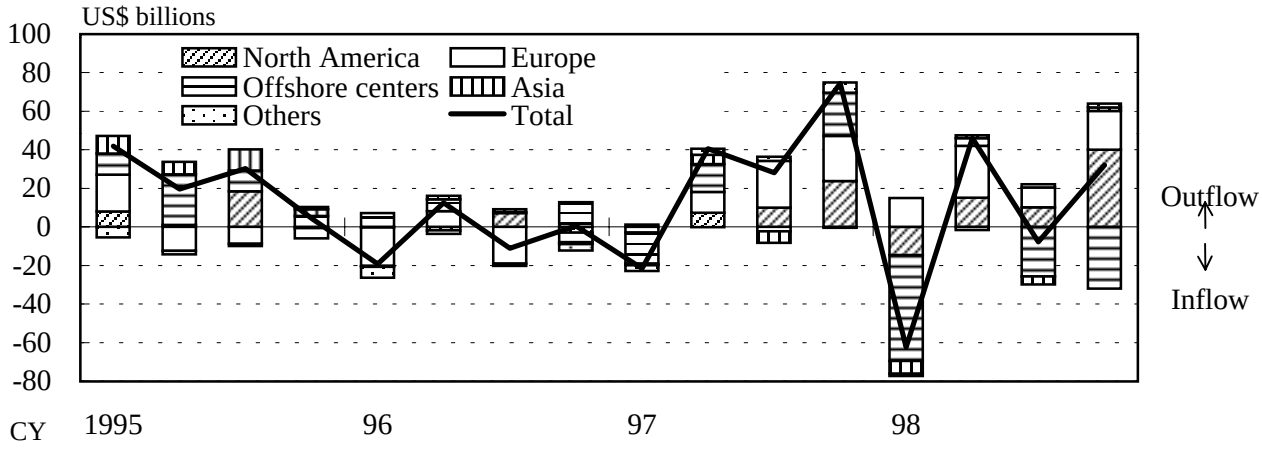
(1) Breakdown by Sector of Counterparty



(2) Breakdown by Currency



(3) Breakdown by Region

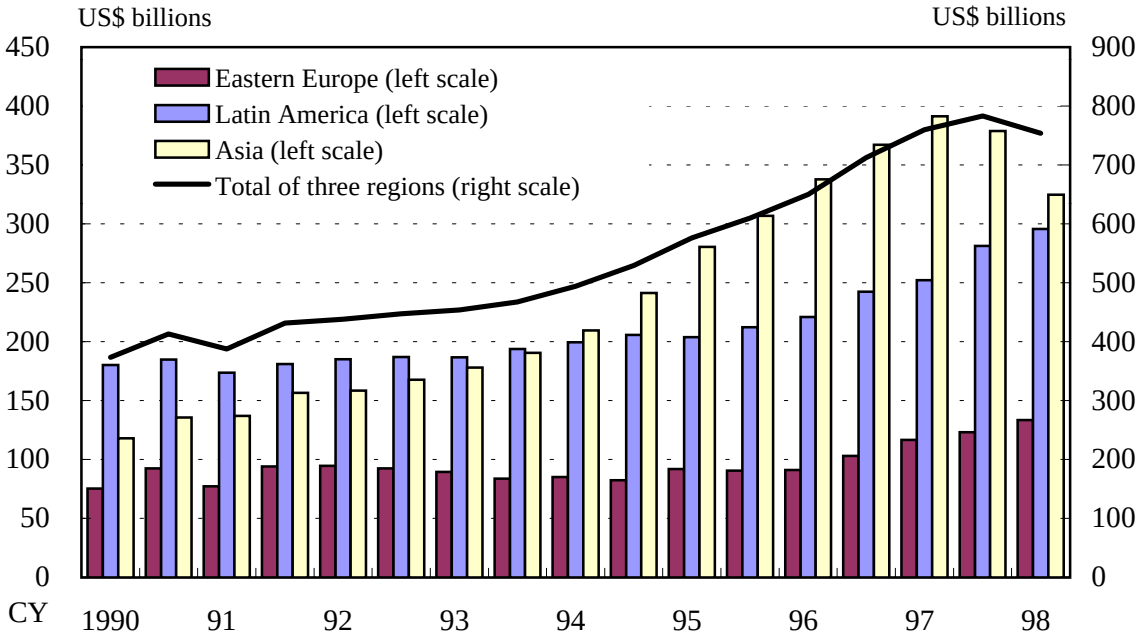


Note: 1. Figures in Chart 4 (1) and (2) are based on the BIS data, except for figures in the fourth quarter of 1998, which are estimated by the Bank of Japan. All figures in Chart 4 (3) are estimated by the Bank of Japan (see Footnote 16).

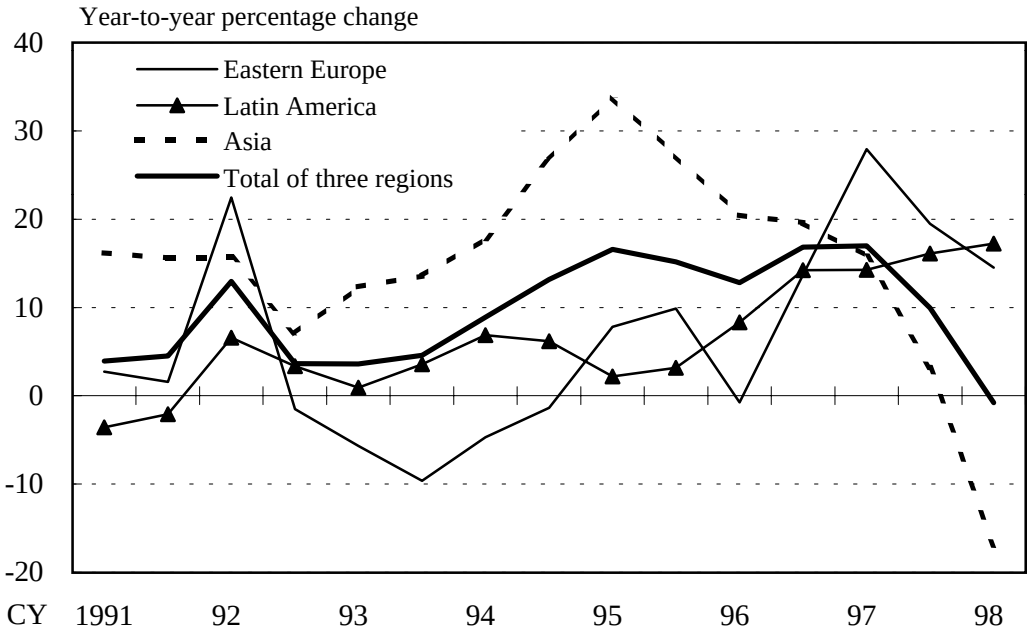
Sources: Bank for International Settlements, "Quarterly Locational International Banking Statistics"; Bank of Japan, "Quarterly Locational International Banking Statistics pertaining to Japan."

Chart 5 BIS Reporting Banks' Credits to Emerging Economies

(1) Amounts Outstanding

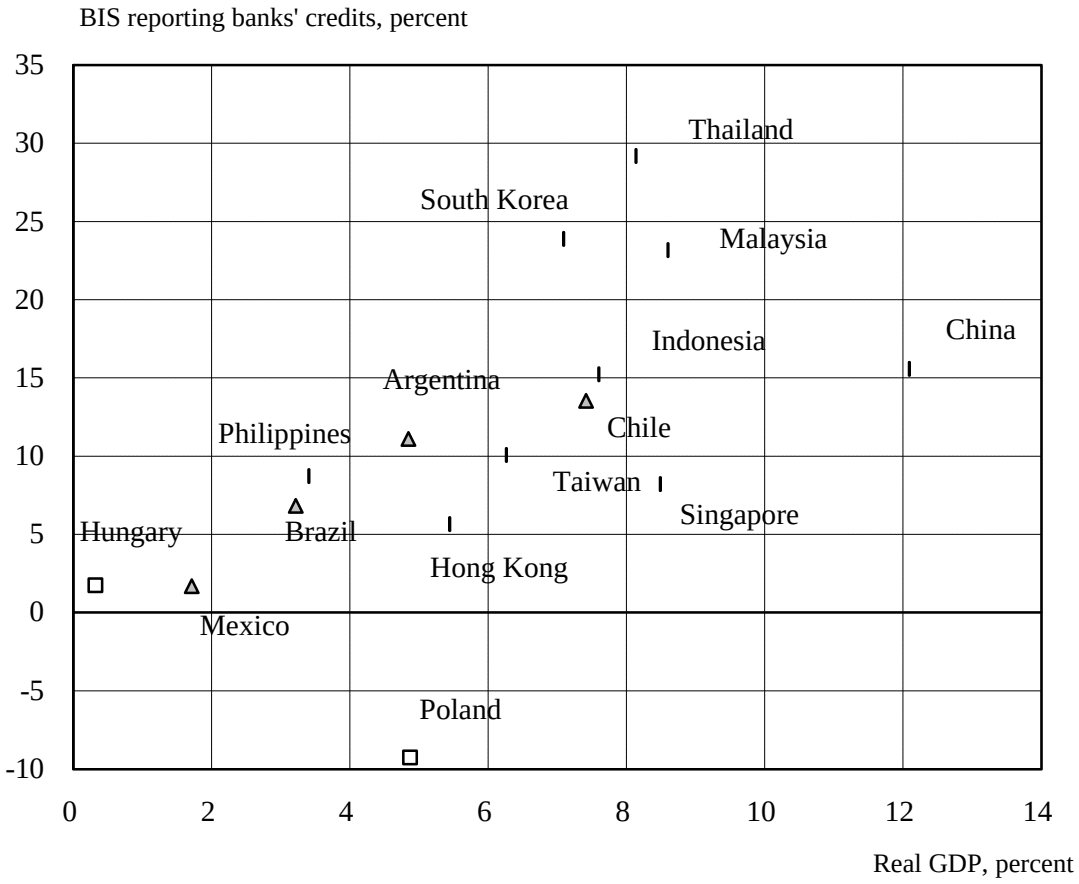


(2) Annual Growth Rate



Source: Bank for International Settlements, "Semiannual Consolidated International Banking Statistics."

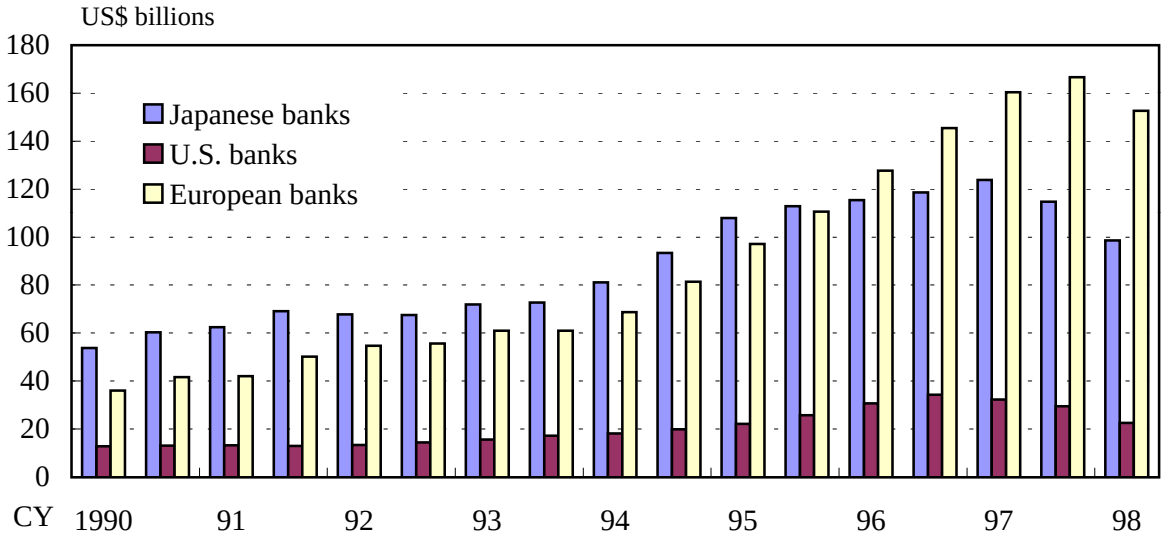
Chart 6 Growth Rate of Real GDP of Emerging Economies and
BIS Reporting Banks' Credits Extension (CY 1991-96)



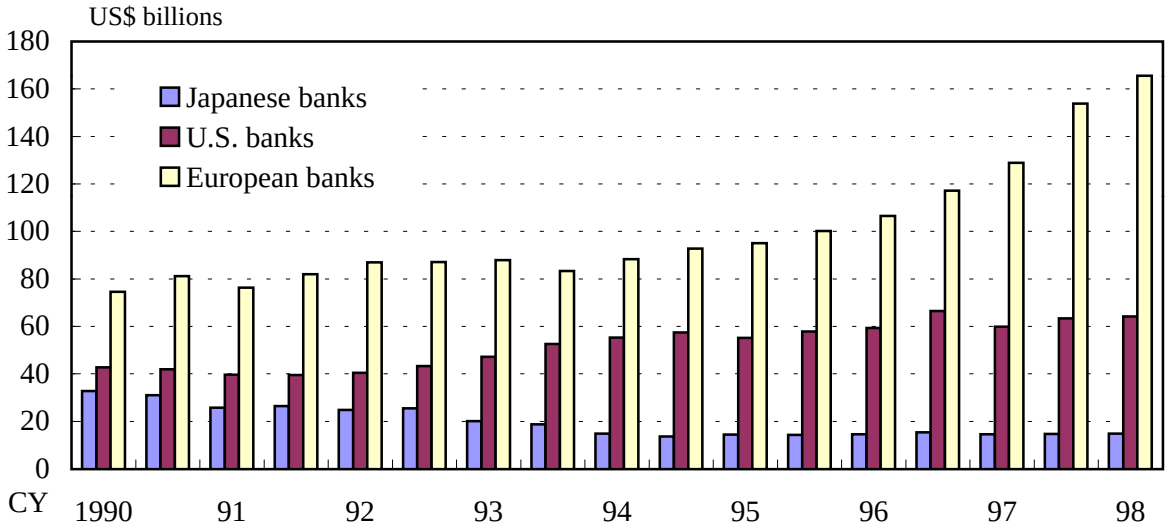
Sources: International Monetary Fund, "World Economic Outlook";
Bank for International Settlements, "Semiannual Consolidated International Banking Statistics."

Chart 7 BIS Reporting Banks' Credits to Emerging Economies

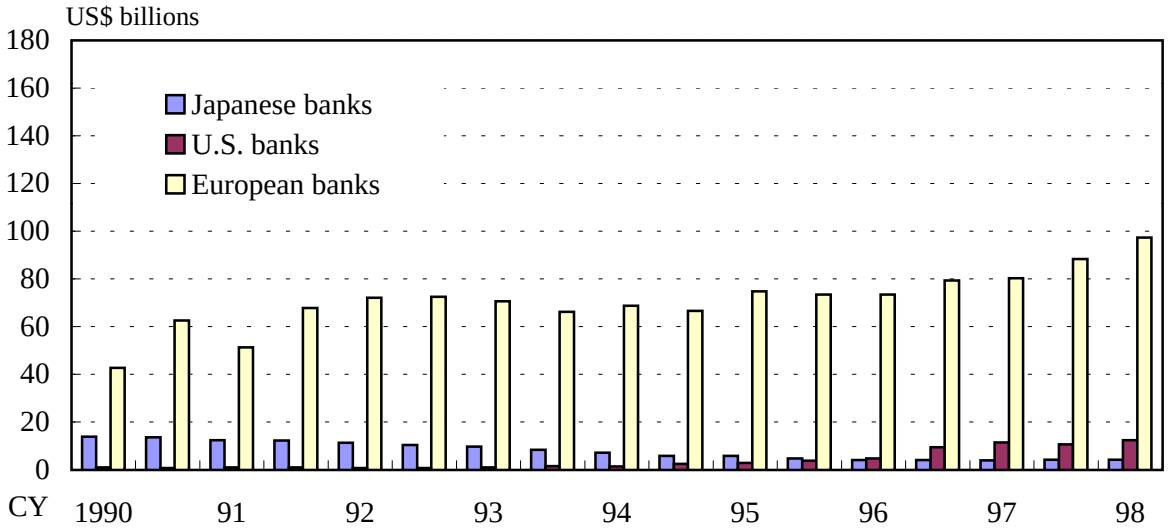
(1) Asia



(2) Latin America



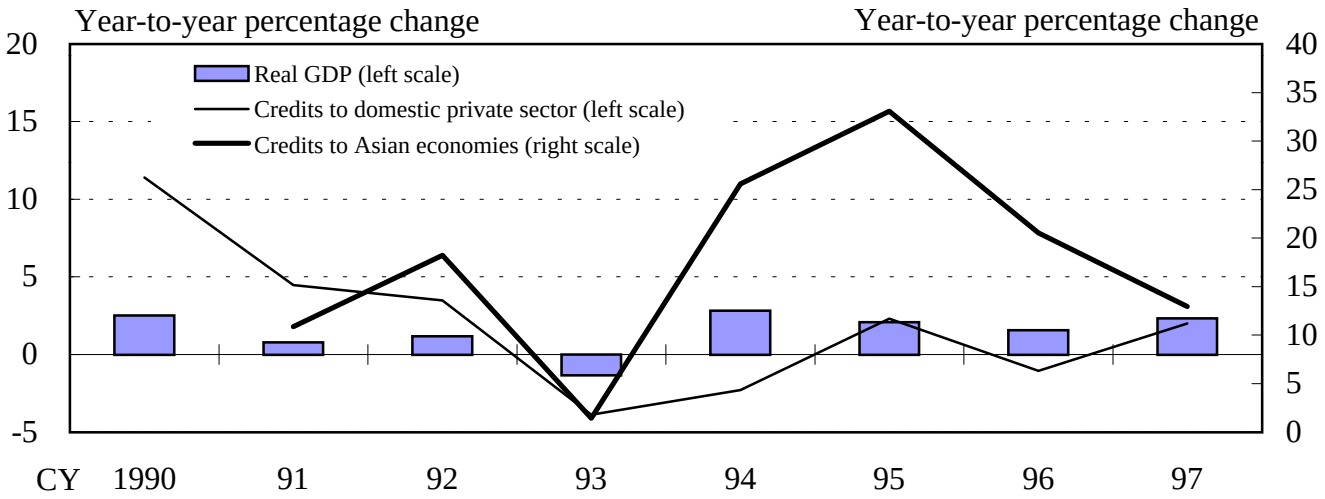
(3) Eastern Europe



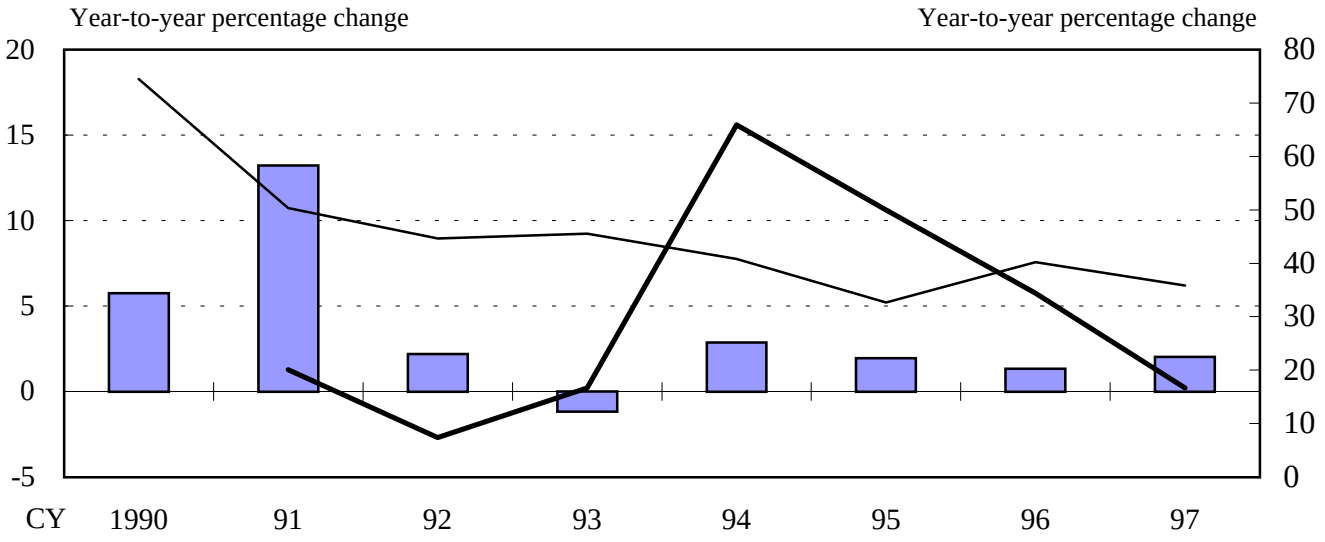
Source: Bank for International Settlements, "Semiannual Consolidated International Banking Statistics."

Chart 8 European Major Banks' Credits to the Domestic Private Sector and Asian Economies

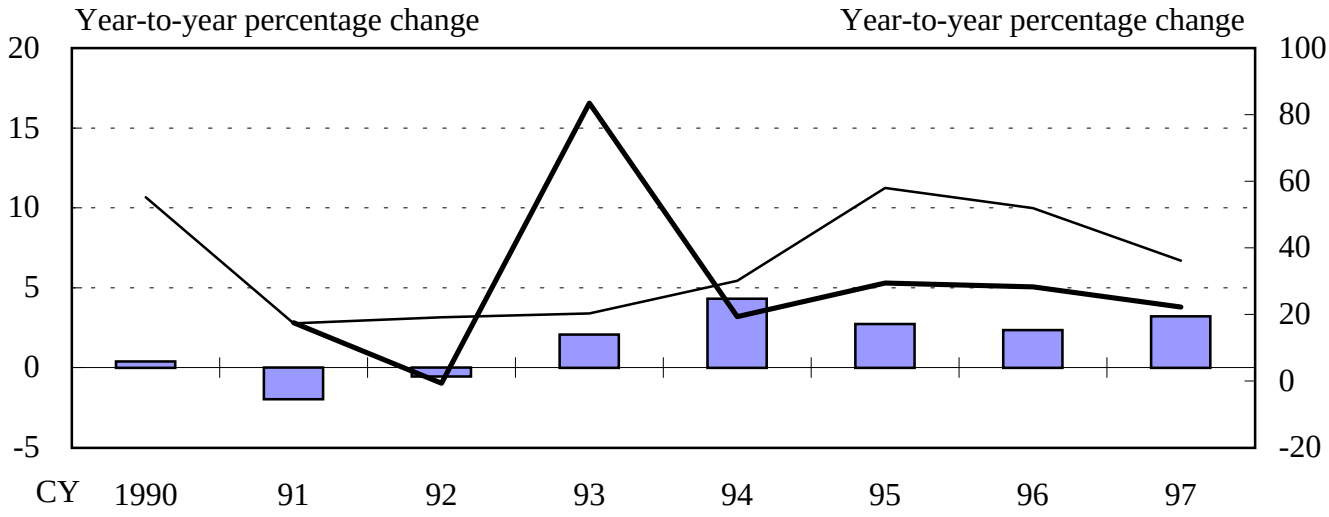
(1) France



(2) Germany

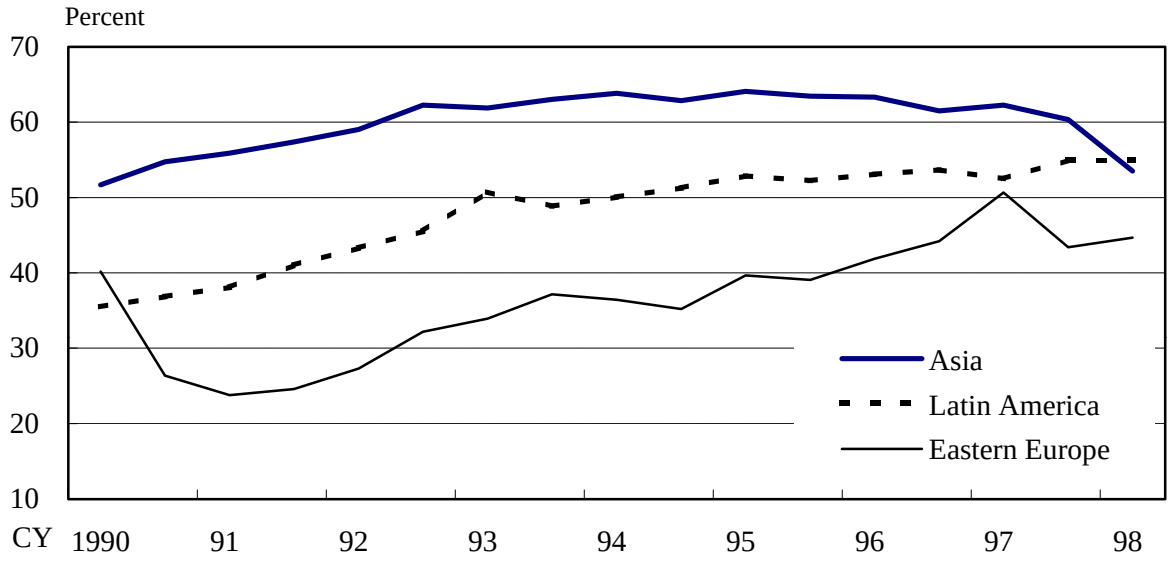


(3) United Kingdom



Sources: International Monetary Fund, "International Financial Statistics";
Bank for International Settlements, "Semiannual Consolidated International Banking Statistics."

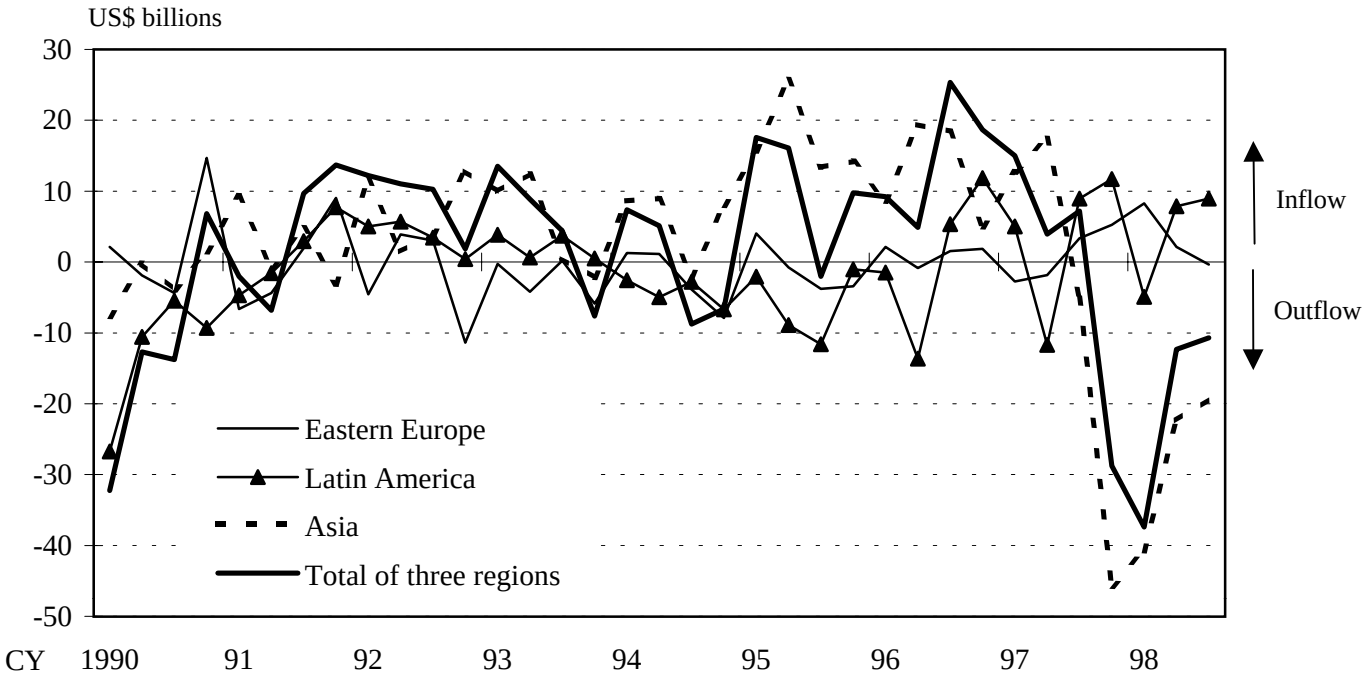
Chart 9 Proportion of Short-Term Loans of BIS Reporting Banks' Credits to Emerging Economies[1]



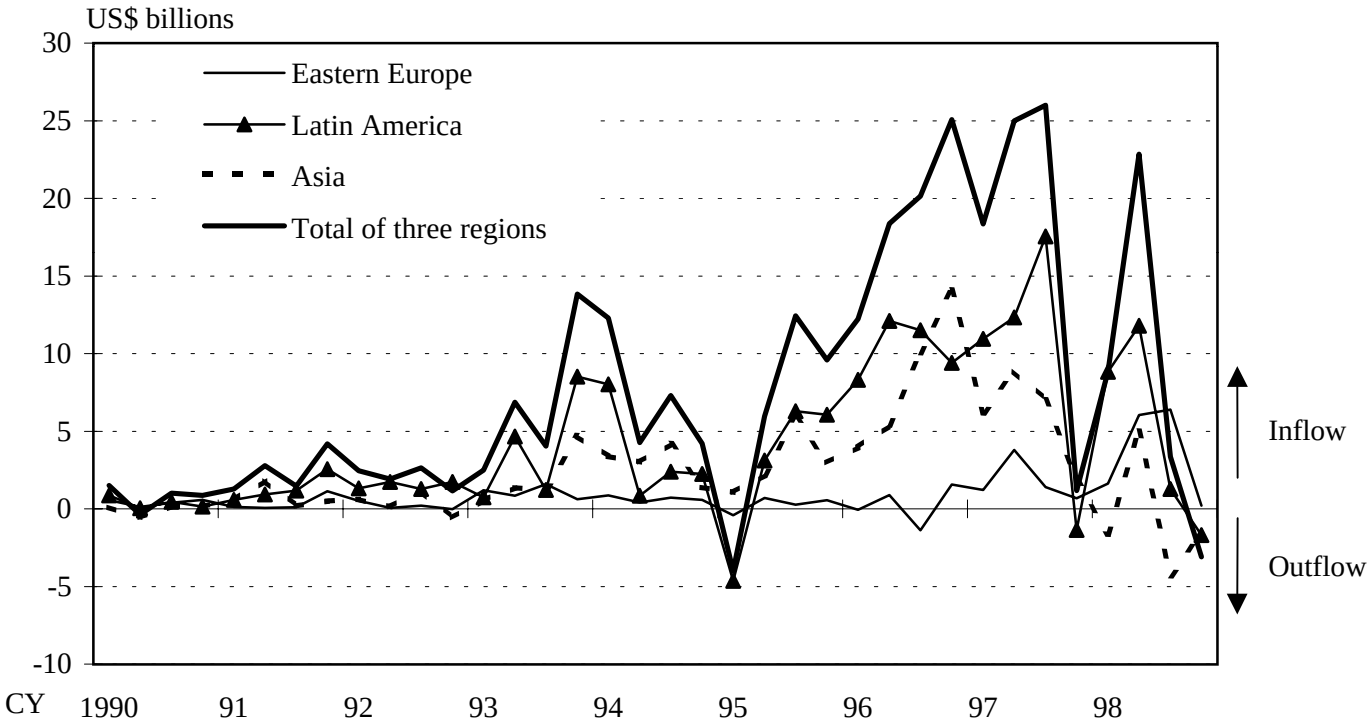
Note: 1. Short-term loans are credits with maturity up to one year.
Source: Bank for International Settlements, "Semiannual Consolidated International Banking Statistics."

Chart 10 Flow of Funds via the Banking Market and the Securities Market in Emerging Economies

(1) Via the Banking Market

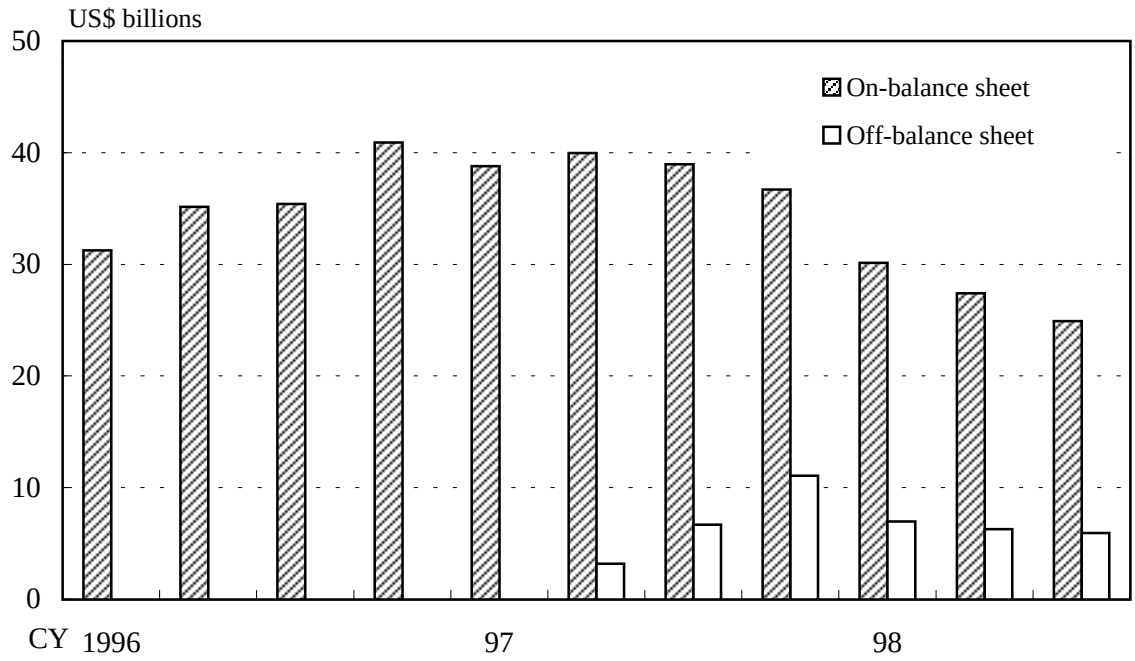


(2) Via the Securities Market



Source: Bank for International Settlements, "Quarterly Locational International Banking Statistics."

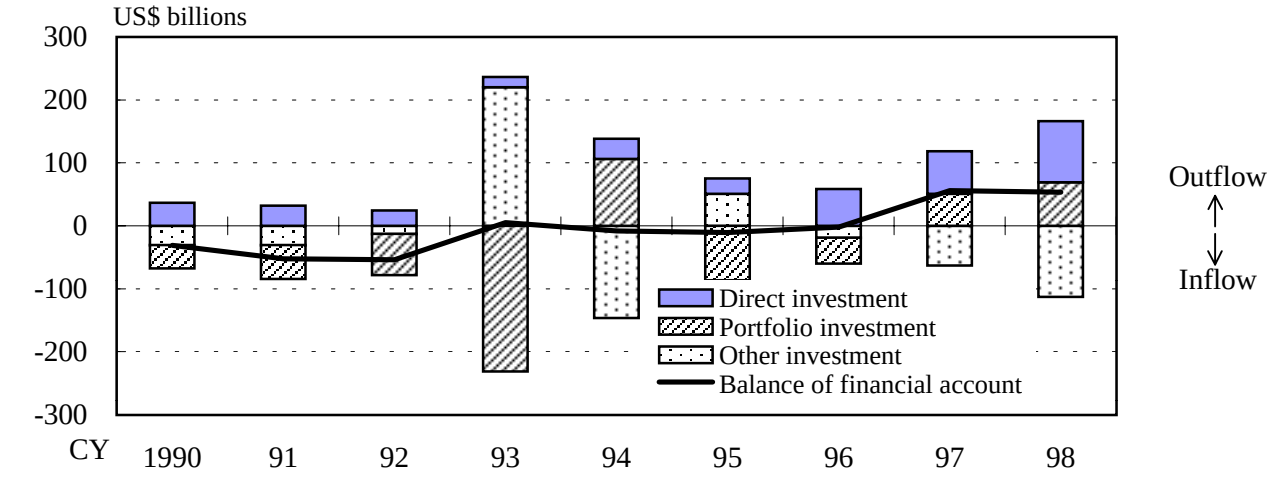
Chart 11 U.S. Banks' On- and Off-Balance Sheet Credits to Asian Economies[1]



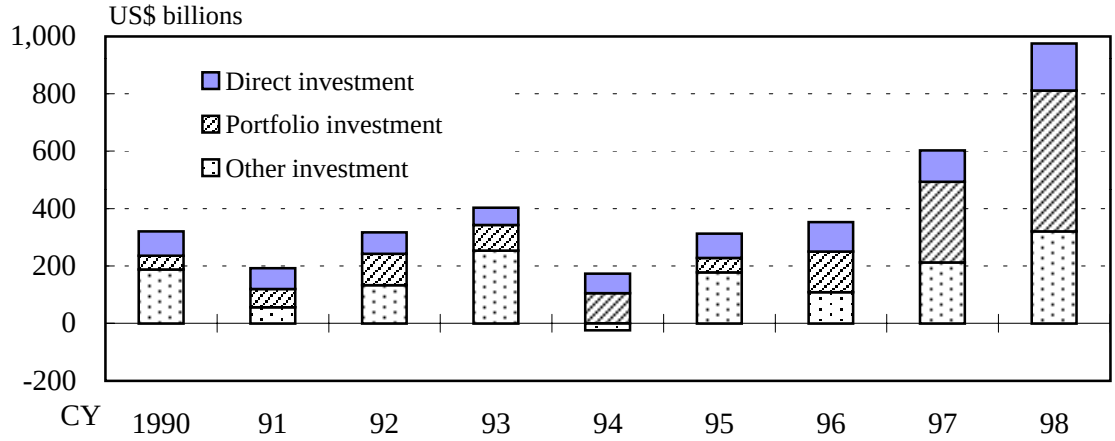
Note: 1. The data for off-balance sheet credits are available from June 1997.
Source: Federal Reserve Board, "Country Exposure Lending Survey."

Chart 12 Balance of Financial Accounts for Major Countries in the Euro Zone[1]

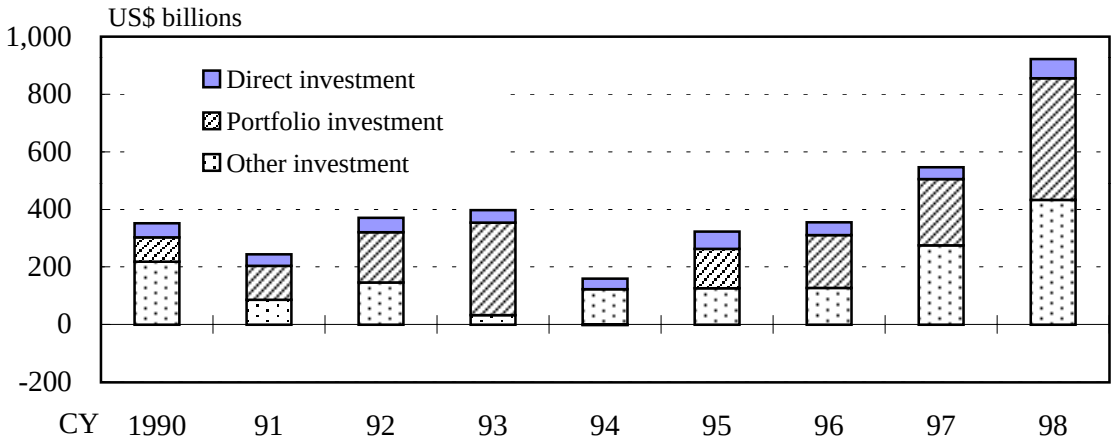
(1) Balance of Financial Accounts



(2) Financial Assets in the Euro Zone



(3) Financial Liabilities in the Euro Zone



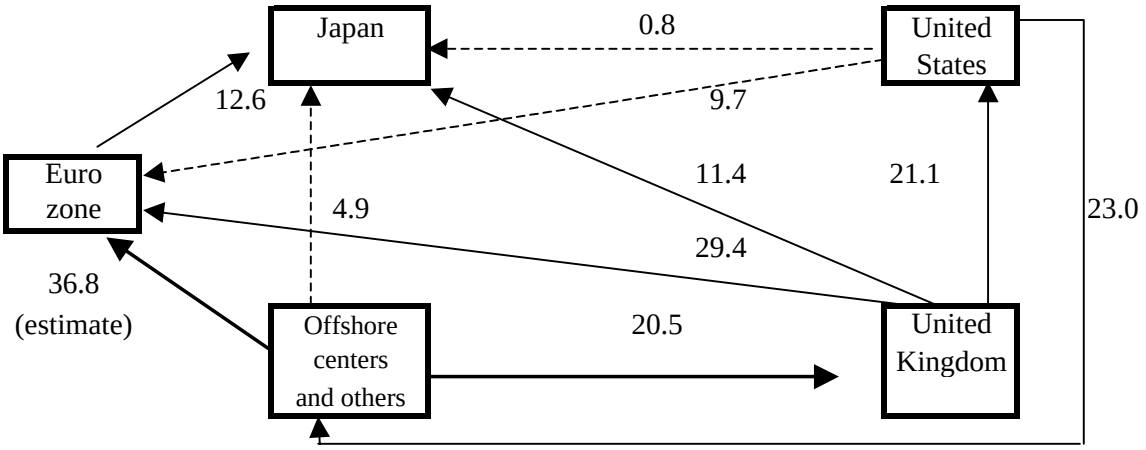
Note: 1. Financial accounts are composed of direct investment, portfolio investment, and other investment. Other investment mostly reflects transactions in the banking market. Figures are the sum of the data for France, Germany, Italy, the Netherlands, and Spain. Figures for 1998 are on an annualized basis, except for the data for Germany.

Source: International Monetary Fund, "International Financial Statistics."

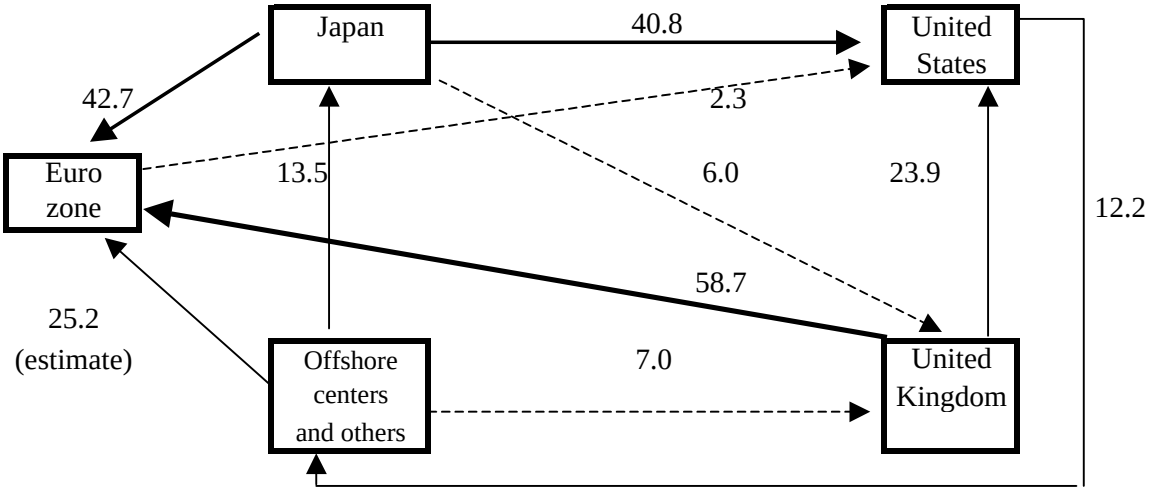
Chart 13 Net Flow of Funds via the Banking Market between the Euro Zone and Other Countries[1]

US$ billions

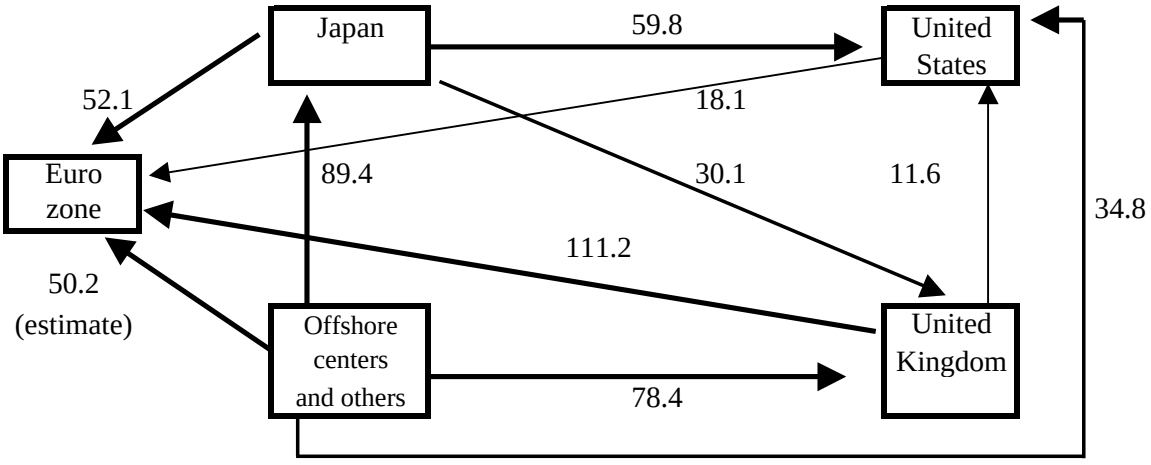
(1) In CY 1996



(2) In CY 1997



(3) In CY 1998

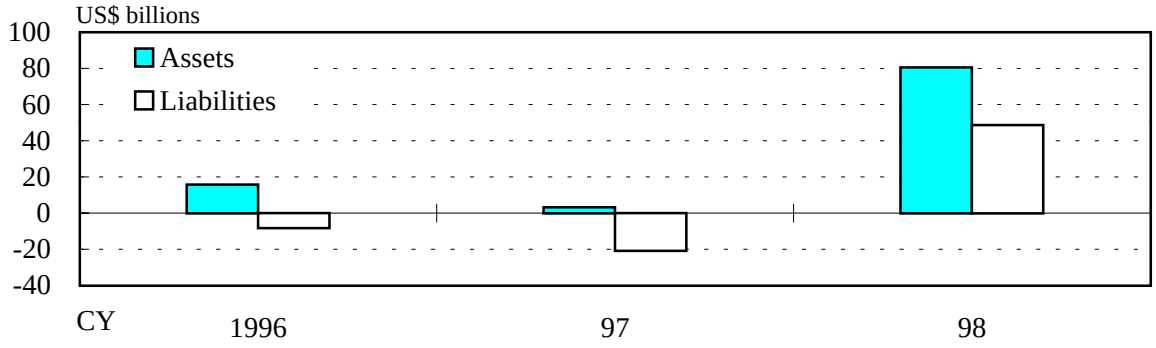


Note: 1. --- indicates net flow of less than US$10 billion,
— indicates net flow of over US$10 billion up to US$30 billion,
— indicates net flow of over US$30 billion up to US$50 billion, and
— indicates net flow of over US$50 billion.

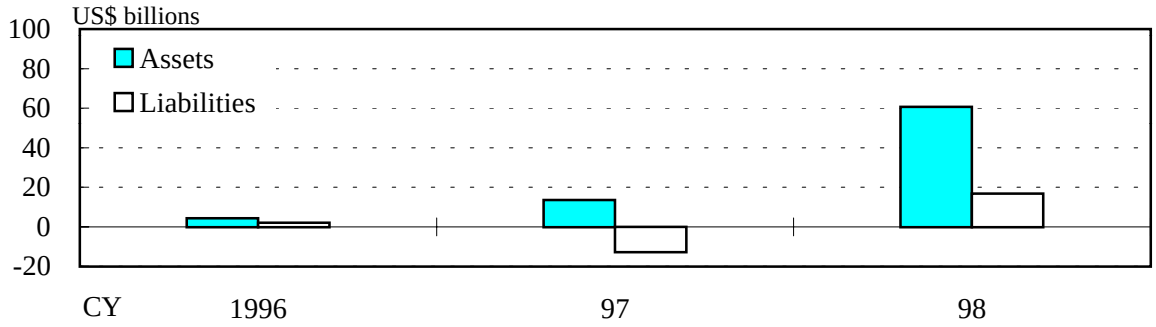
Sources: Bank for International Settlements, "Quarterly Locational International Banking Statistics";
Bank of Japan, "Quarterly Locational International Banking Statistics Pertaining to Japan";
Bank of England, "External Business of Banks Operating in the UK";
U.S. Department of the Treasury, "Treasury Bulletin."

Chart 14 Change in Amounts Outstanding of External Assets and Liabilities vis-à-vis Major Countries of the Euro Zone held by Other Countries within the Zone1

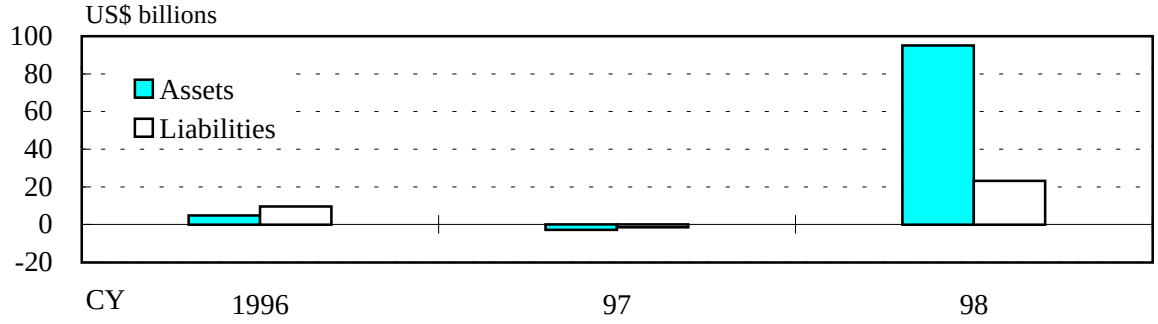
(1) Vis-à-vis Germany



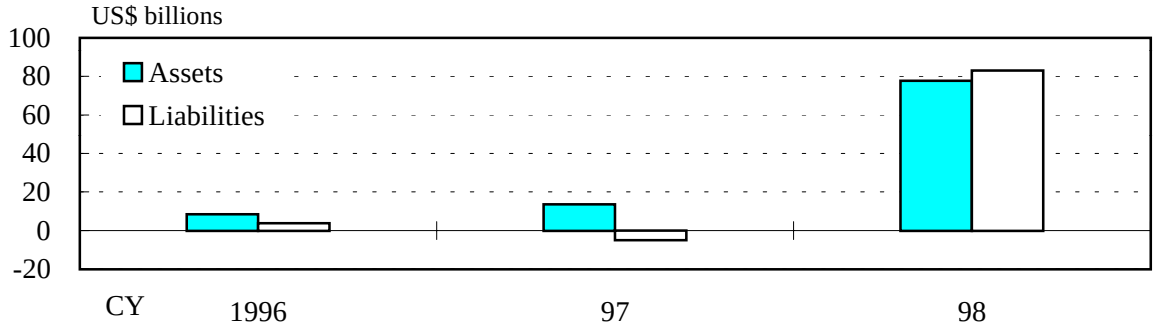
(2) Vis-à-vis France



(3) Vis-à-vis Italy



(4) Vis-à-vis the Netherlands



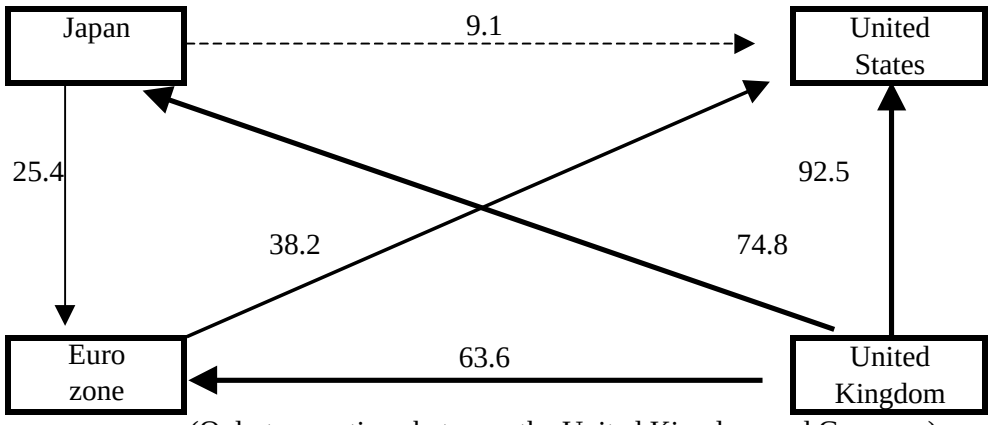
Note: 1. Figures are estimated by subtracting the amounts outstanding of external assets and liabilities vis-à-vis each major country of the euro zone held by Japan, the United States, and the United Kingdom from those held by all BIS reporting countries. Thus, it should be noted that the figures do not provide a pure estimate of transactions among euro zone countries but also include transactions between offshore reporting centers and the major countries of the euro zone.

Sources: See Chart 13.

Chart 15 Net Flow of Funds via the Securities Market between the Euro Zone and Other Countries[1]

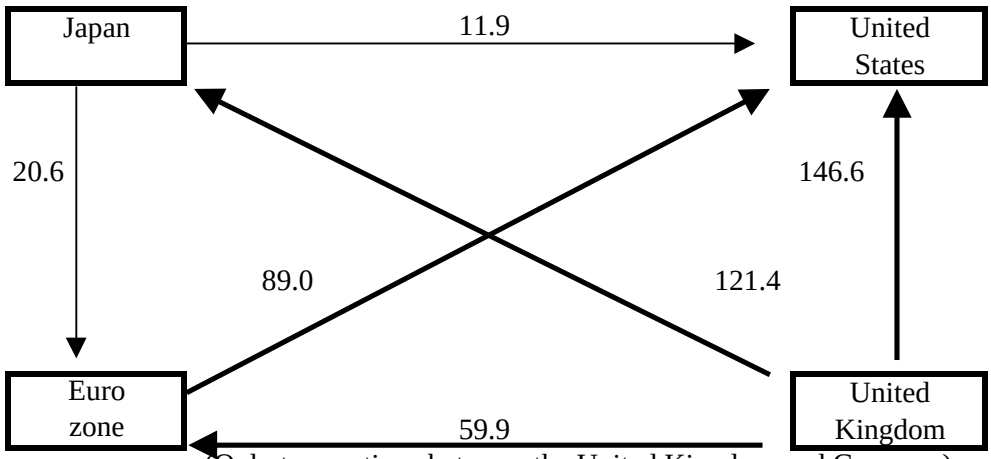
US$ billions

(1) In CY 1996



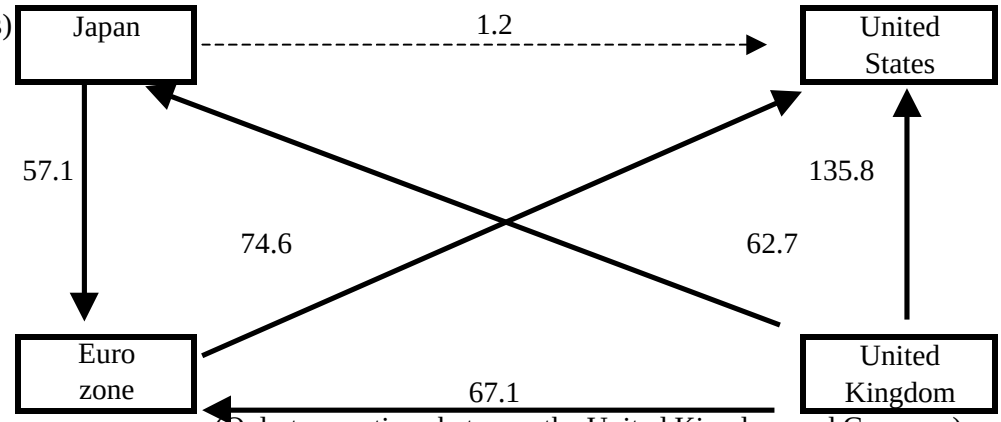
(Only transactions between the United Kingdom and Germany)

(2) In CY 1997



(Only transactions between the United Kingdom and Germany)

(3) In CY 1998
(annualized basis)



(Only transactions between the United Kingdom and Germany)

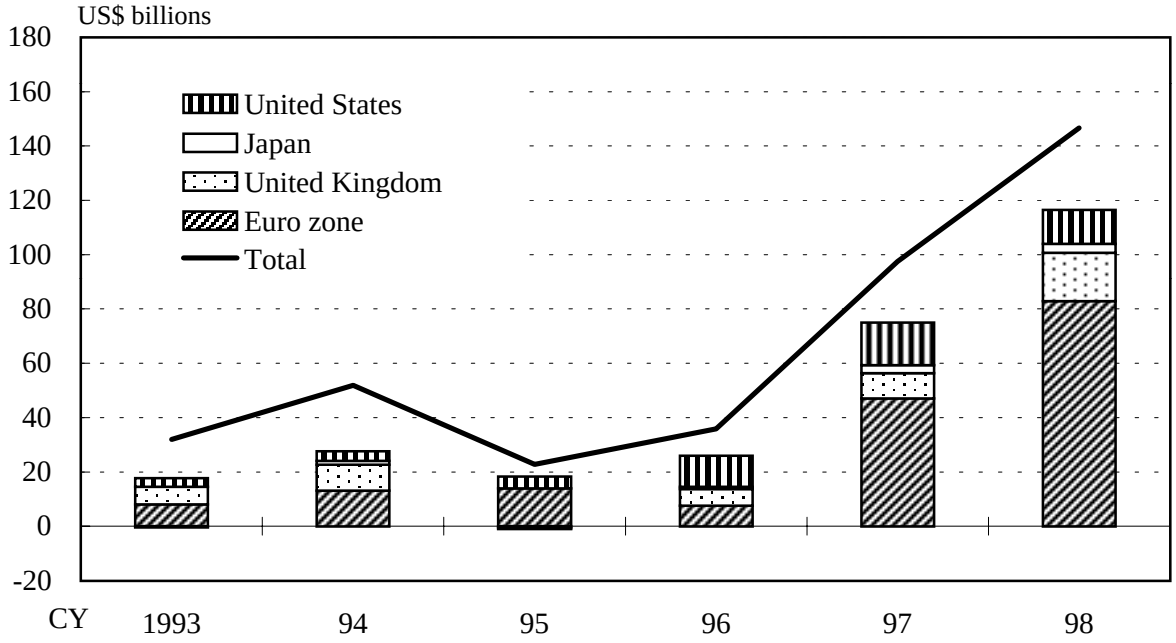
Note: 1. ----- indicates net flow of less than US$10 billion,
——— indicates net flow of over US$10 up to US$30 billion,
═══ indicates net flow of over US$30 up to US$50 billion, and
▬▬▬ indicates net flow of over US$50 billion.

Figures between Japan and the euro zone only include transactions between Japan and seven countries in that zone (Belgium, France, Germany, Italy, Luxembourg, the Netherlands, and Spain).

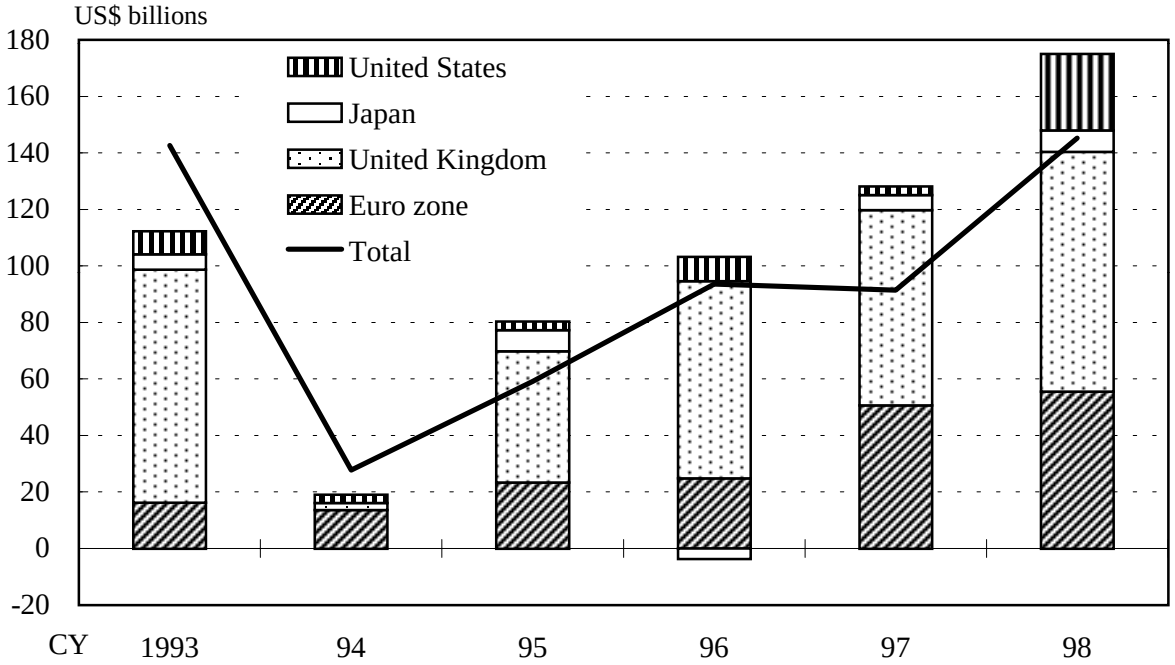
Sources: Bank of Japan, "Balance of Payments Monthly";
U.S. Department of the Treasury, "Treasury Bulletin";
Deutsche Bundesbank, "Balance of Payments Statistics."

Chart 16 German International Portfolio Investment by Region[1]

(1) Portfolio Investment Assets



(2) Portfolio Investment Liabilities



Note: 1. The euro zone excludes Belgium and Luxembourg. Figures are converted to U.S. dollar-denominated values at the exchange rates released by the International Monetary Fund.

Source: Deutsche Bundesbank, "Balance of Payments Statistics."