

Liberalization of Japan's Foreign Exchange Controls and Structural Changes in the Balance of Payments

MITSUHIRO FUKAO

The interdependence of the Japanese economy with the world economy can be seen in Japan's balance of payments and major structural changes in the post-war years. Extremely strict foreign exchange controls were introduced after the Second World War but they have gradually been deregulated since. As a result, Japan's exchange control system is now almost fully liberalized. This paper will review post-war structural changes in the balance of payments, focusing on capital flows, by contrasting such changes with the liberalization of foreign exchange controls. Certain implications of these changes will also be discussed.

I. Introduction

The interdependence of the Japanese economy with the world economy can be seen clearly in Japan's balance of payments and major structural changes in the post-war years. First came the adoption of a fixed exchange rate at ¥360/US\$ in the period immediately following post-war disruption, then the shift to the floating exchange rate system and, finally, the internationalization of financial markets that accompanied the liberalization of foreign exchange controls. This paper will review post-war structural changes in the balance of payments, focusing on capital flows, by contrasting such changes with the liberalization of foreign exchange controls. Certain implications of these changes will also be discussed.

An understanding of the role of foreign exchange controls in maintaining the post-war fixed exchange rate system is necessary with respect to the future course of, and choices for, the international monetary system. Even since the shift to the floating rate system, Japan's exchange controls have at times been strengthened in order to stabilize exchange markets. A review of these instances is also important in considering future foreign exchange policy.

The author would like to thank Akihiro Amano and Michiko Suda for their valuable comments.

The plan of the paper is as follows: Section II discusses some basic subjects that are necessary to understand the relationship between the balance of payments and foreign exchange controls. Section III provides an overview of the foreign exchange control system in the post-war period and structural changes in the balance of payments focusing on capital flows. A somewhat detailed analysis is given concerning the important measures of foreign exchange control policy and their effects. And finally, in Section IV, some policy implications stemming from the previous analysis will be given.

The major conclusions of this paper are as follows:

(1) Re-establishing convertibility of the yen into foreign currencies for current transactions by 1964, Japan became a full participant in the IMF system. Foreign exchange controls at that time were incomparably stricter than today's controls. However, these exchange controls, which were tightened so much that they hindered even current transactions towards the end of the period of the fixed rate regime, were unable to suppress the huge inflow of short-term capital in 1971. In light of this, and considering developments since then with respect to the internationalization of financial markets, it would be almost impossible, even with extremely strong exchange controls, to return to a fixed or semi-fixed exchange-rate regime while at the same time still maintaining monetary policy independent from financial and economic developments in the rest of the world.

(2) Even after the move to floating exchange rates in 1973, relatively tight exchange controls that restricted the movement of private capital continued in the 1970s. As a result, the ratios of foreign assets and liabilities to nominal GNP remained relatively flat through the 1970s, and financial internationalization did not progress much.

(3) The large current account surpluses of 1977-78 had to be absorbed mostly by official dollar purchases (i.e. official intervention), because private capital outflows were restricted by foreign exchange controls. However, this intervention was conducted in a passive manner, following the "leaning against the wind" policy. Therefore, only when the yen appreciated sharply against the dollar were current account surpluses absorbed. Thus, the large appreciation of the yen at this time might have been caused by the combination of foreign exchange controls and policy of passive intervention.

(4) Even after the advent of the floating exchange rate system, Japan continued to implement so-called yen conversion quotas for foreign exchange banks (these quotas were upper limits on the amounts of foreign funds that could be borrowed and converted into yen for domestic use). There is debate whether these controls were necessary and/or effective, since only foreign exchange banks were subject to them at a time when channels for private capital had become diversified. In fact, however, there were relatively effective foreign exchange controls on the non-financial sector during the 1970s. Therefore, the yen conversion quotas were necessary as part of the overall framework of exchange control policy to stabilize the yen exchange rate.

(5) During the 1980s, there was a major expansion in private sector capital move-

ments. There were several reasons for this expansion. First, there was the implementation of the new foreign exchange law which liberalized, in principle, all foreign transactions after the end of 1980. Second, there was an easing of the regulations imposed by the monetary authorities on foreign securities investment by institutional investors. And finally, because of the expansion of international financial operations by foreign exchange banks, there was an expansion of both inward and outward capital flows through them.

(6) Today the internationalization of finance has taken root, and the international raising and investment of funds by corporations has become part of indispensable day-to-day operations. To impose strict foreign exchange controls that can influence the exchange rate in any major way would necessarily result in market disruption. Thus, to effect emergency controls on foreign exchange transactions, as is possible under the New Foreign Exchange Law as presently written, would only be done in exceptional and extraordinary circumstances.

II. The Foreign Exchange Market—Basic Concepts for Analyzing Exchange Control Policy

In order to analyze the effects of exchange control policies, it is essential to understand certain aspects of international finance, such as the relationship of forward and spot exchange rates to interest rate arbitrage, the relationship of foreign transactions to the demand and supply of foreign exchange, etc. This section will give a simple explanation of these basic concepts used to analyze the effects of exchange control policy in the following sections.

A. Spot and forward exchange rates and the interest arbitrage mechanism

Exchange controls, in general, aim at stabilizing the exchange rate through controlling the sale and purchase of foreign exchange that accompany imports, exports, and international capital transactions. They also aim to prevent foreign monetary conditions from influencing domestic markets. In this part, we will consider the relationship between the interest rate differential between a home and a foreign country, and the spread between the spot exchange rate and the forward exchange rate. This relationship is important in considering the effects of exchange controls.

In the foreign exchange market, trading is not only undertaken in foreign currency deposits that can be used immediately but also in foreign exchange that is receivable at some time in the future (forward exchange). Such trading in currency for future delivery is closely related to the lending and borrowing of funds. To explain this we will borrow a diagram from Deardorff (1979), but in order to make the argument more concrete we will think in terms of the current yen-dollar exchange rate, and the future yen-dollar exchange rate. In addition, for the purpose of simplification, we will exclude transaction

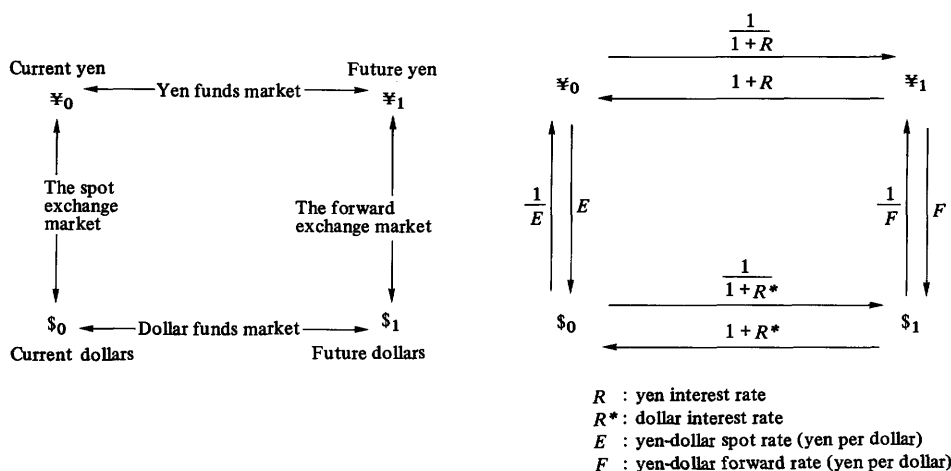
costs.

In the left panel of Figure 1, current yen is labeled $¥_0$, future yen $¥_1$, current dollars $\$0$, and future dollars $\$1$. The exchange rates are the spot rate (e.g. the rate of exchange between yen and dollars at the current point in time) and the forward rate (e.g. the contracted rate of exchange between yen and dollars for a future date but concluded at the current point in time). When a forward contract is entered into, the forward transaction is not settled with respect to the transfer of foreign exchange and the receipt of domestic funds; this happens only at the time specified in the contract and at the predetermined forward contract rate. Simply put, the spot exchange market is for the exchange of yen and dollars today, and the rate of exchange in that market is called the spot rate; and the forward market is for the exchange of yen and dollars in the future and the rate applying there is the forward rate.

Correspondingly, the yen money market is the market in which yen-denominated funds are both invested and borrowed. However, looking at this from another angle, one may also consider this money market as one in which current yen and future yen can be traded. The investment of yen funds may be viewed as exchanging future yen ($¥_1$) for current yen ($¥_0$). The rate of exchange between these two is related to the interest rate in yen markets. Moreover, the dollar money market is where current dollars ($\$0$) and future dollars ($\1) are exchanged. And, the rate of exchange between these two is related to dollar interest rates.

In this fashion, these three markets—that is the foreign exchange market, the yen money market, and the dollar money market—are where current and future values of the yen and dollars can be exchanged. Such transactions give rise to four rates of exchange: between spot yen and dollars, forward yen and dollars, the yen interest rate, and the

Figure 1. Spot and Forward Exchange Rates
and the Covered Interest Rate Arbitrage



dollar interest rate. These relationships are illustrated in the right panel of Figure 1. The figure shows eight arrows. The vertical arrows indicate purchase of the currency (at the tip of the arrow with the currency indicated at the base of the arrow). For example, the arrow pointing from $¥_0$ to $₦_0$ indicates the sale of yen and the purchase of dollars through the yen-dollar spot market. The symbols next to the various arrows indicate the price of purchasing one unit of currency (as indicated at the tip of the arrow) in terms of units of the currency indicated at the base of the arrow. In the case of selling yen and purchasing dollars, E expresses the spot exchange rate for \$1 in terms of yen. Therefore, the opposite case of buying yen and selling dollars going from $₦_0$ to $¥_0$ is indicated by the exchange rate $1/E$, which is the inverse of the rate mentioned above. In a similar manner, F is the current forward yen rate for purchasing \$1.

Next, let us look at the horizontal arrows. The one going from $¥_0$ to $¥_1$ indicates the investment of yen funds and expresses the act of buying future yen with current yen. As is written above this arrow, one yen at a time in the future may be purchased at the present for one yen discounted by the nominal interest rate, i.e. the yen interest rate R is included in the interest rate factor $1/(1+R)$, which is the price of purchasing one yen in the future.¹ The reverse arrow going from $¥_1$ to $¥_0$ illustrates the purchase of current yen with future yen and corresponds to borrowing yen. Thus, the price that measures the value of one current yen in terms of future yen is, as indicated above the arrow, the interest rate factor $1+R$. An exactly identical relationship holds in the market for dollar funds where current dollars $₦_0$ and future dollars $₦_1$ are exchanged.

As can be seen from the above example, transactions in yen funds (exchange of $¥_0$ and $¥_1$) can be accomplished through the circuitous route of going through three separate markets—the spot exchange market ($¥_0$ and $₦_0$ exchange), the dollar funds market ($₦_0$ and $₦_1$ exchange), and finally the forward market ($₦_1$ and $¥_1$ exchange). For example, a transaction that purchases future yen in return for current yen, that is the investment of yen funds or going from $¥_0$ to $¥_1$, could be carried out as follows. First, current yen would be used to purchase current dollars ($¥_0$ to $₦_0$ in the spot exchange market). Next, the dollar proceeds could be used to purchase future dollars ($₦_0$ to $₦_1$, i.e. investment in dollar funds). And finally, the future dollars could be used to purchase future yen ($₦_1$ to $¥_1$, i.e. the forward purchase of yen). In this way, transactions that are the de facto investing and borrowing of yen funds may be carried out through the use of forward transactions in the exchange market. These transactions are covered interest rate arbitrage transactions in the broad sense of the term. Therefore, the choice between investing funds in the yen market itself and investing them through the circuitous route using the three markets described above is determined by looking at the degree of divergence

¹The interest rate here, R , must be considered along with the maturity of the transaction in question. For a three-month forward transaction, an annual interest rate of 5% has to be converted into a three-month rate of 1.25% ($=5 \times 3/12$).

between the spot exchange rate and the forward exchange rate (the spot-forward spread) and the interest rate differential between yen and dollars.

The profitability of interest rate arbitrage transactions that are covered by forward exchange is illustrated by using the right panel of Figure 1. For example, let us consider the case of simply investing yen funds and the circuitous alternative of purchasing dollar funds, investing them, and then repurchasing yen funds through a forward exchange contract. For simplicity, we will exclude transaction costs.

Investing yen funds directly

The price of future yen in this case P_1 , is the price of going from ¥₀ to ¥₁ in the notation above:

$$P_1 = 1/(1+R). \quad (1)$$

The circuitous route: purchasing dollars and repurchasing yen forward

The price of one future yen in this case is P_2 and indicates going from ¥₀ to \$₀, then from \$₀ to \$₁, and finally from \$₁ to ¥₁. In terms of the notation above, the price of future yen via this route is:

$$P_2 = E \cdot 1/(1+R^*)1/F. \quad (2)$$

If $P_2 < P_1$, then it is more advantageous to use equation (2) i.e. changing yen into dollars, investing in dollars, and returning to yen, than it would be to invest directly in yen. It is important to note that there is absolutely no exchange rate risk whatsoever in the second route. When this transaction is implemented, one does indeed buy current spot dollars, but these are immediately hedged through the sale of forward dollars in the forward exchange market, so that no exchange rate risk with respect to the future value of the dollar arises. Therefore, when P_1 and P_2 differ by more than transaction costs, one can undertake interest rate arbitrage transactions without risk and earn the interest rate differential. In such cases, a transaction as described above will occur. Moreover, if there are no exchange controls on spot and forward exchange markets and no controls on either yen or dollar fund markets, then the spot or forward exchange rates or domestic or foreign interest rates will change in a way that eliminates the divergence. Therefore, the right-hand sides of equations (1) and (2) above can be equated, leading to the so-called covered interest rate arbitrage condition.² This condition may be stated as follows:

$$F/E = (1+R)/(1+R^*).$$

²Several other conditions are necessary for the interest rate arbitrage condition to be established, in addition to the absence of foreign exchange controls at the time of the transaction. These other conditions include i) the expectation at the time of the futures contract that no foreign exchange controls will be imposed that would make implementation of the contract difficult, and ii) the tax system treats interest earnings, interest payments, and the capital gain or loss from spot-forward spreads equivalently.

This equation may be restated by subtracting 1.0 from both sides and rearranging as follows:

$$(F-E)/E=(R-R^*)/(1+R^*).$$

When value R^* on the right hand side is small (e.g. with an annual dollar interest rate of 8% the three-month dollar interest rate would be $0.08 \times 3/12 = 0.02$) then the following approximate interest rate arbitrage condition (or interest rate parity condition) may be obtained.

$$(F-E)/E=R-R^*. \quad (3)$$

This condition states that the divergence between the dollar spot rate and forward rate (annual rate) is equal to the differential (annual rate) between the yen interest rate and the dollar interest rate.

Care must be taken because the transaction costs of both the lending and exchange transactions were ignored in deriving this formula. Therefore, it is quite common for there to be a small deviation from interest rate parity, even in the absence of exchange controls.

In actual covered interest arbitrage transactions, it is very rare for spot or forward transactions to be carried out separately. Rather, the normal case is a so-called swap transaction, in which a spot dollar purchase is combined with a forward dollar sale (¥_0 to $\$0$ and $\$1$ to ¥_1) or a spot dollar sale is combined with a forward dollar purchase ($\$0$ to ¥_0 and then ¥_1 to $\$1$). Such spot-forward swap transactions are usually considered foreign exchange transactions, but at the same time can be thought of as combinations of yen and dollar lending and borrowing, as seen in the right panel of Figure 1, where the following relationships are evident.

i) A spot dollar purchase and a forward dollar sale (¥_0 to $\$0$ and $\$1$ to ¥_1) is exactly the same as investing yen funds and borrowing dollar funds (¥_0 to ¥_1 and $\$1$ to $\$0$).

ii) A spot dollar sale and a forward dollar purchase ($\$0$ to ¥_0 and ¥_1 to $\$1$) is identical to borrowing yen funds and investing in dollars (¥_1 to ¥_0 and $\$0$ to $\$1$).

Thinking in this way, one can see that spot-forward swap trading is, in fact, the same as borrowing and investing, and therefore that the spread, which is the deviation of the spot rate from the forward rate, plays the same role as the yen-dollar interest rate differential.

B. Balance of payments and the demand and supply of foreign exchange

The balance of payments is very closely related to the demand and supply of foreign exchange, but the two are not identical. Let us next consider the relationship between them.

The foreign exchange market is usually defined in two ways—a narrow definition being the interbank market in which foreign exchange transactions are carried out among

banks and a broader definition that includes transactions between banks and non-bank customers in addition to interbank transactions. The object of transactions in this market, so-called "foreign exchange", is deposits denominated in foreign currencies or claims on such deposits. However, this concept of foreign exchange does not adequately capture the various pressures on demand and supply that affect the exchange rate. This is because foreign currency deposits are managed together with other foreign currency-denominated assets and liabilities by firms and financial institutions. In the following, we will use a broader concept of foreign exchange: the net asset-liability position in the foreign currency. We will think of "foreign exchange" in its broader sense of net holdings of foreign-currency denominated assets and liabilities. Moreover, in order to understand the macro demand and supply of foreign exchange, we will think of the foreign exchange market as being that in which foreign currency-denominated assets and liabilities are exchanged for domestic currency assets and liabilities. (The analysis that follows is given in detail in Fukao (1983).)

At first glance, this definition of foreign exchange appears not to include forward positions in foreign currency. However, a forward transaction can be seen, as shown in Figure 1, to be a spot transaction plus a combination of two investment transactions, i.e. the forward purchase of the dollar ($¥_1$ into $\$1$) is a combination of borrowing funds in yen ($¥_1$ to $¥_0$), a spot dollar purchase ($¥_0$ into $\$0$), and finally an investment in dollars ($\$0$ to $\$1$). The value of the two investments should be the same. In the analysis of the demand and supply of foreign exchange that follows, the net forward position (including claims to receive dollar payments in the future and obligations to make payments in dollars incurred through export and import contracts) will be included in the net asset-liability position after decomposed into these three transactions.³

In this way, the foreign exchange market will be considered in a broad sense—a market in which various economic agents buy and sell their overall spot-forward positions. In analyzing equilibrium in the foreign exchange market so defined, it is convenient to utilize the balance sheets as simplified in Table 1. In this table the world comprises two

³As seen above, the forward market for foreign exchange is essentially equivalent to a combination of the spot foreign exchange market and two lending markets in different currencies. For this reason, all transactions in forward markets are converted into spot transactions, so that, for the purpose of analysis, the forward market can be ignored. At this point, it is important to pay attention to the fact that when a forward dollar position of a Japanese resident is converted into a spot position, the value of this forward position must be discounted at the actual interest rate that is being paid by that resident. In particular, when there are exchange controls on the borrowing of foreign currencies by residents, the actual interest rate on dollars domestically exceeds that paid abroad by a considerable margin, so that forward dollars must be discounted considerably before converted into spot dollars. Similarly, the forward yen positions of a non-resident must be discounted by the actual yen interest rate he faces. When there are no exchange controls, all forward positions can be discounted by the interest rates of respective currencies and added to the spot position. In this case, such conversion permits a considerable simplification of the classical analysis of the Tsiang-Sohmen model. For more on this point, see Fukao (1983, 1985).

Table 1. Simplified Asset and Liability Table

	Sector				Total
	Japan		United States		
	Monetary authorities	Others	Monetary authorities	Others	
Yen denominated assets	$Q_{¥}^j$	$Y_{¥}^j$	$Q_{¥}^u$	$Y_{¥}^u$	0
Dollar denominated assets	$EQ_{\j	$EY_{\j	$EQ_{\u	$EY_{\u	0
Total	0	B^j	0	B^u	0

Q : Net financial assets held by the monetary authorities

Y : Net financial assets held by other sectors

B : Net foreign financial assets held by other sectors

Superscript j : Japan

Superscript u : United States

Subscript $¥$: Yen denominated instruments

Subscript $\$$: Dollar denominated instruments

E : The price of 1 dollar in yen.

countries, the United States and Japan, and there are only two currencies, the dollar and the yen. Below the name of each sector, net financial assets held are listed on a currency-by-currency basis. If it is a net asset position, it has a plus sign; if it is a net liability position, it has a minus sign. For both Japan and the United States, a distinction is made between the monetary authorities and "other sectors"; the latter is the sum of the private sector and government bodies besides the monetary authorities. We will assume that these other government bodies do not hold foreign assets or liabilities.

Looking at the vertical columns in the table, one can ascertain the net asset position for each sector in each currency. For both the monetary authorities in Japan and the United States, we shall disregard physical assets and net worth from the balance sheet, so that both will show net financial asset holdings of zero. For "other sectors" in both countries, the net financial assets held will correspond to the difference between accumulated savings on the one hand and accumulated investments and accumulated government deficits on the other (i.e. the accumulated IS balance). This amount will be equal to net foreign assets (which is the accumulated current account balance on a contract basis, adjusted by capital gains and losses). These relationships may be more easily understood as follows. From the saving-investment relationship in national income accounts, the sum of private investment (I), the government deficit ($G-T$), and the current account balance (BC) must be equal to private sector savings (S), i.e.,

$$S = I + (G - T) + BC. \quad (4)$$

Accumulating both sides backwards indefinitely, one derives the formula that private sector net asset holdings (W) are equal to the sum of physical capital stock (K), net

government bonds outstanding (D), and net foreign assets (B). Thus, the following formula also holds:

$$W = K + D + B$$

or

$$B = W - K - D. \quad (5)$$

Thus, the net foreign asset position is equal to the difference between accumulated savings on the one hand and capital stock and net government bonds on the other, and changes only slowly over time.⁴

Balance sheet adding-up constraints force the following relationships to be true.

$$Q_{¥}^j + EQ_{\$}^j = 0 \quad (6)$$

$$Y_{¥}^j + EY_{\$}^j = B^j \quad (7)$$

$$Q_{¥}^u + EQ_{\$}^u = 0 \quad (8)$$

$$Y_{¥}^u + EY_{\$}^u = B^u \quad (9)$$

For example, equation (6) shows the balance sheet of the Japanese monetary authorities. Its net dollar denominated assets (foreign exchange reserves) are $Q_{\j and other financial assets and liabilities on a net basis in yen terms, $Q_{¥}^j$. For Japan's monetary authorities, net dollar-denominated assets will be positive and net yen-denominated assets (i.e. yen-denominated assets minus yen-denominated liabilities) negative.

This table also describes the demand and supply for financial assets in various currencies, as seen in the rows in the table. For example, when one sector holds yen-denominated assets, another sector must always hold yen-denominated liabilities. For this reason, summing the lines horizontally across the table necessarily yields zero. That is, the following equilibrium conditions in asset markets must hold:

$$Q_{¥}^j + Y_{¥}^j + Q_{¥}^u + Y_{¥}^u = 0 \quad (10)$$

$$Q_{\$}^j + Y_{\$}^j + Q_{\$}^u + Y_{\$}^u = 0. \quad (11)$$

Equation (10) is the equilibrium condition for yen-denominated assets, and equation (11) is the equilibrium condition for dollar-denominated assets. In the latter equation, the common exchange rate coefficient, E , is eliminated by division.

⁴Exactly speaking, the net asset position in this analysis includes export and import contracts. Therefore, net asset position B in this table is equal to ordinary net assets plus outstanding export contracts minus outstanding import contracts. For details see Fukao (1983, pp.66-68).

Moreover, for the world as a whole, net aggregated financial assets held are equal to zero (since someone's assets must equal someone's liabilities). Thus, the following equation holds:

$$B^j + B^u = 0. \quad (12)$$

The balance sheet identities expressed in equations (10) and (11) are not independent because of equation (12). To see this, one may take equation (10) and eliminate variables $Q^j_{¥}$ and $Y^j_{¥}$ using equations (6) and (7) in order to obtain the following important equation:

$$B^j = EY^j_{\$} - Y^u_{¥} + EQ^j_{\$} - Q^u_{¥}. \quad (13)$$

This equation can be interpreted as the equilibrium condition for the foreign exchange market, that is the market in which each economic agent buys and sells foreign-currency denominated assets so as to change his net overall position. This interpretation can be understood by noting that the first and third terms on the right side of equation (13) ($Y^j_{\$}$ and $Q^j_{\$}$) correspond to the net overall position of its "other sectors" of Japan (the private sector) and its monetary authorities, while the second and fourth terms ($Y^u_{¥}$ and $Q^u_{¥}$) correspond to the net overall position of "other sectors" of the United States and its monetary authorities. The adjustment of these net overall positions must be satisfied within the constraint imposed by equation (13). If, for example, the monetary authorities of both Japan and the United States did not hold any foreign currency positions, then the two terms $Q^j_{\$}$ and $Q^u_{¥}$ would be equal to zero. If the accumulated current account balance of Japan were in surplus, then B^j would be positive and this situation would require either that the private sector in Japan hold a long dollar position ($Y^j_{\$} > 0$) or that the United States private sector hold a short yen position ($Y^u_{¥} < 0$) in order to finance Japan's surpluses.

The private sectors of both countries will adjust their net overall positions $Y^j_{\$}$ and $Y^u_{¥}$ in accordance with their expectations of exchange rate changes and interest rate differentials between the two countries. This is where foreign exchange control comes in. Foreign exchange control is the attempt to influence the demand and supply for foreign exchange through such means as controls on foreign investment or on foreign borrowing, or alternatively the suppressing of interest rate arbitrage, either covered or uncovered. Alternatively, intervention by the monetary authorities in the foreign exchange market is an operation that attempts to influence foreign exchange demand and supply through direct changes in terms $Q^j_{\$}$ and $Q^u_{¥}$ in equation (13).

III. Liberalization of Foreign Exchange Controls and Structural Changes in the Balance of Payments

Extremely strict foreign exchange controls were introduced after the Second World War but which have gradually been liberalized since. In this section, the theoretical framework previously outlined will be used to analyze the effects of post-war foreign exchange policy. We will also give an overview of the effects that these policies have had on the structure of Japan's balance of payments and exchange rate fluctuations. Supplement A gives an outline of exchange controls in the post-war period.⁵

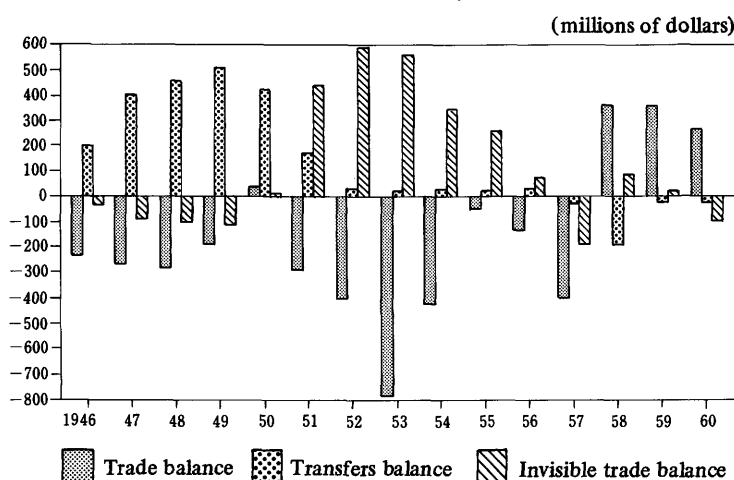
A. From the end of the Second World War until 1964: exchange controls on current transactions and the foreign exchange budget system

In this period when the Japanese economy was recovering from total disruption, very strict controls were imposed on all overseas transactions, not only on capital transactions but also export and import transactions. Foreign exchange was concentrated in the hands of the government and that received for exports was allocated for import payments through the foreign exchange budget system. In what follows, we will give an overview of the period from the end of the war until 1964, when the foreign exchange budget system was abolished and current transactions such as exports and imports were liberalized.

Following defeat in August 1945, Japan was occupied by the allied powers. The general headquarters (GHQ) of the occupying armies put all overseas transactions under control so that all exports and imports were conducted through it and the Japanese government. Since exports were not growing, aid from the United States was essential to import food and other indispensable items. A look at Japan's balance of payments tables from this period (see Figure 2) shows a deficit in the trade account offset by huge surpluses in transfers (corresponding to aid from the United States). With high inflation rates in the post-war years it was impossible to establish a stable exchange rate. At this time, the government adopted a multiple exchange rate system, setting rates for exports at a depreciated rate to encourage them while setting certain import rates at an appreciated level to hold down increases in the cost of living. Under this system, Japan posted net imports with the rest of the world. However, the amount that the government paid to purchase export goods exceeded the amount received from the sale of imported goods in the domestic market; when the Bank of Japan granted credit to make up the difference, inflation ensued.

⁵The following description of exchange controls and balance of payments developments depends on many sources, including Hayami (1977), Bank of Japan (1985, 1986), Fujita (1987), Economic Planning Agency (1984), Komiya and Suda (1983a, 1983b), and Ministry of Finance (1988). Regarding foreign exchange controls under the old foreign exchange control law, a detailed account is given in Ministry of Finance, *First International Finance Bureau Yearbook*, Chapter 4 "Foreign Exchange Control Policy," 1977.

Figure 2. Japan's Balance of Payments, 1946 – 60



However, the confusion of the post-war period ameliorated gradually, and the U.S. government, facing a cooling of relations with the Soviet Union, took the policy of substantially increasing its economic aid to Japan, reducing reparations to the minimum, and encouraging speedy economic recovery. As a result of these policies, production once again resumed growth. Taking this opportunity, and in an effort to reduce post-war inflation, GHQ ordered a very strict fiscal and monetary contraction and the introduction of a single exchange rate—the so-called “Dodge Line” plan (named after GHQ’s fiscal counsellor). In March 1949, the operation of overseas transaction controls and foreign exchange reserves was transferred from GHQ to the Foreign Exchange Control Board established within the Japanese government, and in April of the same year a single exchange rate of ¥360/US\$ was established. The Foreign Exchange Control Board was abolished in 1952, and management of foreign exchange control and reserves was transferred to the Ministry of Finance. With the recovery of the Japanese economy, the foreign trade responsibility was then transferred back to the private sector with permission for exports by private parties being granted in December 1949, and that for imports in January 1950.

Parallel with this was the reorganization of foreign exchange controls. In December 1949, the Foreign Exchange and Foreign Trade Control Law was promulgated (also known as the “old” Foreign Exchange Law, because it was overhauled completely in December 1980), under which foreign exchange transactions were prohibited in principle and permitted only in exceptional cases according to directives and notifications from government ministries. Under this law, a policy of foreign exchange concentration was adopted which, in principle, forbade the holding of foreign exchange by private parties (this system was introduced in June 1950 and continued in a modified form until May 1972). Under this system residents who obtained foreign exchange were required to

immediately sell to the monetary authorities through authorized "foreign exchange banks." At first, exchange rates between clients and banks and also between banks and the government were fixed officially, as a result of which all foreign exchange holdings were concentrated to the government at the official rate. Under such system, there was no room for a foreign exchange market. Then, in June 1952, domestic foreign exchange banks were allowed, up to a certain limit, to hold foreign exchange deposits with overseas banks,⁶ and the settlement of export and import transactions was carried out through these accounts (this was a shift in concentration only of banks' net foreign exchange balances along with the conclusion of correspondent relationships). Together with these developments, the Tokyo foreign exchange market was reopened as the venue for foreign exchange banks to adjust overall foreign exchange balances. In this market, the rate of exchange between the government and foreign exchange banks was set at ¥360.35/US\$ for sales and ¥359.65/US\$ for purchases (from the viewpoint of the government). This very narrow ¥0.70 differential was also maintained for interbank transactions, and quantities transacted were very, very small.⁷ At this point, the government only engaged in passive transactions at the official rate and did not carry out any active intervention in the market.

Once private parties were permitted to engage in exports and imports, it was possible for rather large sums to move across borders by varying the timing of payment for imports and receipt of proceeds from exports. In order to control such leads and lags, a regulation was promulgated in November 1950 which established time limits for the settlement of import and export proceeds. This system was called the standard settlement system, and was gradually relaxed until the end of 1980 when the New Foreign Exchange Law was implemented. Even after the 1980 law, some controls remain with respect to special settlement methods, currently including the approval of prepayments and advance receipts of more than two years, and the cancelation of offsetting claims and debts.

The foreign exchange holdings that became concentrated in the government under this system were allocated for foreign payments on a quarterly basis starting in January 1951 through the foreign exchange budget system (semi-annual basis from fiscal 1952 and abolished in April 1964). Moreover, the conversion of yen obtained by non-residents into foreign exchange was strictly restricted so that the holding of yen-denominated assets by non-residents (assets such as yen cash and yen deposits) was very limited. In May 1950, a foreign investment law was adopted which regulated inward investment in forms such as direct investment and technology introduction (this law was abolished in 1980 and related provisions were incorporated into the New Foreign Exchange Law of 1980).

Under these circumstances, private sector capital movements were, in effect, prohi-

⁶At this time, there was a prohibition, in principle, on foreign exchange banks having short spot positions. This is related to the yen conversion quotas of a later period.

⁷In January 1953, the band was widened from ¥0.70 to ¥1.60 with band limits of ¥360.80 and ¥359.20. In September 1959, it was widened again to 0.5% above and below IMF parity.

bited. The net foreign exchange position of the Japanese private sector and the net yen position of the overseas private sector were both very close to zero. Moreover, foreign monetary authorities held almost no yen in their foreign exchange reserves because of its extremely limited convertibility, and hence the yen positions of foreign monetary authorities were also close to zero. Therefore, using the foreign exchange market equilibrium condition of equation (13) in Section II, we have the following simple relationship

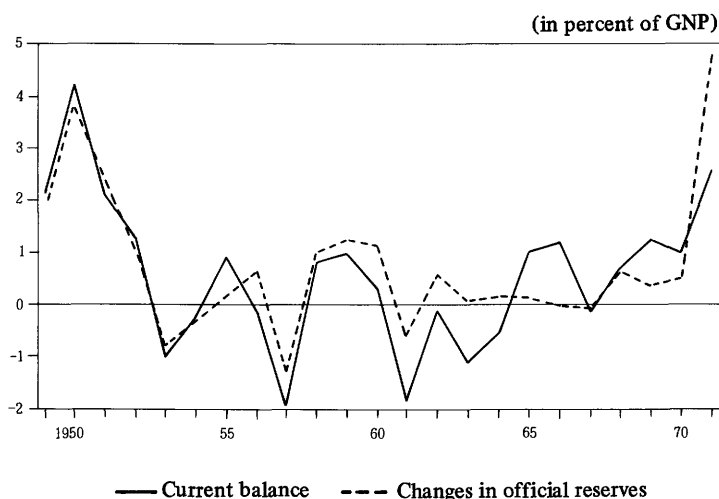
$$B^j = EQ^j_{\$}, \quad (14)$$

i.e., the foreign exchange reserves of Japan were equal to accumulated current account balances. Looking at a specific period, one would see that the increase in official reserves is almost identical to the current account surplus for the same period.

In fact, as seen in Figure 3, movements in the current account balance were almost identical to the increase in foreign exchange reserves from just after the war until 1962. This demonstrates that the movement of private capital was extremely small. Though Japan's current balance was in surplus from 1947 through 1952, it had peculiar composition: trade deficits continued, but until 1950 there were large transfer surpluses in the form of U.S. aid, and from 1951 to 1952 huge special procurements by the United States due its involvement in the Korean War, both of which brought the overall current account into surplus. Under these circumstances, Japan obtained IMF membership in August 1952 and was therefore able to obtain IMF funding when it experienced balance of payments difficulties. Moreover, at the same time, Japan accepted the obligation of maintaining an exchange rate band of $\pm 1\%$ around the parity of ¥360/US\$.

With the reduction in Korean war-related demand and the overheating of the Japanese domestic economy in 1953, the current account turned to post a deficit. These

Figure 3. Japan's Balance of Payments, 1949 – 71



difficulties were overcome with borrowings from the IMF and a tight money policy. Thereafter, the current account balance had a tendency to go into a deficit during times of cyclical expansion, and IMF borrowing was effected as well as tight money policy in 1957.

Thus, in the post-war period, Japan repeatedly experienced a shortage of foreign exchange reserves. This was the reason for the maintenance of strict foreign exchange control through the foreign exchange concentration system and the foreign exchange budget system. Under this system, it was possible for the monetary authorities to maintain the fixed exchange rate so long as the current balance was officially financed by a change in foreign exchange reserves or borrowings from the IMF. However, this system became inconvenient with the growth of the Japanese economy and the expansion of transactions with foreign countries.

B. From 1964 to 1973: exchange control under the IMF system

This section deals with the period from 1964, when Japan abolished exchange controls on current overseas transactions, until 1973, the year of the shift to the floating exchange rate system. The abolition of exchange controls on overseas current transactions such as exports and imports in 1964 was taken against the background of extremely rapid economic growth. Pure capital transactions with overseas partners continued to be restricted, but capital movements related to so-called leads and lags became very conspicuous as exports and imports expanded. As a tendency for the current account to show a surplus emerged in the latter half of the 1960s, upward pressure on the yen strengthened. And, in the summer of 1971, despite strict exchange controls, expectations for a revaluation of the yen resulted in the huge inflow of short-term capital and the yen floated for a short period. With the Smithsonian Agreement at the end of the year, a temporary return to fixed rates occurred, but floating exchange rates resumed in the spring of 1973. Thus, the original IMF system with its freedom of current transactions and fixed exchange rates did not continue for very long.

1. Liberalization of exchange controls on current transactions and partial return of yen convertibility

After post-war reconstruction, the Japanese economy grew rapidly despite temporary balance of payments problems. During this period exports and imports expanded tremendously, and, in June 1960, the government introduced a "trade and exchange liberalization plan" with the goal of becoming a OECD member and achieving Article VIII status in the IMF. The shift to Article VIII status would mean the abolition of exchange controls on current transactions that were permitted during the Article XIV status period. Moreover, OECD membership would mean not only the liberalization of capital flows accompanying current transactions but also the gradual liberalization of pure capital transaction (see Ministry of Finance, International Finance Bureau Year-

book, 1977, p. 89).

The first step came in July 1960 with the establishment of free yen accounts for non-residents. As a result, non-residents were able to deposit yen, received either through current transactions with Japan or through the sale of foreign exchange, into these accounts and such deposits could be freely converted back into foreign currencies. The reverse side of this coin, however, was that other yen balances could not be converted freely into foreign exchange. It also meant, at the same time, the introduction of yen exchange for use in settling trade transactions through the transfer of free yen deposits.

The next step toward abolition of exchange controls on current transactions was the beginning of official foreign exchange market intervention in April 1963. Until this time, the government's special foreign exchange account had passively bought and sold all foreign exchange with foreign exchange banks at the official rate. But, after this change, the exchange rate was free to move within $\pm 0.75\%$ around ¥360/US\$, the IMF parity, so that the monetary authorities could flexibly intervene within this range to establish equilibrium. Also at this time, the legal controls on spot exchange rates between banks and clients were abolished. Because of these changes, the Tokyo foreign exchange market grew rapidly.

In April 1964, three years after Western European countries such as the United Kingdom and West Germany, Japan became an Article VIII country and abolished exchange controls on current transactions as well as the foreign exchange budget system, and permitted tourist travel. Through these measures, the conversion of yen into foreign currencies became quite free, if for the purpose of importing goods or services. At the same time, Japan became an OECD member. With the abolition of foreign exchange controls on current transactions, there naturally followed a certain liberalization of capital transactions intertwined with exports and imports. For example, in shipbuilding and other industries in which production starts once orders have been received, there are instance in which export payment is received before actual delivery, which is, therefore, a *de facto* capital inflow. For other exports, there are cases when long-term export financing is made available in order to make transactions more advantageous, meaning corresponding capital outflows. On the import side, prepayment (capital outflow) and postponed payment (import usance, a capital inflow) also occur. Such capital transactions related to current transactions are essential for smooth trading relationships and therefore increased through the 1960s as the scale of Japanese trade rose, despite the control exerted through the above-mentioned standard settlement system.

However, an increase in capital transactions related to current transactions had made it possible for the private sector to change its foreign exchange holdings substantially. When confidence in parity was maintained, current account imbalances could be financed to a certain extent automatically by private capital movements. In fact, until 1970, movements in official foreign exchange reserves were smaller than current account imbalances, evidencing that private capital flows did finance current account imbalances

to a certain extent (see Figure 3 and Nishihori, 1972), i.e. so long as there was confidence that the IMF parity would be maintained, then the exchange rate risks were limited to $\pm 0.75\%$ around parity. If for example, the interest rate for borrowing yen domestically is higher in nominal terms than the rate for borrowing dollars, then it will be advantageous to borrow dollars without forward covering. And, in fact, in the 1963-64 period, when the current account balance went into a deficit and tight monetary policy was adopted, both long- and short-term capital inflows occurred to arbitrate the interest rate differential between foreign and domestic markets; official intervention was limited.

2. *The mechanism of short-term capital flows*

Capital flows arising from uncovered interest rate arbitrage can occur in two forms. i) Capital flows that are genuinely uncovered, such as changes in import usance in foreign currency terms, changes in the foreign currency-denominated advances on contracted exports, or changes in the free-yen deposits of non-residents. Such transactions are the direct arbitrage of nominal interest rate differentials between domestic and foreign markets and do not require explanation. ii) Flows that are covered transactions in themselves but where the counterparty is effectively performing uncovered interest arbitrage. Examples include import usance with forward cover and spot-forward swaps by banks (explained below). Because of the importance of these transactions for understanding the effectiveness of foreign exchange controls, we will explain them in detail.

Let us assume that the short-term interest rate for yen funds in Japan is 8% and that the short-term interest rate in the dollar financial market in the United States is 4%. With a four percentage point interest rate differential and the expectation that fixed exchange rates will be maintained, it is advantageous to borrow dollar funds rather than yen ones; and advantageous to invest in yen assets rather than dollar ones. This situation would generate uncovered capital inflows into Japan in the first form as seen above, and also contribute to direct dollar sales and yen purchase pressure in the spot exchange market. Moreover, as seen in equation (3) in Section II, covered interest rate arbitrage transactions tend to set the forward exchange rate for the dollar at a 4% annual premium vis-à-vis the spot rate (appreciation of the forward dollar). In other words, if the forward premium for the dollar is less than 4% at an annual rate, covered interest rate arbitrage transactions would give rise to profits without exchange risk and covered short-term capital inflows would continue. However, under the fixed exchange rate system of Japan at that time, the fluctuation limit for the spot yen-dollar exchange rate was kept at $\pm 0.75\%$, around the IMF parity for a total of 1.5%. Therefore, a 4% premium would mean that either the spot rate or the forward rate would have to exceed these fluctuation limits beyond a period of 4 1/2 months ($12 \times 1.5/4 = 4.5$). Since the spot exchange rate was kept within the fluctuation range by intervention, this meant that the forward rate exceeded the upper limit. In such cases, exporters, who in the future would have to sell dollars, would certainly benefit from selling dollars forward at a good price, rather than

waiting until that future time and selling spot. Because of this, there would be sales of forward dollars and purchases of yen, as well as covered short-term capital inflows corresponding to these transactions. The foreign exchange banks that usually were the counterparties in these transactions would buy dollars forward with yen. But, in order to hedge, they also borrowed dollars and sold them spot for yen. Such transactions by foreign exchange banks in which they would sell spot dollars for spot yen and buy forward dollars for future yen (spot-forward swaps) were called yen conversion transaction ("enten" in Japanese), because they arose from borrowing dollars and converting them into yen for investment. Yen conversion by foreign exchange banks was interest rate arbitrage that was covered in the forward markets, and which did not affect banks' net overall positions. In this sense, these were not speculative transactions. However, looking at both the forward market yen purchases of exporters and the interest rate arbitrage transactions of foreign exchange banks, one sees a combination of pressure for dollar sales and yen purchases, and at the same time downward pressure on yen interest rates because of the supply of yen funds into yen financial markets. In theory, such yen conversions could be made by anyone who could borrow forward-covered foreign exchange, but in practice transactions costs were very high for all parties other than foreign exchange banks. In addition, foreign exchange controls on the non-financial sector were extremely strict so that only a very limited number of agents other than foreign exchange banks could make such transactions, agents such as importers who could obtain import usance.

3. *Monetary policy and short-term capital flows*

Capital flows through these channels were one factor in making the independence of monetary policy under the fixed exchange rate system difficult to maintain. If there had been no exchange controls on such capital transactions, then capital inflows through the two forms of uncovered transactions would have resulted either in the virtual total elimination of interest differentials, or abandonment of the fixed exchange system by the monetary authorities. Such short-term capital flows were seen in large amounts during the monetary tightening periods after June 1961 and August 1967. In order to control such capital flows, the monetary authorities put strict limits on pure capital transfers and also limits on the period of import and export usance that accompanied current transactions. When fund inflow pressure was very strong, the authorities also exerted control over foreign exchange banks in the form of limits on the outstanding amounts of short-term borrowings from abroad through yen conversion quotas.^{8,9}

⁸Foreign exchange banks were subjected, after July 1961, to an upper limit on the interest rate that could be paid for borrowing foreign short-term funds; this was a means to suppress such borrowing (this limit was lifted in July 1966). In addition, in June 1962, the so-called "Foreign Exchange Reserve System" was introduced, under which foreign exchange banks were required to maintain a certain percentage of liquid foreign currency assets vis-à-vis their Eurodollar and free yen deposit liabilities to non-residents and other short-term foreign

Measures to control yen conversion worked toward creating a divergence between the spot-forward spread and interest rate differentials because the measures constrained covered interest rate arbitrage transactions. Let us consider, for example, the case in which yen interest rates were higher than dollar interest rates, the case seen above. If interest arbitrage transactions are impossible, the demand and supply of forward exchange would become independent from the demand and supply of spot exchange, so that the forward exchange rate would settle at the level at which forward sales corres-

currency liabilities (free yen deposits were treated as foreign currency). This system continued until June 1967, when it was abolished. As a supplementary measure, major foreign exchange banks were subject to administrative guidance on short-term foreign borrowing amounts after July 1964 (see Bank of Japan 1986, p.265).

Movement of Reserve Ratios (%) Under the Foreign Exchange Reserve System

Date of implementation (Year/Month/Day)	Reserve ratio	Supplementary reserve ratio	Application of supplementary rate
1962/6/11	20		
1963/1/11	20	35	Amounts exceeding the average of December 1962
1964/8/1	25	35	Increases beyond August 1964
1965/6/1	25		
1966/4/1	15		

Source: Bank of Japan, *A 100-Year History of the Bank of Japan* (Nihon Ginko Hyaku Nen Shi), Volume 6, p.265, 1986.

⁹From February 1968, major foreign exchange banks were subject to administrative guidance on the upper limit of yen conversion. In September 1971, these guidance measures were given an explicit legal basis. Yen conversion quotas were defined, at first, in terms of an upper limit on the net short spot position of foreign currencies plus the amount of outstanding free yen liabilities to non-residents (see figure below). As a result, not only was yen conversion reduced, but free yen deposits were also discouraged. After December 1973, all free yen accounts other than inter-office accounts (so-called general free yen accounts because these were deposits from general non-resident clients) were excluded from the framework of yen conversion controls. The reason that yen conversion quotas continued to apply to inter-office free yen accounts was that converting into yen funds abroad and remitting to Japanese offices was equivalent to undertaking yen conversions in Japan.

An Outline of Yen Conversion Quotas

Assets	Liabilities
Foreign currency-denominated assets (A)	Foreign currency- denominated liabilities (B)
	Non-resident free yen accounts (C)

Yen conversions=B+C-A, and this amount was required to be less than the upper limit. This limit began as a positive number for Japanese banks but was gradually lowered to zero by February 1970. For foreign bank branches in Japan, positive limits were set on an individual basis.

In addition, there were also two other elements subtracted from the amount A listed in the formula above, thus lowering the upper limit on yen conversions. These two amounts were: export bills outstanding which were earmarked for borrowings from the Bank of Japan under the System for Loans Against Foreign Exchange Assets (an export financing system abolished in March 1972); and foreign assets outstanding acquired under swaps made through buying dollars spot and selling forward in transactions between foreign exchange banks and the government's Foreign Exchange Fund Special Account (known as the Import Finance Lending System, which was a method of financing import usance, and which was abolished in March of 1980).

Yen conversion controls were changed in June 1977 to a system of controls on spot net positions, and later in June 1984 abolished entirely (see Ministry of Finance, *First International Finance Bureau Yearbook*, 1977, p.135).

ponded to forward purchases. As a result, the selling pressure on the dollar in the forward market would be mostly absorbed by the depreciation of the forward dollar against the yen and dollar sales pressure in the spot market would weaken.

Even in the 1960s, the potential for large flows existed. At that time, exports and imports were already equivalent to some 10% of GNP, implying that even with only a two-month shift in the payment and receipt of exports and imports (so-called leads and lags of overseas payments), potential capital flows would amount to over 3% of GNP ($20 \times 2/12 = 3.33$). When one considers the fact that Japan's foreign exchange reserves in the mid-1960s were about \$2 billion or just over 2% of GNP, it is easy to see that independent monetary policy required fairly strict exchange controls under a fixed exchange rate system. As soon as Japan eliminated exchange controls on current transactions, this fundamental dilemma with the IMF system, that the maintenance of fixed exchange rates contradicted independent monetary policy, became clear. Thus, it was necessary for Japan to continue strict foreign exchange controls on capital transactions.

Because of the liberalization measures concerning current transactions, capital flows in the 1960s expanded in comparison to those in the 1950s, and larger differentials emerged between changes in official exchanges reserves and the current account balance. Nevertheless, until 1970, these divergences were relatively small (see Figure 3). One of the reasons for this was that, when no parity changes were expected, uncovered interest arbitrage transactions did not provide particularly large profit opportunities because of the relatively small interest rate differentials and the troublesome foreign exchange controls on capital flows.

However, the profitability of capital movements grew tremendously whenever the maintenance of fixed parities came under suspicion. If for example, the yen was revalued vis-à-vis the dollar, then an uncovered position of dollar sales and yen purchases could result in a very large profit in a short period of time. On the other hand, if the yen was revalued over the period of a foreign exchange denominated export contract or a claim on foreign exchange that accompanied a deferred export payment, then there could be a very large exchange loss if such contracts were unhedged. Because of this possibility, hedging transactions of dollar sales were essential. Speculation and hedging when parity changes are expected are different in nature from under a floating exchange rate system. Even if parity change expectations turn out to be incorrect, there is virtually no risk of losses. Such speculation and hedging is, therefore, extremely attractive (these transactions are often called one-way options).

4. Persistent current balance surpluses and shift to floating exchange rates

After 1968, Japan's current balance tended to show a surplus, so that foreign exchange reserves, which had fluctuated at about \$2 billion dollars, reached \$4.4 billion by the end of 1970. On the other hand, the U.S. economy became overheated because of the escalation of the Vietnam War. The U.S. balance of payments showed a trade deficit in

1971 for the first time in post-war history and capital outflow increased sharply. At the same time, foreign exchange control policy in Japan changed from trying to prevent capital outflow to trying to encourage it. In April 1970, permission was granted for investment trusts to purchase foreign securities (with an upper limit of \$100 million), and in January 1971 this was extended to insurance companies (with the same upper limit). In addition, in August 1971, both investment trusts and insurance companies saw the abolition of upper limits on their purchases of foreign securities, while general investors were also granted blanket permission to sell and purchase foreign securities. Despite these measures, capital exports from Japan did not rise significantly because of the strong anticipation of a devaluation of the dollar.

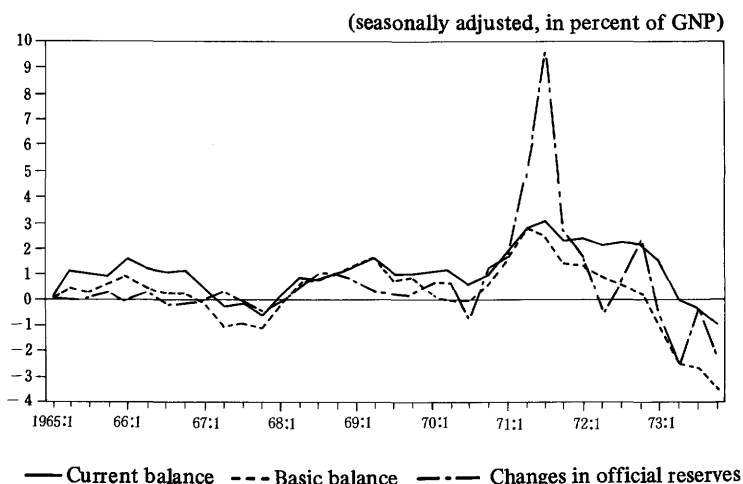
In May 1971, the German mark began to float, and this gave rise to expectations that the yen would also be revalued. As a result, huge capital flows into Japan were seen, and official exchange reserves rose from \$4.4 billion at the end of 1970 to \$7.9 billion at the end of July 1971. In this situation, the United States suspended the convertibility of the dollar to gold on August 15, and also announced a 10% import surcharge (the so-called Nixon Shock). Capital inflows in the 11 days between August 16 and August 27, just before Japan's shift to the floating rate system, amounted to \$4 billion in such forms as advances for contracted exports. Foreign exchange reserves by then amounted to \$12 billion. These figures demonstrate that the liberalization of exchange controls on current transactions allowed huge capital flows despite strict exchange controls on pure capital transactions.

As seen in Figure 4, the increase in official exchange reserves during 1971 was considerably larger than the current account surplus.¹⁰ These capital flows are believed to have arisen mostly from the activities of Japanese companies abroad. The subsidiaries of Japanese firms borrowed large amounts in dollars, and used them to remit prepayments for exports to parent companies or to purchase yen-denominated securities (see Bank of Japan, 1986, p.321, or Komiya and Suda, 1983b, p.12). At this time, there were controls on the receipt of advances for contracted exports, but when huge profits over a very short

¹⁰At the time of the float in 1971, a portion of official foreign exchange reserves was deposited with Japanese foreign exchange banks. These banks sold some of these dollars in the spot market and then bought dollars forward at rates above the market rate from small- and medium-sized enterprises. Through this mechanism, the portion of foreign exchange reserves of the monetary authorities that was so deposited ceased to be claims on foreign parties and therefore caused a reduction in observed official reserves; there was also a reduction in export risk for small- and medium-sized firms. In addition, the Import Finance Lending System of the monetary authorities also had the effect of reducing the level of observed foreign exchange reserves (see Komiya and Suda 1983b, p.12).

The Import Finance Lending System was a system under which the Bank of Japan would lend a portion of the funds necessary for import usance to Japanese foreign exchange banks in yen-denominated loans at the official discount rate. The banks, then, would conduct a swap transaction with the Foreign Exchange Fund Special Account of the government to obtain dollar funds for import usance; buy spot dollars and sell forward. This system was abolished in March 1980 (see Ministry of Finance, *First International Finance Bureau Yearbook*, 1977, p.135).

Figure 4. Japan's Balance of Payments, 1965 – 73



period could be foreseen, the effectiveness of such controls was limited. After the United Kingdom shifted to floating exchange rates on August 23, Japan shifted to floating rates on August 28, and the post-war system of fixed exchange rates collapsed *de facto*. Obviously, the floating regime in this period was very different from that being experienced now and in recent years. In this early period, extremely tight exchange controls were still imposed to an extent that made even current transactions difficult, while the authorities revalued the yen gradually and intentionally in the market.^{11,12}

¹¹In these circumstances the monetary authorities froze the short-term foreign exchange liabilities of foreign exchange banks at the level of August 18, 1971 (this freezing was abolished on December 21). Because of this regulation, foreign exchange banks were no longer able to take on the dollar-denominated liabilities necessary to hedge dollar purchases. Consequently, even daily foreign exchange operations such as the hedging of export contracts and the purchase of export bills and travelers checks were disrupted. For this reason, foreign exchange banks suspended the publication of forward rates for customers from August 19 until October 29 and some banks refused to become the counterparties for the hedging of export contracts. In addition, when Japan shifted to the floating exchange rate system on August 28, upper limits were introduced on the outstanding amount of non-residents' free yen accounts at foreign exchange banks. The latter were controls on the outstanding amounts of all free yen deposits, including settlement accounts. Consequently, even the normal settlement of international transactions was made difficult. For this reason, these controls were abolished in January 1972. For an account of the circumstances of this period see Komiya and Suda (1983b, Chapter 1).

¹²The floating of the yen after the Nixon Shock was quite different from that of today. At the time, intervention was aggressive and exchange controls severe, meaning that, in fact, the monetary authorities determined the exchange rate. The Bank of Japan (1986, p.331) describes the situation as follows: "Under the circumstances of the time, all the participants in the market, including foreign exchange banks, scrutinized any subtle move of hand and foot of the monetary authorities every second of the day, in order to see which direction the exchange rate would be guided. The situation was one in which price formation in the market was left almost entirely to the authorities."

With the Smithsonian Agreement of December 1971, the yen's IMF parity was revalued to ¥308/US\$, and the exchange rate fluctuation band was widened to $\pm 2.5\%$. Just after revaluation, the dollar was somewhat strong, but soon yet buying pressure strengthened and capital controls were imposed during 1972, such as the re-strengthening of controls on receiving advances on contracted exports, establishment of high reserve requirements on increases in non-resident free yen deposits,¹³ and limitations on non-resident purchase of Japanese securities to the amount of non-resident sales. Among these measures, the establishment of reserve requirements on increases in yen deposits was implemented in the form of having foreign exchange banks make non-interest bearing deposits at the Bank of Japan equal to a portion of non-resident free yen received. In effect, this lowered yen interest rates that could be offered to non-residents.

At this time, in May 1972, the foreign exchange concentration system was abolished and both residents and non-residents were allowed to hold foreign currency deposits with foreign exchange banks in Japan. However, there were important restrictions. For example, residents were not allowed to deposit foreign exchange obtained from the sale of yen and could only deposit that received from transactions stipulated under laws and regulation, such as export proceeds (it was possible to sell foreign currency deposits to get yen). In addition, there were many regulations on deposits into and payments from non-resident foreign currency accounts.

In order to hold down the increase in official foreign exchange reserves at this time, not only were capital inflows discouraged, but controls on capital outflows were also loosened. As seen in Figure 5, long-term capital outflows rose after 1972 with the expansion of direct foreign investments, credits connected with plant exports and loans for the purpose of developing overseas resources and securing distribution channels.^{14,15} However, foreign securities investment and short-term capital outflows did not expand because

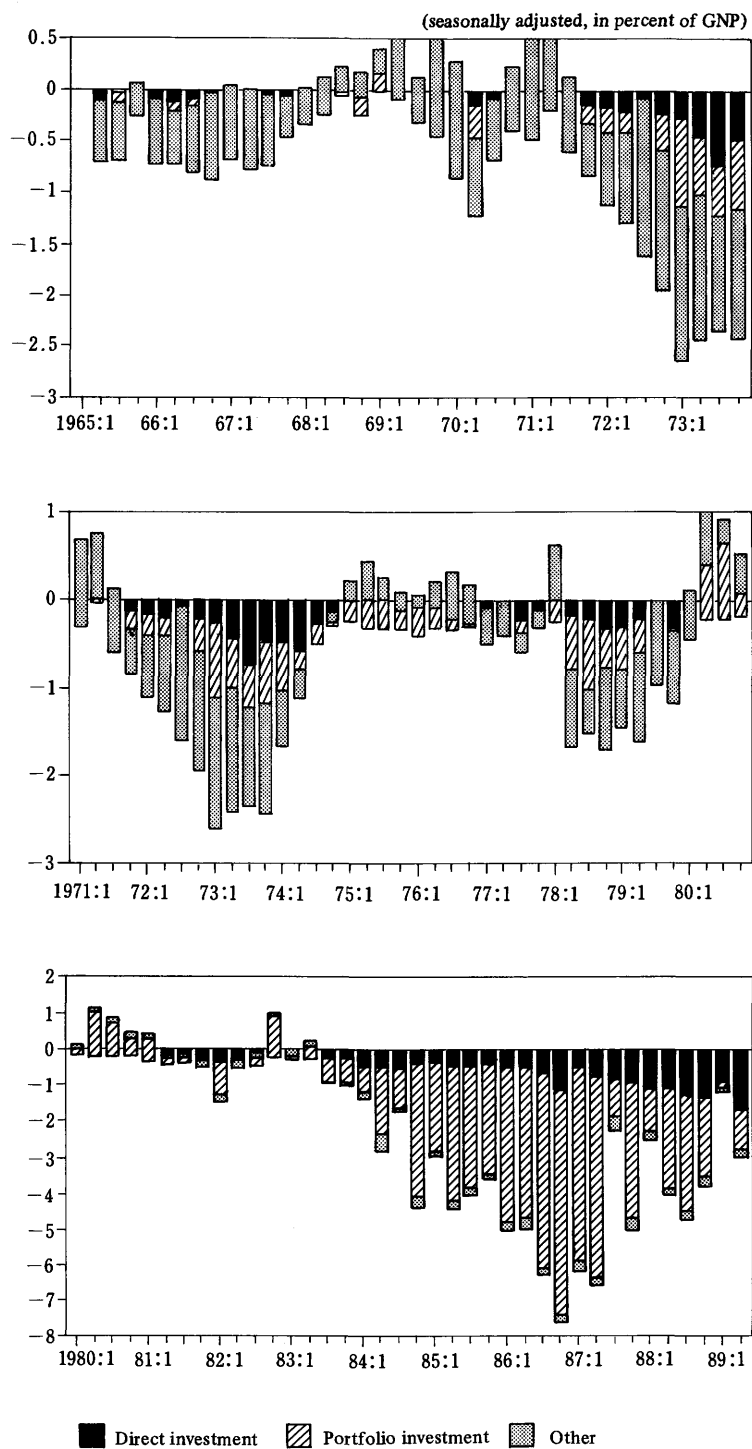
¹³The movements of reserve requirements placed on non-residents' free yen accounts are shown in the following table.

Date of implementation (Year/Month/Day)	Reserve requirement (%)	Marginal reserve requirement (%)	Base period for application of marginal reserve requirement (Year/Month/Day)
1972/06/01	0	25	1972/04/21 – 05/20
/07/01	0	50	1972/05/21 – 06/20
1973/12/10	0	10	1972/05/21 – 06/20
1974/09/12	0	0	
1977/06/01	0.25		
/11/22	0.25	50	1977/10/01 – 10/31
1978/03/18	0.25	100	1978/02/01 – 02/28
1979/01/17	0.25	50	1978/02/01 – 02/28
/02/10	0.25	0	

Source: Bank of Japan, *Economic Statistics Annual*, March, 1986.

¹⁴This period is also known as "year one of foreign investment" because of the huge increase in direct foreign investment that accompanied not only the rise of the yen but also the encouragement of such investment by the government (see Komiya 1988, Chapter 5).

Figure 5. Japan's Long Term Capital Balance



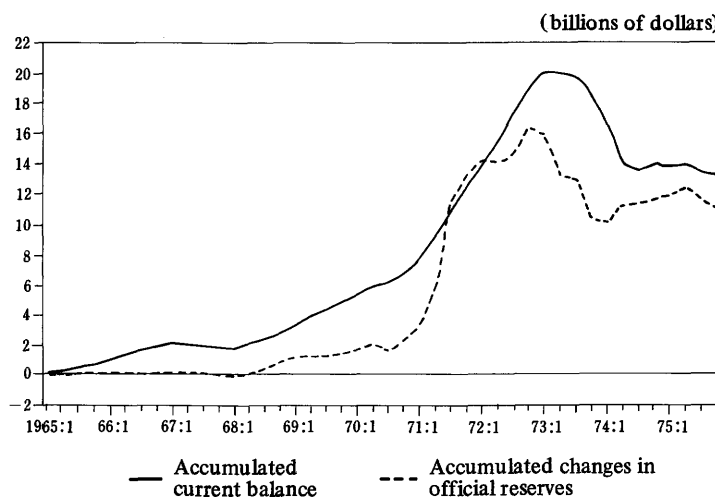
of the still strong belief that the dollar would weaken in the future.

At this time, macroeconomic policy makers feared a deep recession because of the revaluation of the yen. They also tried to avoid a further revaluation and to reduce the current account surplus. Therefore, they adopted a highly expansionary fiscal policy together with an extreme loosening of monetary policy. This combination led to severe inflation after the second half of 1972.

The Smithsonian system did not last very long. In June 1972, the British pound shifted to a floating exchange rate and, in early 1973, selling pressure on the dollar in various foreign exchange markets became so severe that the yen shifted to the floating rate system on February 14. In March, major member countries of the European Community, including West Germany and France, began a joint float.

In order to understand the balance of demand and supply of foreign exchange for Japan as a whole at the end of the fixed rate period, it is necessary to analyze time-series data on the external asset-liability position. However, such data is not available for periods before the end of 1971. Let us therefore make a rough estimation using the accumulated value of the balance of payments after 1965. Figure 6 shows the accumulated current balance along with the accumulated changes in official reserves. The difference between these two values is the portion of the current account surplus that is not being held as short-term assets by the government; this amount can be seen as roughly

Figure 6. Accumulated Current Account Balances and Their Financing



¹⁵One important relaxation of regulations was the start of Tokyo Dollar Call market in April 1972. Because of this, interbank foreign currency fund transactions could be carried out in Tokyo. As seen in Section II, there is a close relationship between the foreign exchange market and the yen-dollar funds market, so that the beginning of this market had an important encouraging effect in simplifying the funds operations of foreign exchange banks.

equal to the net overall foreign exchange position of the private sector. From this estimate one can see that the current account in the period from 1965 to 1968 was financed almost wholly by an accumulation of foreign exchange holdings by the private sector. From 1969 to 1971, both private sector foreign exchange holdings and increases in official reserves were needed to finance the current account surplus. And, finally, in 1971, while the current account surplus was rising considerably, an imminent devaluation of the dollar was expected. The private sector sold much of its accumulated dollar position so that official exchange holdings increased by more than \$10 billion. From this we can see that the private sector shifted exchange risk to the government.

C. From 1973 to 1980: a managed float with controls on capital movements

Japan's shift from fixed rates to floating rates in the spring of 1973 caused a major change in the risks associated with holding assets and liabilities denominated in foreign currencies. As we have seen, under a fixed exchange rate system when a change in parity is expected, there exists a so-called one-way option, in which the holding of assets or liabilities denominated in foreign currencies allows the opportunity for large profits without risk. However, under a floating exchange rate system, the holdings of foreign currency assets and liabilities are usually associated with very large risks of incurring a loss. This change in the risk structure meant a very large decline in the mobility of short-term capital. As a result, for a short time after the beginning of the floating exchange rate system, there was a decline in speculative short-term capital flows in comparison to the end of the fixed rate system. In fact, the control of the exchange rate through the use of foreign exchange market intervention became somewhat easier. However, in a situation where there is low mobility of private capital flows, a refusal by the monetary authorities to finance current account imbalances would result in large changes in the exchange rate. The sharp appreciation of the yen in 1977-78 may have occurred because of this. This part will give an overview of exchange controls under the old foreign exchange control law that prohibited exchange transactions in principle and will also examine the effects that this system had on the exchange rate and the balance of payments under the floating exchange rate system.

1. Exchange control policy after the shift to floating exchange rates

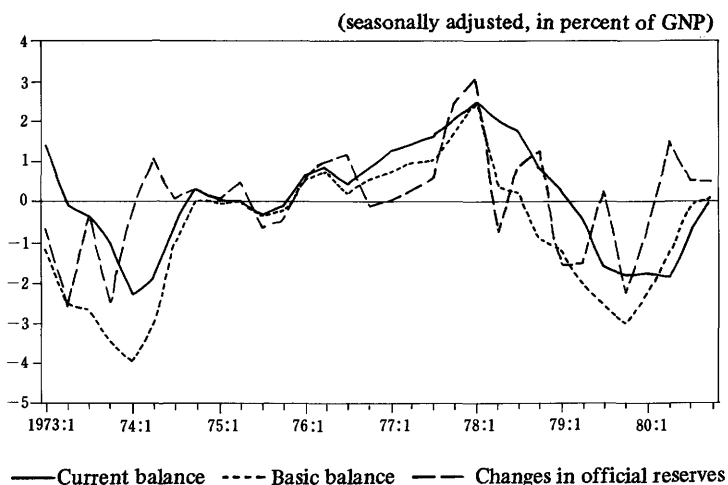
Even with the shift to floating rates in the spring of 1973, the strict foreign exchange controls at that time meant that price formation in the foreign exchange market was guided by the monetary authorities; de facto, the management of the market resembled very closely that of the fixed exchange rate period. Between the stabilization of monetary conditions in Europe at the end of March 1973 and the outbreak of the oil crisis in mid-October of that year, the yen fluctuated in an extremely small range centering on ¥265/US\$ (see Komiya and Suda, 1983, p.41). However, due to the overheating of the Japanese economy and the effects of revaluation of the yen, Japan's current account

balance went into deficit in mid-1973; with the oil crisis in October of that year, the current account deficit reached 2% of GNP between the end of 1973 and the first half of 1974. In addition to the worsening current account balance, there was a very rapid increase in prices. Strong selling pressure on the yen developed, so that the yen dollar rate reached ¥320/US\$ by January 1974.

With this pressure on the yen, exchange controls that hindered capital inflows were first abolished and then controls on capital outflows were quickly strengthened. At the end of 1973, zero net increase controls on inward securities investment (limitations on non-resident purchases of Japanese securities to the amount of non-resident sales) were abolished, and reserve requirements with respect to the increase in non-resident free yen deposits were lowered. Also, in early 1974, controls on receiving advances on contracted exports were relaxed. Corresponding to this relaxation was tightening on the other side, including the introduction of voluntary restraints on net increases in foreign investments on the part of banks, securities companies, investment trusts, and insurance companies starting in January 1974 as well as the introduction of controls preventing net increases in residents' foreign currency deposits (see Supplement A). Moreover, macroeconomic policy shifted to become extremely tight in terms of both fiscal and monetary policies.

The Japanese current account returned to near balance by the end of 1974 as the economy went into a deep recession. As seen in Figure 7, the decline in official foreign exchange reserves from the last half of 1973 to the first half of 1974 was very small, despite large current and long-term capital account deficits. The reason for this maintenance of official reserves was a very large increase in foreign borrowings by foreign

Figure 7. Japan's Balance of Payments, 1973 – 80



exchange banks,¹⁶ induced by the tightening of domestic financial markets and the very large increase in import usance that accompanied the huge rise in oil import payments. At the same time, the failure of the Herstatt Bank in Europe and disruptions in Euro-markets meant that Japanese foreign exchange banks had difficulty in borrowing foreign currency funds at the end of 1974, and had to pay interest rates somewhat above general market rates for a period of time.

Partly due to the slow recovery of the Japanese economy in 1975 relative to that of the United States, Japan resumed posting a current account surplus by 1976. From 1977, the foreign asset holdings of the private sector began to rise, and the yen exchange rate began to strengthen (see Figures 8 and 9).

In response to the rapid strengthening of the yen in 1977, official market intervention was undertaken to purchase dollars while capital export controls were eased and capital import controls strengthened. In June 1977, controls on the outstanding balances of foreign currency deposits held by residents were abolished as were measures prohibiting their acquisition of short-term foreign securities. In addition, in November, a 50% reserve requirement on increases in the free yen deposits of non-residents was instituted. In March 1978, this reserve ratio on increases was raised to 100%, which de facto prohibited the payment of interest on such increases. In addition, the acquisition of yen-denominated securities by non-residents was also strictly controlled. This time, unlike in 1971, no extreme controls that would have made even current transactions difficult were introduced. However, the huge short-term capital inflows seen in 1971 due to increases in import usance and advances on contracted exports (leads and lags) were not seen (see Figure 7). This lack of large short-term capital inflows was presumably due to the fact that, under a floating exchange rate system, large and uncertain changes in exchange rates were possible, in contrast to the one-way option under the fixed exchange rate system, so that short-term exchange rate speculation was much more risky. In this sense, the strength of the yen at this time was not principally due to speculative capital inflows. Rather, as will be explained below, the yen's strength was due to the fact that large current account imbalances were occurring in a regime with exchange controls that made private capital outflows difficult. Also, official intervention was not sufficient to absorb increases in foreign currency assets due to the current account surplus.

The yen continued to appreciate until November 1978, when dollar defense measures were announced by the Carter administration (see Figure 9). The current account surplus began to shrink at this time because of effects of the high yen and expansion of the Japanese economy. With the large increase in crude oil prices in 1979 (the second oil

¹⁶In 1974, official exchange reserves actually increased. This was probable due, however, to the fact that foreign exchange sales were more than offset by the return of foreign currency deposits from foreign exchange banks and the unwinding of foreign currency swaps used in the Import Finance Lending System. (For details, see Bank of Japan 1986, p.435, and Komiya and Suda 1983b, p.108.)

Figure 8. Accumulated Current Account Balances and Their Financing, 1973 – 81

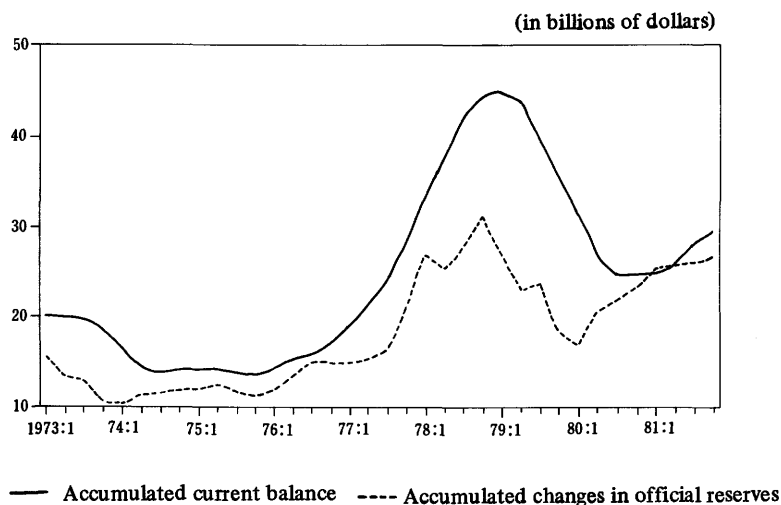
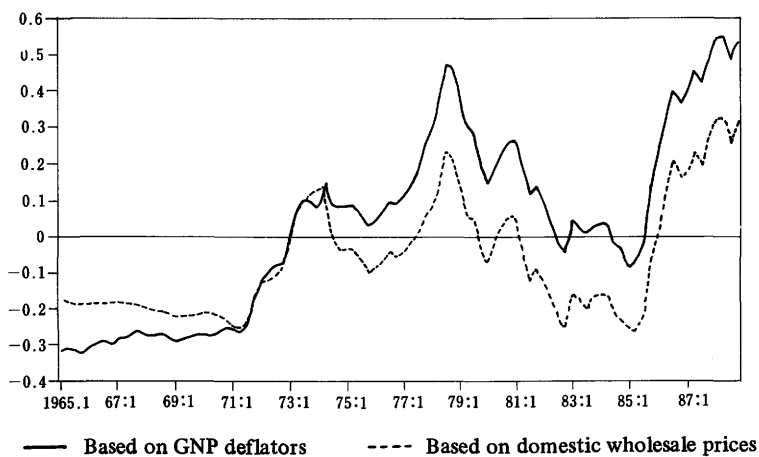


Figure 9. The Real Yen-Dollar Exchange Rate

(Base period: 1973:1, natural log values)



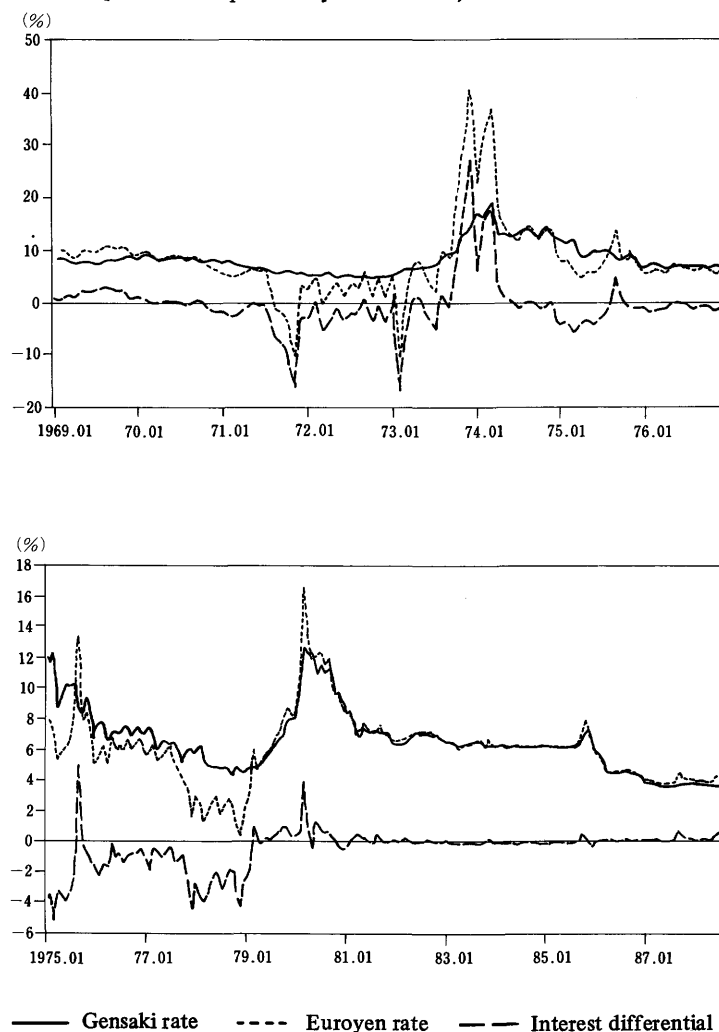
crisis), the Japanese current account fell into a large deficit in 1979 and 1980. Given this changing environment, all capital inflow controls that had been taken in the high yen period were abolished during 1979, and the prohibition of non-resident participation in repo (*gensaki*) transactions was lifted in May.

2. Interest rate differentials and exchange controls

The change of direction of exchange controls can also be observed in the relationship between domestic yen interest rates and Euroyen interest rates, which are the yen rates that are used in interbank lending and borrowing transactions by banks abroad. Figure 10 compares data after 1969 for three-month gensaki (repo) interest rates with three-month Euroyen interest rates (both at the end of the month). Since data on Euroyen rates is only available after 1975, rates prior to that time are estimated by the three-month Eurodollar rate and the three-month spot-forward spread of the yen-dollar exchange rate on the

Figure 10. The Interest Rate Arbitrage Condition

(Before 1974, Euroyen interest rates are estimated based on spot-forward spreads of yen-dollar rate)



Tokyo foreign exchange market. This is because one could always effect yen financial transactions in Euromarkets by combining dollar financial transactions and yen-dollar forward transactions even if Euroyen transactions were thin. As explained in Section II, if one currently held dollars but wished to invest in yen (that is buy future yen with current dollars), then one would achieve exactly the same result by purchasing yen spot and investing it or by investing the dollar funds and purchasing yen forward through a forward contract. Therefore, the Euroyen interest rate on the one hand and the combination of the Eurodollar interest rate and the yen-dollar spot-forward spread on the other would have the following relationship:

$$\text{Euroyen interest rate} = \text{Eurodollar interest rate} + \text{Dollar forward premium.} \quad (15)$$

The domestic yen interest rate and the Euroyen interest rate should be almost identical in the absence of exchange controls because of arbitrage between domestic and foreign markets. In fact, however, until about 1980, exchange controls were rather strict, and there were large differentials between these two interest rates. Let us now analyze why this deviation in yen interest rates at home and overseas occurred.

a) The case of capital inflow controls

First let us consider controls by the Japanese monetary authorities on the inflow of capital under strong upward pressure on the yen. In this case, non-residents sought profits from the yen's appreciation by investing in yen-denominated assets such as non-resident free yen deposits and yen-denominated securities. However, if the acquisition of yen-denominated securities was forbidden because of exchange controls, then only non-resident free yen deposits remained as a means for investment.¹⁷ Moreover, the application of high reserve requirements on increases in the free yen deposits of non-residents worsened the profitability of foreign exchange banks who had accepted such deposits. Lower profitability meant a lowering of interest rates on such yen deposits at Japanese banks. Through arbitrage, Euroyen interest rates fell below domestic yen interest rates and even approached zero. As even stricter exchange controls were adopted, banks began to refuse to accept such deposits, and the effective interest rates on yen funds for non-residents became negative.¹⁸ In cases when banks that had accepted Euroyen deposits could not invest them in Japan because of exchange controls, they had to lend such

¹⁷Of course, depositing into Euroyen accounts was always possible but the banks that accepted such deposits would, in order to avoid foreign exchange risk, in the final analysis either bring them to Japan for investment or lend them to other non-residents.

¹⁸By purchasing yen cash (i.e. banknotes) from Japan, a yen investment with zero interest rate is always possible. However, there would be high transaction cost associated with the transportation of cash funds and short-term gains from such arbitrage would be small. Once a negative Euroyen interest rate continued over a prolonged period because of exchange controls, expanded outflows of cash would work toward making these controls ineffective in the long run.

yen to other non-residents for hedging purposes. This put the banks in a difficult position: because of the large risk adhering to yen liabilities when expectations for an appreciation of the yen existed, such loans required negative interest rates.¹⁹ The fall of Euroyen interest rates therefore diminished interest rate income received through yen investments by non-residents and worked toward weakening buying pressure on the yen. As can be seen from equation (15) above, a decline in the Euroyen interest rate under a given Eurodollar interest rate led to a greater discount of the dollar vis-à-vis the yen in the forward markets.

In times of strong upward pressure on the yen, it was also advantageous for residents to have uncovered dollar liability positions. That is, they borrowed dollars and sold them in the spot market, invested the proceeds in yen, and, after the dollar fell, repurchased dollars and repaid dollar debts, thus earning a capital gain. For this reason, exchange controls that aimed at preventing an appreciation of the yen had to be implemented by the monetary authorities so that dollar borrowings by residents were limited.²⁰

This, then, was the mechanism through which exchange controls worked toward suppressing the increase in the spot rate for the yen, i.e. through lowering Euroyen interest rates relative to domestic yen interest rates. The other side of this coin is the direct effect of suppressing forward dollar sales by a depreciation of the forward dollar against the yen beyond the level implied by the covered interest arbitrage condition (equation (3)) indicated by the domestic yen interest rate and the Eurodollar interest rate. In short, controls expanded discount of the forward dollar.

This effect of exchange controls was, however, to some extent hindered by the

¹⁹In fact, rather than the actual application of a negative interest rate to yen deposits, there would more likely be a net negative return on dollar deposits covered by forward dollar sales and yen purchases (de facto yen deposits). In this situation, the forward dollar is discounted more than the dollar interest rate. When the forward dollar is discounted sharply, selling pressure on forward dollars is weakened because the forward dollar rate already reflects the anticipated future fall of the dollar.

²⁰Imposition of controls on dollar borrowing by Japanese residents is similar in effect to raising the interest rate on dollar borrowings within Japan relative to dollar interest rates abroad. A differential between dollar interest rates at home and abroad is the other side of the same coin of a differential between yen interest rates at home and abroad, i.e. if forward dollar transactions are permitted domestically, dollar transactions can be carried out using the yen funds market and dollar forward exchange markets. In this case, the effective dollar interest rate domestically can be calculated from the following formula (also see Figure 1):

$$\text{Effective dollar interest in Japan} = \text{Yen interest rate in Japan} + \text{Dollar forward discount}$$

A high dollar interest rate in Japan means a large forward discount of the dollar. If there is no separation between domestic and foreign forward exchange markets, the yen interest rate abroad is determined by the following formula:

$$\text{Effective yen interest rate abroad} = \text{Dollar interest rate abroad} - \text{Dollar forward discount}$$

Therefore, when the forward discount is large because of exchange controls, the effective yen interest rate abroad is lower than the yen interest rate in Japan.

covered interest rate arbitrage transactions of foreign exchange banks such as yen conversions. These arbitrage transactions tended to prevent the forward dollar-yen exchange rate from falling by more than the interest parity condition allowed and worked toward nullifying the effect of foreign exchange controls on agents other than foreign exchange banks. That is, the expanded discount of the dollar made yen conversion transactions by foreign exchange banks more advantageous and created an opportunity for profits without foreign exchange risk. The dollars that foreign exchange banks bought cheaply forward (that is at a large discount) from clients could be used to hedge dollars sold in the spot market after banks had engaged in dollar borrowing, with the added advantage of a nice profit. Such yen conversion transactions worked toward reducing the excessive discount of the dollar due to exchange controls and therefore toward equalizing the spot-forward spread with the difference between yen interest rates in Japan and dollar interest rates in the United States. To the extent that the authorities did not want such equalization, yen conversion restrictions were a necessary part of foreign exchange controls even under a floating exchange rate system because they helped to hold down upward pressure on the yen.²¹

b) The case of capital outflow controls

Let us next consider the case of capital outflow controls by the Japanese monetary authorities under strong downward pressure on the yen. In this case, Euroyen interest rates exceed domestic yen interest rates. When market participants expected a depreciation of the yen, non-residents tried to effect yen borrowings, purchase dollars with the proceeds, and, once the yen had fallen, earn a profit by repaying their borrowings with yen bought cheaply in the future. For this reason, exchange controls must limit yen lending to non-residents by residents such as Japanese banks. When outflows of yen funds from Japan are completely stopped, any non-resident wishing to speculate against the yen must borrow yen funds from some other non-resident. Such yen funds would be difficult to obtain, however, if the yen were expected to weaken. Because of a strong possibility of a capital loss on yen lending, non-residents as well would not be willing to lend except at high interest rates. For this reason, Euroyen interest rates would have a tendency to rise above yen interest rates in Japan. Under the same mechanism as in just described case of upward pressure on the yen, the forward premium of the dollar would expand (see equation (15)).

Moreover, in this case, Japanese residents would also wish to sell yen and try to earn capital gains by investing in dollars. Therefore, foreign exchange controls would have to

²¹Komiya and Suda (1983a, pp.155-156), say that yen conversion quotas were ineffective under the floating exchange rate system; but theoretically as seen in the main text, such quotas could be effective. In practical terms so long as the controls are no hindrance to current transactions, a large differential between domestic and foreign interest rates is difficult to maintain, and the effectiveness of such controls will be limited.

limit the acquisition of foreign securities by residents and their opening of foreign currency deposits. In the case of foreign exchange controls attempting to reduce the weakness of the yen, interest rate arbitrage transactions would once again work toward nullifying the effects of controls. That is, the dollar conversion of yen funds by foreign exchange banks (the reverse of yen conversions, under which yen funds are exchanged for dollars and invested with forward cover) would reduce the expansion of the forward dollar premium and work toward nullifying the effect of capital outflow controls. For this reason, in order to maintain the effectiveness of foreign exchange controls, such yen borrowing transactions would have to be regulated.

As can be seen in Figure 10, from the last half of 1970 until September 1973, Euroyen interest rates reflected controls on capital inflows and were either below domestic gensaki rates or at about the same levels. In November 1971 and February 1973, particularly, the Euroyen interest rates calculated from equation (15) went to -10% , which reflects the harshness of the capital flow controls at that time (for an explanation of the meaning of a negative Euroyen interest rate, see footnote 19). In contrast, after October 1973 when the first oil crisis occurred, Euroyen interest rates were very much above domestic gensaki interest rates, and reached 40% temporarily. The situation in which Euroyen interest rates exceeded domestic yen interest rates by a wide margin continued until the middle of 1974, when confusion occasioned by the oil crisis abated.

After the oil crisis died down, foreign exchange controls were relaxed and deviations between Euroyen interest rates and domestic gensaki rates returned to a relatively narrow margin. Then, in November 1977, with the extreme strengthening of capital inflow controls, Euroyen interest rates fell far below gensaki rates. As can be seen in Figure 10, at the time of the imposition of high reserve requirements on increases in non-resident yen accounts and the quasi prohibition of the acquisition of yen securities by non-residents, Euroyen interest rates were $2-5\%$ below gensaki rates. However, with the abolition of these foreign exchange controls, Euroyen rates and gensaki rates came closer, and particularly after the May 1979 permission for non-residents to participate in the gensaki market (repurchase agreement market), the deviation between these two rates became extremely small.^{22,23}

In this way, one can see how foreign exchange controls limited arbitrage between yen markets overseas and at home and therefore reduced selling pressure on the yen when it was weak and buying pressure when it was strong. These effects promoted stabilization of the spot foreign exchange market and a consequent smaller degree of

²²In March 1980, Euroyen interest rates exceeded domestic gensaki rates (repurchase agreement rate) by a considerable margin. This was due to the abolition of ceilings on interest paid on the free yen accounts of foreign governments (official free yen) which resulted in sharp competition for such free yen deposits among Japanese foreign exchange banks.

²³Fukao and Hanazaki (1987) compare the domestic interest rates and Euro interest rates for the major countries including Japan. For other detailed analyses of Japan, see Otani and Tiwari (1981) and Ito (1986).

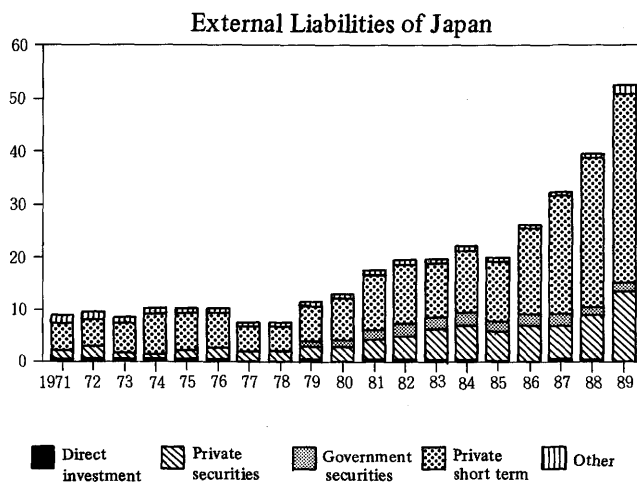
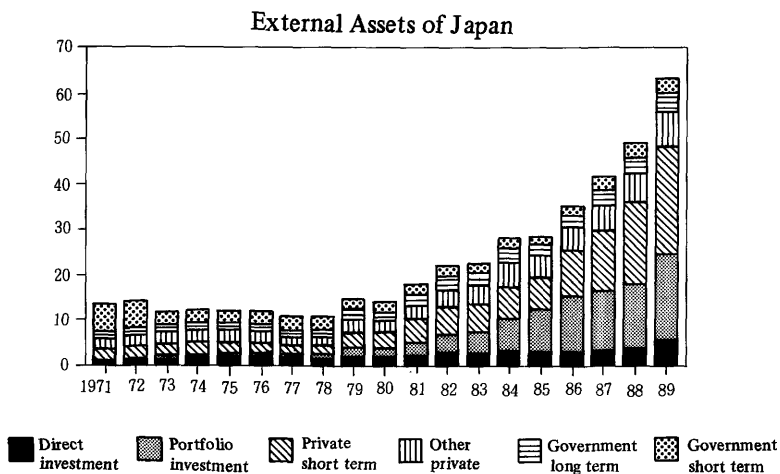
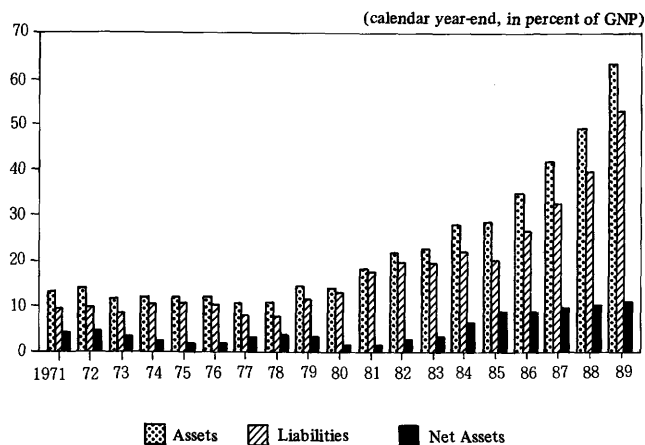
intervention. However, at the same time, the forward exchange market was disrupted: one cannot deny that the costs of hedging import and export transactions in the forward market rose. That is, at times when the yen was expected to weaken, foreign exchange controls raised the premium on forward dollars so that importers who wished to buy dollars forward were forced to buy them at higher prices that included the expected increase in the value of the dollar. For this reason, while foreign exchange controls that aimed at stabilizing the yen rate were in fact able to stabilize the spot rate, they were not able to stabilize the forward rate to the same extent.

3. *Exchange control policy and capital movements*

As just seen, foreign exchange controls in the period of the expected appreciation of the yen before mid-1973 worked toward suppressing capital inflows and encouraging capital outflows. But, once the oil crisis occurred, the controls turned 180 degrees toward suppressing capital outflows and encouraging capital inflows. Another volte-face occurred once the yen began to strengthen suddenly in 1977 and 1978, and the direction turned once again toward suppressing capital inflows and encouraging outflows. These effects of changing foreign exchange controls can be separated into defensive ones (suppressing capital inflows when the yen was high, and outflows when low) and active ones (such as encouraging capital outflows when the yen was high, and capital inflows when low). The defensive effects were perhaps effective to an extent, as can be seen in the differentials between yen interest rates at home and overseas. However, the active effects are likely to have been limited. Although effective sometimes such as in the expansion of capital outflows in 1972-73, the active effects attempted to work contrary to economic incentives for capital flows on the whole.

In order to obtain overall picture of the effects of exchange control policy in the 1970s on the internationalization of Japanese financial markets, Figure 11 shows the developments of Japan's external assets and liabilities outstanding relative to GNP. The figure shows the ratio of outstanding foreign assets and liabilities at the end of each calendar year to nominal GNP in the fourth quarter. Data is from 1971, when it was first published. The upper panel shows that Japan's gross foreign assets and liabilities were roughly stable relative to the Japanese economy in the 1970s. This stability reflects the fact that the relaxation of foreign exchange controls in this period was rather sporadic responding to changes in the yen exchange rate and did not attempt to promote capital exchange between foreign and domestic financial markets. Despite the mild liberalization of foreign securities investment for general investors after 1971, there remained strict controls, based on the real demand principal, against hedging such asset holdings in a flexible way through forward contracts (these rules were eased in April 1978). Moreover, because the old foreign exchange law forbade all foreign transactions in principle, while permitting certain transactions through exemption by administrative order, it was difficult for general investors to know which types of transactions were actually liberalized.

Figure 11. Japan's External Asset and Liability Positions



One cannot deny that this was a hinderance to foreign investment. As far as official regulations were concerned, the large financial institutions such as banks, securities companies, investment trusts, and insurance companies were allowed to conduct foreign investment during the years of the floating exchange rate system except for the period of "self restraint" imposed from January 1974 through June 1975, in which no net increases in foreign securities holding were allowed (this period lasted until March 1977 for banks). However, before the adoption of the New Foreign Exchange Law at the end of 1980, only life insurance companies effected relatively small foreign investments after 1978 and other institutions did not make any significant foreign investments at all. This was probably due to the generally negative attitude of the monetary authorities toward foreign security investments by financial institutions.

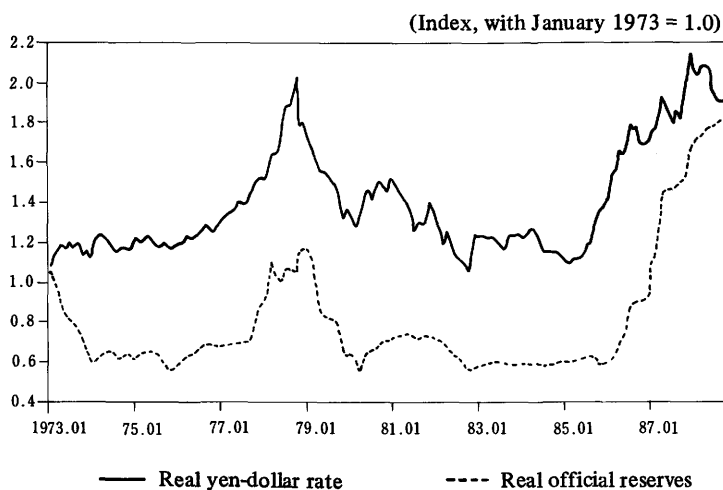
Although the gross ratios of foreign assets and liabilities to GNP did not change very much, the composition of these ratios did change gradually (Figure 11). Looking first at assets (the middle panel) we see that government short-term assets (mostly official reserves) saw their ratio fall continuously from 40% at the end of 1971 to 16% at the end of 1980. Since the absolute figure of foreign exchange reserves rose from \$15.2 billion at the end of 1971 to \$25.2 billion at the end of 1980, this declining ratio demonstrates the growth of the Japanese economy over this period and the simultaneous depreciation of the dollar. In contrast, private short-term assets (mainly short-term assets of foreign exchange banks) and foreign direct investment continued rising and securities investment began to rise around 1979. Looking next at the liability side, we see that private short-term liabilities (mostly short-term liabilities of foreign exchange banks) constituted the largest share throughout the period, although foreign holdings of Japanese securities issued by the private sector also saw a rising share. Looking therefore at the 1970s as a whole, the internationalization of Japan's financial markets did not progress substantially relative to the growing size of the Japanese economy. In short, the level of internationalization of Japanese financial markets remained at the situation of the beginning of the 1970s when the foreign exchange concentration system was abolished.

Next, let us look at the net foreign asset position and its financing. After the Japanese economy overcame the first oil crisis, a current account surplus emerged by the end of 1975 and continued expanding until the beginning of 1978 (see Figure 8). In contrast, because the liberalization of international capital transactions had not increased substantially, private capital outflows were relatively small; therefore, it was necessary to finance these current account surpluses by official intervention. In fact, *ex post*, two-thirds of the increase in net foreign assets that accompanied the current account surpluses between 1976 and 1978 were financed by increases in official reserves. However, despite this fact, the yen rose sharply vis-à-vis the dollar between 1977 and 1978. This was probably due to the fact that Japan's official intervention was following the "leaning-against-the-wind" strategy (for an empirical investigation of Japanese intervention at this time see Quirk, 1977). Consequently, intervention was not able to absorb the current

account surpluses *ex ante*. As can be seen from Figure 12, there is a very close relationship in the period from 1975 to 1980 between real foreign exchange reserves (converted from nominal dollar terms utilizing the U.S. Consumer Price Index) and the level of the real exchange rate.²⁴

Along these lines, one may interpret this experience as follows: With the current account surplus on a rising trend and with the liberalization of capital transactions on foreign securities and other types of investments insufficient, the private sector was unable to absorb increases in foreign currency assets. This situation gave rise to dollar selling pressure. To offset this pressure, official dollar purchases were carried out passively. In other words, with relatively strict foreign exchange controls, only foreign exchange intervention was available to absorb large current account surpluses. However, since official intervention strategy was passive in the sense of leaning against the wind, it led to a large appreciation of the yen. This leaves open the possibility that a more aggressive official intervention strategy would have held down the yen's appreciation by absorbing increases in the current account surplus into official reserves. The game aspect of the market cannot, however, be ignored. If the authorities had been able to stop the appreciation of the yen temporarily through intervention, this would have resulted in a one way

Figure 12. The Yen-Dollar Rate and Japanese Foreign Exchange Reserves



²⁴According to Komiya and Suda (1983b, Chapter 7), intervention in the period up to March 1978 was to defend against a rise in the yen beyond a certain level. However, looking *ex-post* from a macro viewpoint, there is a strong correlation between changes in foreign exchange reserves and changes in the exchange rate, so that intervention appears to be leaning against the wind. Moreover, since 1981, the correlation between foreign exchange reserves and exchange rate changes has weakened. It has been observed that this might be due to the explicit declaration of U.S. non-intervention policy by then Treasury Under-Secretary Sprinkel of the Reagan administration in April of that year, and the weakening of the international cooperation system with respect to the stabilization of exchange rates.

option such as that in the summer of 1971, which would have increased pressure on the yen even further. Therefore, a rather large appreciation of the yen was not to be avoided.

D. The 1980s: rapid internationalization of financial markets under the new foreign exchange law

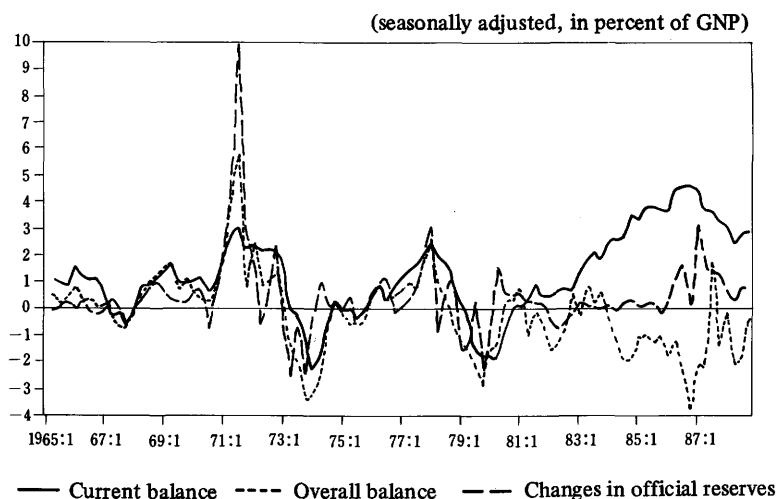
At the end of 1980, the new foreign exchange law was implemented. Contrary to the old law, under which all foreign exchange transactions were prohibited in principle, the new law allowed any foreign exchange transactions unless specifically restricted. The restrictions on foreign securities investment by institutional investors such as life and casualty insurance companies, trust banks, and the postal life insurance system (*kan'i hoken*), were also liberalized in the 1980s. This liberalization of international capital transactions, combined with high interest rates in the United States of that time, made foreign securities investments quite active and became one of the reasons for the weakness of the yen over most of the first half of the 1980s. In what follows, we will give an overview of the effects of the liberalization of capital controls on the structure of the balance of payments at this time.

1. Trends in Japan's balance of payments in the 1980s

After hitting a record high of ¥175.50/US\$ in October 1978, the yen fell rapidly with the onset of the second oil crisis, the deterioration of Japan's balance of payments, and the sharp rise in dollar interest rates accompanying monetary tightening in the United States from the summer of 1979. By the end of 1979, the yen-dollar rate had hit ¥240/US\$. However, Japan was able to overcome inflation in the second oil crisis period in a relatively short period of time. By the end of 1980s, the current account deficit had also been rectified. Reflecting these circumstances, the yen strengthened during 1980 toward ¥200/US\$. However, with the continuation of very high real interest rates in the United States, there was increasing pressure for long-term capital outflows from Japan, and the yen followed a downward trend until the beginning of 1985. In reaction to the yen's weakness, the Japan's current account surplus continued to rise. However, in the spring of 1985, this downward trend of the yen reversed and it began to strengthen. Between the Plaza Agreement of September 1985 and the end of 1987, there was a sharp increase in the value of the yen.

Figure 13 shows the current account, the overall balance, and changes in foreign exchange reserves from 1965 to the present. The overall balance is the sum of the current balance, the long-term capital balance, and the non-bank short-term private capital balance. The change in foreign exchange reserves corresponds roughly to intervention by the monetary authorities and can be interpreted as the public sector capital balance. As can be seen from this figure, with the exception of a period of large inflows of short-term capital in 1971, these three balances moved parallel until the beginning of the 1980s. That is, private sector capital flows were relatively small, and therefore current account sur-

Figure 13. Japan's Balance of Payments, 1965 – 88

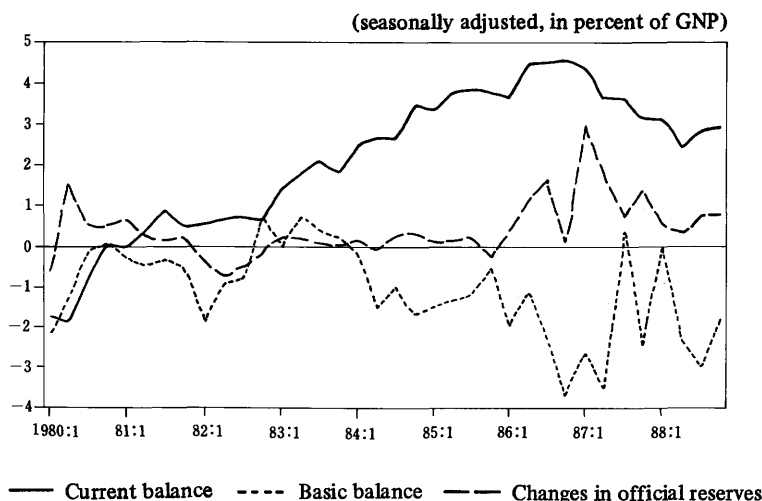


pluses corresponded closely to increases in official reserves.

However, in the 1980s, there were major divergences in the trends of these three balances. Looking at the current account and the overall balance, one sees that the former rose very rapidly after 1983 while the latter in general saw a tendency towards a deficit. The main reason for the difference between these two balances was the huge increase in long-term capital outflows, particularly of private sector foreign securities investment (see Figures 5 and 14). Moreover, rising official reserves in the face of the increasing deficit in the overall balance reflected the large inflows of short-term capital through foreign exchange banks. In other words, after 1983, the current account surplus and private banking sector short-term capital inflows continued while corresponding deficits were registered as the outflow of long-term capital in the form of overseas securities investment by the private sector and increases in official reserves (particularly after the second half of 1985). The outflow of long-term capital corresponding to the net inflow of short-term capital may be seen in macro-terms as Japan's playing the role of international financial intermediary. In contrast, the outflow of long-term capital corresponding to the current account surplus may be seen as a supply of savings to the rest of the world.

came extraordinarily active, and the divergence between the current balance and the public sector capital balance widened considerably. As a result, the internationalization of Japanese financial markets progressed at an extremely rapid pace. This is evidenced by the ratios of Japan's overseas assets and liabilities to GNP in Figure 11. These ratios rose quickly after the beginning of the 1980s. For example, at the end of 1980, foreign assets were about 14% of GNP but by the end of 1989 had reached 63%. Another example is seen in liabilities, which rose from about 13% of GNP at the end of 1980 to about 53% at

Figure 14. Japan's Balance of Payments, 1980 – 89



the end of 1989. During this period, the net foreign asset position continued to improve because of current account surpluses; from 1% of GNP at the end of 1980 to 10% at the end of 1989.

The composition of these assets and liabilities naturally reflects the structure of the balance of payments. On the asset side, the major contributors were private overseas securities investment by institutional investors and the private short-term capital outflows of foreign exchange banks. On the liability side, the major increases were in private sector short-term capital inflows by foreign exchange banks and the increased acquisition of Japanese securities by non-residents. Among these, the increases in the short-term overseas liabilities of foreign exchange banks substantially exceeded the increases in their short-term assets.

In this fashion, private sector capital flows in the 1980s became active to a degree never before seen. Among the major contributors to this trend were the implementation of the new foreign exchange law in December 1980, the relaxation of foreign securities investment controls on institutional investors, and the expansion of international financial operations by foreign exchange banks. Let us now consider each of these factors in detail.

2. *Implementation of the new foreign exchange law*

A new foreign exchange law (known officially as the Law Revising Partially the Foreign Exchange and Foreign Trade Control Law) was implemented in December 1980. This law changed the basic principle behind foreign exchange control in Japan from that of "prohibition of foreign transactions with exceptions" to "freedom of transactions with exceptions." The structure of foreign exchange control under the old law reflected the

needs of the post-war reconstruction period with scarce foreign exchange under very severe economic conditions. However, as the Japanese economy developed, not only current transactions but also capital transactions became liberalized in a partial fashion; thus the maintenance of a legal framework that prohibited overseas transactions in principle raised difficulties such as giving the impression to foreign countries that Japan was implementing regulations that were not transparent. Therefore, a complete overhaul of the exchange control system was effected.

Under the new law, foreign exchange transactions were liberalized in principle, and the concept was adopted that transactions would be controlled only partially and exceptionally. Moreover, concerning capital transactions, controls could be implemented only in those emergency situations: (i) when maintenance of balance of payments equilibrium was difficult; (ii) in the case of sharp fluctuations in the foreign exchange market; and (iii) when financial markets were adversely affected because of international capital movements. To this date, no capital controls have been invoked under these emergency provisions. Under the New Foreign Exchange Law, residents' foreign currency deposits with (including those through sales of yen), and foreign currency borrowing from, banks in Japan (so-called impact loans) were completely liberalized. In these cases, notification to the authorities was not required. In addition, interest rates on foreign currency deposits were exempted from the upper limits of the Temporary Interest Rate Adjustment Law and were therefore free interest rates. Moreover, the new law liberalized the deposit of yen and foreign currencies in Japanese banks by non-residents, although the interest rates on the yen deposits of non-residents (other than those made by public entities) were subject to the upper limit of the Temporary Interest Rate Adjustment Law. (This upper limit was not applied to the non-resident yen deposits in the Japan Offshore Market established in December 1986.) The new law also permitted the prohibition of interest payments on such deposits in cases when it was necessary to prevent sharp changes in the yen exchange rate, but this provision has never been invoked to date. Moreover, regarding inward and outward cross-border securities investments, no notification is necessary under the new law if such purchases are made through designated securities companies. As a result of the new law, it became possible for residents to freely hold foreign assets and liabilities. This was a fundamental change in exchange controls and was effectively an abolition of virtually all restrictions on the convertibility of yen into foreign currencies. And, since all yen became convertible, so-called non-resident *free* yen deposits came to be known simply as non-resident yen deposits (see Fukui, 1981, p.118).

However, even under the new foreign exchange law, there remained restrictions in the form of yen conversion quotas and a real demand principle for forward exchange contracts. However, these remaining restrictions were not particularly meaningful. First of all, yen conversion quotas on banks became meaningless as a form of exchange control under the new law, because non-bank residents were able to borrow foreign currency and freely obtain forward cover for repayment in foreign currency. That is, even if covered

interest rate arbitrage through yen conversion by foreign exchange banks was limited, interest rate arbitrage by non-bank corporations was liberalized. Given the fact that the transactions costs for large corporations were not very different from those for foreign exchange banks, yen conversion quotas lost their meaning. If one looks at Euroyen interest rates relative to gensaki (repurchase agreements) rates and the deviation between the two, one sees, as in Figure 10, that there is almost no difference after the end of 1980.²⁵

Moreover the real demand principle for forward contracts became virtually meaningless because net foreign exchange positions could be freely adjusted in spot markets following the liberalization of borrowing and depositing foreign currencies at freely determined interest rates.²⁶ The real demand principle for both forward contracts and yen conversion quotas was eliminated, in April and June 1984, respectively.

3. *Active investment in foreign securities by institutional investors*

The new foreign exchange law did not fundamentally change regulations on foreign securities investment for institutional investors. However, upon its implementation, the attitude of the monetary authorities toward foreign investment by institutional investors became much more lenient. Prior to the 1980s, their foreign investment had, in fact, been quite limited. For example, the outstanding holdings of foreign securities by life insurance companies were only 2.7% of total assets at the end of 1980 (the upper limit on such investment was 10% of total assets between 1971 and 1986). In another example, trusts banks (or more accurately the trust accounts of all banks) had no holdings of foreign currency assets among discretionally-managed funds (pension trusts, loan trusts, and jointly-managed money trusts).

However, with the start of the 1980s as seen in Table 2, there was a rapid liberalization of foreign securities investment (see supplement B for details of controls on foreign securities investment by institutional investors). In January 1981, pension trusts were permitted to invest up to 10% of total assets in foreign currency-denominated instruments. In addition, the postal life insurance system was permitted to acquire foreign securities up to 10% of total assets in May 1983. Such liberalization of investment in foreign securities by institutional investors occurred in the first half of the 1980s when demand for domestic funds was low because of the weak recovery of the Japanese

²⁵Since mid-1987, the gensaki rate (repurchase agreement rate) in Japan and the Euroyen interest rate have differed to a slightly greater extent than previously. This is because repurchase transactions remain subject to the securities transaction tax while there has been an expansion of markets for other, non-taxed short-term financial instruments. The transactions costs of arbitrage through repurchase transactions is thus relatively high, and so there has been a relative decline in their use. A comparison of Euroyen interest rates with interest rates on CDs, which are not subject to the securities transaction tax, shows that interest rate arbitrage is quite well established.

²⁶See Section II for an explanation of the equivalence between the forward exchange market on the one hand and the combination of spot exchange market, and dollar and yen lending markets on the other.

Table 2. Foreign Securities Investment Controls on Institutional Investors

Upper limits on the ratio of foreign securities holdings to total assets (%)						
Total assets at end-1988 (in trillions of yen)	Life insurance	Casualty insurance	Loan trusts and jointly- managed money trusts	Pension trusts	Postal life insurance	Trust fund bureau
	92.4	19.6	37.3	17.7	39.9	209.4
Situation in 1980	10	10	0	0	0	0
Jan. 1981	↓	↓	↓	10	↓	↓
May 1983	↓	↓	↓	↓	10	↓
Feb. 1986	↓	↓	1	↓	↓	↓
Mar. 1986	25	25	↓	↓	↓	↓
Apr. 1986	↓	↓	↓	25	↓	↓
June 1986	↓	↓	3	↓	↓	↓
Aug. 1986	30	30	↓	30	↓	↓
Apr. 1987	↓	↓	↓	↓	↓	10
June 1987	↓	↓	↓	↓	20	↓
Feb. 1989	↓	↓	5	↓	↓	↓

Note: Comparison between institutions is not necessarily valid because of differences among institutions in the types of foreign assets subject to the upper limits. For details, see Supplement B.

The total asset figure applies to loan trusts only.

economy and when real interest rates in the United States were extremely high. For this reason, institutional investors, such as life insurance companies started to acquire dollar-denominated securities en masse.

In addition to increasing foreign securities investment by general investors after the liberalization of exchange controls, a sharp increase in foreign investment by institutional investors generated very strong capital outflow pressure and the yen remained weak between 1981 and 1985. Responding to this weakness of the yen, the monetary authorities introduced temporary controls on certain types of foreign securities investment. For example, life insurance companies were subject to an upper limit on increase in foreign investment between April 1982 and August 1986. In addition, casualty insurance companies, pension trusts, and the postal life insurance system were also subject to similar controls (see supplement B).²⁷

²⁷There were several loopholes in the controls imposed on the foreign securities investments of institutional investors at this time, and therefore such investments were able to continue. On this point, see Okina (1989).

However, after 1985, with the sharp appreciation of the yen, these controls were abolished, and upper limits on the ratio of foreign securities holdings to total assets were loosened. During 1986, the upper limit for life and casualty insurance companies was raised from 10% to 30%, while the limit for the postal life insurance system was raised to 20%. Since these changes, actual foreign securities investment amounts by institutional investors have been far below these upper limits, meaning that they have not constituted a binding constraint.

Table 3 shows the outstanding amounts of foreign securities investment for major institutional investors. The nine categories shown in the table accounted for about three-quarters of the total foreign securities holdings of Japan as of the end of 1989 and of these, banking accounts (as opposed to trust accounts) of all banks (excluding former *sogo* banks) accounted for the second largest amount totalling ¥14 trillion. However, almost all of this was hedged through foreign currency borrowings because of prudential regulations on the foreign exchange positions of banks. In contrast, the foreign securities holdings of insurance companies were about ¥17 trillion, and a major part of this was not hedged, indicating that these institutions were the most important holders of foreign securities on an unhedged basis. The share of foreign securities to total assets of institutional investors, as seen in the bottom part of Table 3, rose very rapidly from the beginning of the 1980s. For both life and casualty insurance companies as well as securities investment trusts, it rose to between 8% – 15% by the end of 1989.²⁸ However, because the dollar began to fall vis-à-vis the yen after 1986, there was a fall in the rate of growth in outstanding amounts so that the share of such securities to overall assets fell for some investors such as securities investment trusts.

4. *More active international financial activities of foreign exchange banks*

The international operations of Japanese foreign exchange banks started expanding from the early 1970s with their more active entry into foreign financial markets. This meant a rapid diversification of international financial transactions. As of the end of 1989, the outstanding assets of foreign branches of Japanese banks reached ¥176 trillion, equivalent to about one quarter of the total assets of ¥676 trillion listed in the banking accounts of all banks (calculated from the balance sheets of domestic offices). Overseas branches of such banks were borrowing foreign currency abroad and remitting it to home offices for use, while home offices were remitting yen funds to foreign branches for overseas operations; both of these activities led to a very rapid increase in capital movements.

Moreover, the international activities of the domestic offices of Japanese banks also

²⁸For an account of foreign securities investments by institutional investors and their investment strategies, see Kinyu Zaisei Jijo Kenkyukai (1984), Fukao and Okina (1989), Koo (1987), Kawai and Okumura (1988), and Ueda and Fujii (1986).

Table 3. Foreign Securities Investments by Institutional Investors

	Outstanding foreign securities investments (calendar year end)												(billions of yen)
	1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989		
Banking accounts of all banks	39	1062	1430	2119	2722	4414	7327	9516	10620	11083	14124		
Trust accounts of all banks	32	173	332	560	944	1436	3461	6213	7872	8169	10306		
The Norinchukin Bank	5	239	313	322	283	380	955	1624	1608	2032	2376		
Life insurance companies	22	682	1123	1902	2927	3842	4772	7306	10343	13086	17162		
Casualty insurance companies	29	193	236	336	571	820	1022	1375	1745	2045	2667		
Securities investment trusts	66	116	203	174	240	843	1635	3909	4146	4784	4829		
Sogo banks	3	22	56	86	112	165	548	888	907	887	1083		
Shinkin banks	0	189	291	295	363	495	721	783	746	734	986		
Postal life insurance	0	0	1	4	194	558	946	1465	1968	2240	2480		
Total	796	2676	3985	5798	8356	12953	21387	33079	39955	45060	56013		

	Shares of foreign securities in total assets											(%)
	1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
Banking accounts of all banks	0.39	0.46	0.57	0.78	0.91	1.33	1.95	2.24	2.23	2.10	2.30	
Trust accounts of all banks	0.15	0.48	0.95	1.36	2.01	2.65	5.40	7.53	7.94	7.14	7.74	
The Norinchukin Bank	0.10	2.00	2.20	2.00	1.50	1.90	4.40	6.30	5.59	6.61	7.44	
Life insurance companies	0.20	2.70	3.90	5.70	7.70	8.80	9.30	11.70	13.73	14.15	15.43	
Casualty insurance companies	0.70	2.80	3.00	3.90	6.00	7.80	8.70	11.20	10.38	10.42	11.59	
Securities investment trusts	1.60	1.90	2.80	1.90	1.70	4.70	8.30	12.50	9.25	9.08	8.45	
Sogo banks	0.02	0.07	0.16	0.22	0.27	0.40	1.25	1.92	1.76	1.60	1.73	
Shinkin banks	0.06	0.46	0.65	0.61	0.71	0.89	1.22	1.23	1.06	0.96	1.13	
Postal life insurance	0.00	0.00	0.01	0.02	0.87	2.24	3.38	4.68	5.57	5.61	5.54	

Note: Assets and liabilities of the trust accounts of all banks are calculated after subtracting securities investment trusts.

Source: Bank of Japan, *Economic Statistics Monthly*.

grew with the increased weight of not only short-term transactions but also medium-and long-term transactions such as foreign securities investment or lending in both yen and foreign currencies. As seen in Table 3 above, the total foreign securities held by banking accounts of all banks had reached ¥14 trillion by the end of 1989 and, of this amount, almost all had been financed by short-term foreign currency borrowings from Euro-markets and other sources.

A further change was the establishment of the Japan Offshore Market (JOM) in December 1986. In this market, foreign exchange banks are able to engage in so-called "foreign-foreign transactions" in which funds are raised from non-residents and lent to non-residents. These transactions are similar to those in Euromarkets and can be carried out with a minimum of controls and tax liability. That is, the Japan Offshore Market is, to an extent, separated from domestic markets so that its activities are excluded from interest rate controls, deposit insurance, and reserve requirements. In addition, interest income according to non-residents from the offshore market is exempt from income tax withholding and also from corporate income tax for those non-residents which have permanent establishments in Japan (the latter provision is subject to tax treaties). After the opening of this market, total assets outstanding grew smoothly; the amount at the end of 1986 was \$93.7 billion, and grew to \$238.8 billion at the end of 1987, and to \$581.2 billion at the end of 1989. Transactions in this market are foreign-foreign transactions in nature, that is, *entrepôt* trade in finance. Nevertheless, most of these transactions are included in the private monetary transaction account of Japanese balance of payments statistics.

All of these factors have led to a continued growth in both capital inflows and outflows through foreign exchange banks. Data constraints make it difficult to see many of the details of the international financial activities of the domestic offices of Japanese banks, but it is clear that they are borrowing short-term funds in order to invest in foreign bonds and extend medium- and long-term loans. Moreover, because all long-term capital outflows are listed as long-term capital above the line in the balance of payments while the short-term borrowings of banks are entered below the line in the monetary transaction account, the divergence between changes in the overall balance and official reserves has expanded in recent years (see Figure 13).

5. *Exchange rate movements and exchange rate policies since 1985*

The weakness of the yen in the first half of the 1980s was largely a result of the very strong capital outflow pressure that came about because of the coincident liberalization of Japanese exchange rate controls and high real interest rates in the United States. However in 1985, real interest rates in the United States began to fall, and the current account deficit of the United States grew so large that the dollar began to fall sharply. The fall in the dollar may have been hastened by the September 1985 Plaza Agreement, in which the G-5 countries recognized the necessity to correct the overvaluation of the

dollar.

Despite this fall in the dollar, capital outflows from Japan through the first half of 1987 in fact expanded (see Figure 5). This expansion can be seen as a result of the combination of a major loosening of the foreign securities investment controls on institutional investors in 1986 along with expectations of a reversal in the dollar's weakness that had just begun at the time.²⁹ However, from 1985 through 1987, the holdings of dollar assets by Japanese institutional investors turned out to be much less advantageous than the holding of yen assets would have been because of the fall in the dollar (see Fukao and Okina, 1988). As the capital losses on dollar assets mounted due to the fall in the dollar, institutional investors reduced their foreign securities investment in the second half of 1987 and thereafter; this reduction further strengthened the yen vis-à-vis the dollar.

The appreciation of the yen between 1985 and 1987 was large and rapid, even when seen in the historical perspective of the entire floating exchange rate period since 1973. In response to the weakening business conditions because of this strengthening of the yen, Japan's official discount rate was reduced five times during 1986 and 1987 and, as of February 1987, reached a historical low of 2.5%. Moreover, in 1986, official intervention to purchase dollars was resumed, and official foreign exchange reserves soared in the first half of 1987 in particular. This intervention seems to have been carried out on the basis of the Louvre Accord of February 1987, in which intervention formed one part of international cooperation aimed at preventing a sharp fall of the dollar (Funabashi, 1988).

There is one contrast, however, in the conduct of Japan's exchange rate policy between this period and the 1970s. During this most recent period, the monetary authorities did not undertake a broad-based strengthening of exchange controls. This was because the internationalization of finance had become so much a part of the financial structure of Japan that the cross-border lending and borrowing of funds by corporations had become a part of daily activity. An invocation of harsh exchange controls in an attempt to influence the exchange rate would have led to major disruptions in financial transactions. Even if non-resident investment in yen securities and Japanese corporate borrowings of dollar funds could have been stopped to prevent the yen's appreciation, it would have been extremely difficult to prohibit non-residents (who had borrowed yen funds) from purchasing yen to repay debts, or Japanese institutional investors (who were holders of dollar bonds) from selling dollars in order to hedge dollar investment. Had hedging of dollar investments by institutional investors been prohibited, then dollar investments in the future would have been undertaken only very cautiously, with the

²⁹Using surveys of yen-dollar exchange rate expectations of participants in the Tokyo foreign exchange market gathered by the Japan Center for International Finance (JCIF), Ito (1988) analyzed movements in exchange rate expectations at the time of the yen's appreciation after the Plaza Agreement of September 1985. According to this research, even though the dollar fell sharply against the yen from the ¥240/US\$ level to the ¥150/US\$ level during the one-year period after the Plaza Agreement, the average market participant continued to forecast that the yen would be more or less flat or even weaken somewhat.

counterproductive result of a further weakening of the dollar.³⁰ It may be concluded, therefore, that in the current situation in which international capital movements have already been liberalized, an attempt to impose exchange controls in order to manipulate the exchange rate could only be justified in extremely exceptional circumstances or an emergency (see Economic Planning Agency, 1984, Chapter 4).

6. *Increase of direct Investment*

Even when overseas securities investment was declining after 1987, foreign direct investment was growing steadily. Therefore, the percentage of the Japanese current account surplus that was financed by capital outflows in net foreign direct investment (on a balance of payments basis) continued to rise, and reached 1.6% of GNP by the third quarter of 1989, an amount equivalent to almost 80% of the current account surplus (see Figure 5, lower panel). It seems to be the case that the perceived risk of exchange rate fluctuations differs between foreign direct investment and foreign securities investment. That is, in the case of foreign direct investment, a claim on real assets in foreign countries is acquired, and in most cases, the time horizon for such foreign direct investment is quite long. Therefore, even if inflation occurs in the country receiving the investment and its currency therefore falls, there is the possibility of a considerable hedge because of price increases in the real assets acquired (see Komiya and Amano, 1972, p.441). Therefore, for direct overseas investments, the outstanding amount is not usually treated as a dealing position in foreign exchange as in the case of securities investments and such exchange risks are managed differently. Thinking in this way, in contrast to the case of financing the current account surplus with overseas securities investments that build up the dealing position of Japanese investors in foreign currency and therefore create upward pressure on the yen and downward pressure on the dollar, the financing of current account surpluses through direct investment is thought to create only weak pressure for the yen's appreciation.³¹

³⁰Under the New Foreign Exchange Control Law, it is possible to prohibit the payment of interest on the yen accounts of non-residents. However, even if such interest payment on yen accounts by foreign exchange banks were prohibited, it would still be possible for non-residents to continue yen investments through yen conversions by foreign exchange banks and Japanese corporations, so that the effect of such a prohibition would be negligible. That is, a non-resident would invest in dollars and at the same time sell dollars forward and buy yen forward so that he would in fact be investing in yen instruments through yen conversions carried out by the counterparties in the forward transactions, i.e. Japanese foreign exchange banks or corporations. The yield in this case would be determined through arbitrage with other types of yen fund raising costs faced by foreign exchange banks or corporations.

³¹In the situation where a corporation perceives its foreign direct investment as real asset holdings abroad involving minimal foreign exchange risks, the effect on foreign exchange demand and supply is almost the same as in the case of imports that are not accompanied by the actual movement of goods. In fact, the statistical definition of direct investment includes certain activities that are closer to lending or equity investment, in addition to the activity originally intended for inclusion, such as real-estate acquisition or the construction of factories (see Komiya 1988, Chapter 5).

There are two statistics of foreign direct investment for Japan, those compiled on a balance of payments basis and those compiled under the notification provisions of the new foreign exchange control law. The latter show figures exceeding those on a balance of payments basis by about 40%. The main reasons for difference are that notification-based figures include planned foreign investments that are not actually implemented and also that they are a compilation of newly executed foreign direct investments and exclude the repatriation of foreign investments.³²

Looking at notification-based figures, which provide both a regional and industrial breakdown, one sees a sharp increase in foreign direct investment after the acceleration of the yen's appreciation in fiscal 1986. The share for North America rose from 35% in fiscal 1984 to 47% in fiscal 1988 (see Table 4). Moreover, of the \$22.3 billion going to North America, \$5.7 billion (about 25%) went to real estate and \$3.2 billion (about 15%) to financial and insurance industries, implying that 60% of the total was in non-manufacturing. However, the share of manufacturing industries has been steadily increasing, from 23% in 1985 to 41% in 1988.

The expansion of foreign direct investment was, in part, due to the expansion of local production in response to trade friction in the manufacturing industry, and also

Table 4. Japanese Foreign Direct Investment

	(notification basis, millions of dollars)								
	FY1980	81	82	83	84	85	86	87	88
North America	1596	2522	2905	2701	3544	5495	10441	15357	22328
Latin America	588	1181	1503	1878	2290	2616	4737	4816	6428
Asia	1186	3338	1384	1847	1628	1435	2327	4868	5569
Europe	578	798	876	990	1937	1930	3469	6576	9116
Other	745	1092	1035	729	756	741	1346	1747	3581
Total	4693	8931	7703	8145	10155	12217	22320	33364	47022

	Composition (in percent)								
	FY1980	81	82	83	84	85	86	87	88
North America	34	28	38	33	35	45	47	46	47
Latin America	13	13	20	23	23	21	21	14	14
Asia	25	37	18	23	16	12	10	15	12
Europe	12	9	11	12	19	16	16	20	19
Other	16	12	13	9	7	6	6	5	8
Total	100	100	100	100	100	100	100	100	100

³²Moreover, there are certain differences in lags involved between data based on notification and that based on actual payments in balance of payments tables.

because of the accumulation of managerial resources in the fields of production technology and quality control on the part of Japanese enterprises. This expansion of direct investment was accelerated by the yen's appreciation. In the financial industry, the merger and acquisition of U.S. companies has been seen in order to acquire superior know-how in financial transactions.

IV. Conclusion

This paper has provided an overview of the liberalization of foreign exchange controls in the post-war period, and the influence that this liberalization has had on Japan's balance of payments. The biggest changes in Japan's exchange control policy occurred with the shift to IMF Article VIII status in 1964 and the implementation of the new foreign exchange law in 1980. Because of the shift to Article VIII status, there was the liberalization of exchange controls on current transactions and, combined with the tariff reductions implemented through the Kennedy round, this liberalization led to a large expansion of trade. In contrast, capital transactions were subject to control that from today's point of view look very strict, even though such foreign exchange controls on capital transactions were permitted by the IMF agreement. However, the trade-related capital movements, (i.e. those accompanying current account transactions) were sufficient to destroy the IMF system in the early 1970s. As a result, the IMF system, in its basic form of fixed exchange rates with free current transactions, functioned between 1964 and 1971 for Japan, a short seven years. For Western European countries that shifted to Article VIII status in 1961, it functioned for only ten-years. In contrast, the current floating exchange rate system has functioned for the 17 years from the shift in 1973 until the present and, despite many problems, has shown great strength as an international monetary system.

Under this floating exchange rate system, Japan implemented a new foreign exchange law, which greatly eased exchange controls after 1980. In addition, the overseas investment controls on institutional investors were also significantly eased. As a result, the internationalization of Japanese financial markets that was at a standstill in the 1970s made very rapid progress after the start of the 1980s. Institutional investors aggressively invested in foreign securities under high real interest rates in the United States, which gave rise to a weak yen and a strong dollar and intensified trade friction between the United States and Japan because of the major increase in Japanese exports to the United States. This experience caused a re-recognition of the problems that accompanied large swings in exchange rates under a floating exchange rate system and stimulated renewed interest in monetary systems such as that of the EMS that give greater weight to exchange rate stability.

Japan's exchange control policies definitely had major effects on the international monetary system and international trade relationships. In today's world, in which Japan's

exchange control system is almost fully liberalized, it may seem unnecessary to think about the influence that exchange control policies in the past had on the balance of payments and exchange rate movements. Nevertheless, it is important for discussion of the international monetary system of the future to have a solid understanding of what exchange controls of the past could do and could not do. Japan's experience with fixed exchange rates as an Article VIII nation after 1964 showed the limits of what exchange controls can do to support a fixed exchange rate system. Even with both exchange controls and intervention, it is impossible to achieve simultaneously both the stabilization of exchange rates and a monetary policy that is independent of world financial and economic conditions.

Mitsuhiro Fukao: Senior Economist, Research Division I, Institute for Monetary and Economic Studies (now in the International Department), The Bank of Japan

Reference

- Amano, Akihiro, *Kokusai Kinyū Ron* (in Japanese), Chikuma Shobō, 1980.
- Bank of Japan, *Nihon Ginkō Hyaku Nen Shi* (in Japanese), Vol. 5, 1985.
- , *Nihon Ginkō Hyaku Nen Shi* (in Japanese), Vol. 6, 1986.
- Deardorff, Alan V., "One-way Arbitrage and Its Implications for the Foreign Exchange Markets," *Journal of Political Economy* 87-2, April 1979.
- Deguchi, Haruaki, "Ōkina Hembō wo Togeru Seihō Kinyū Gyōmu (in Japanese)," in Kaname Seki, ed., *Hembō Suru Seimei Hoken*, 1987.
- Economic Planning Agency, *Shin Kokumin Keizai Keisan no Mikata-Tsukaikata* (in Japanese), Printing Bureau, Ministry of Finance, 1978.
- , *Shōwa 59 Nendo Nenji Keizai Hōkoku* (in Japanese), Printing Bureau, Ministry of Finance, 1984.
- Fujita, Tsunero, ed., *Tokyō Gaikoku Kawase Shijo* (in Japanese), Kinyū Zaisei, 1987.
- Fukao, Mitsuhiro, *Kawase Reito to Kinyū Shijō* (in Japanese), Tōyō Keizai, 1983.
- , "Shohyō: Komiya Ryutaro, Suda Miyako, Gendai Kokusai Kinyū Ron (in Japanese)," *Keizaigaku Ronshū*, Vol. 50, No. 4, University of Tokyo Press, January 1985.
- , and Masaharu Hanazaki, "Internationalization of Financial Markets and the Allocation of Capital," *OECD Economic Studies* 8, Spring 1987.
- , and Kunio Okina, "Internationalization of Financial Markets and Balance of Payments Imbalances: A Japanese Perspective," Paper for Carnegie-Rochester Conference, April 22-23, 1988.
- Fukui, Hiroo, *Shinkai Gaikoku Kawase Kanri Hō* (in Japanese), Kinyū Zaisei, 1981.
- Funabashi, Yoichi, *Tsuka Retsu Retsu* (in Japanese), Asahi Shimbun, 1988.
- Hayami, Masaru, ed., *Kokusai Shūshi* (in Japanese), Kinyū Zaisei, 1977.
- International Monetary Fund, *Balance of Payments Manual*, 4th ed., International Monetary Fund, 1977.
- , *Report on the World Current Account Discrepancy*, International Monetary Fund, September 1987.
- Inuta, Akira, "Kokusai Shūshi Kankei no Shotōkei ni tsuite (in Japanese)," *Zaisei Kinyū Tōkei Geppō*, Printing Bureau, Ministry of Finance, May 1965.
- Ito, Takatoshi, "Capital Controls and Covered Interest Parity between the Yen and the Dollar," *The Economic Studies Quarterly*, Vol. 37, No. 3, September 1986.
- , "Foreign Exchange Rate Expectations: Micro Survey Data," NBER Working Paper Series No. 2679, August 1988.

- Kaneko, Yoshiaki, and Takehiko Isaka, *Japan Offshore Market Q & A* (in Japanese), Zaikai Shōhōsha, 1987.
- Kinyū Zaisei Jijō Kenkyū Kai, *Sakimono Kawase Torihiki to Zaimu Senryaku* (in Japanese), Kinzai, 1984.
- Komiya, Ryutaro, *Gendai Nihon Keizai* (in Japanese), University of Tokyo Press, 1988.
- , and Akihiro Amano, *Kokusai Keizaigaku* (in Japanese), Iwanami Shoten, 1972.
- , and Miyako Suda, *Gendai Kokusai Kinyū Ron—Riron Hen* (in Japanese), Nihon Keizai Shimbunsha, 1983a.
- , and ———, *Gendai Kokusai Kinyū Ron—Rekishi, Seisaku Hen* (in Japanese), Nihon Keizai Shimbunsha, 1983b.
- Kondo, Tatehiko, ed., *Shin Kokusai Kinyū Jijō* (in Japanese), Zaikai Shōhōsha, 1987.
- Koo, C. Richard, "Japan and International Capital Flows," mimeo, Nomura Research Institute, 1987.
- Kubota, Isao, *Sekai wo Ugokasu Nippon* (in Japanese), Zaisei Shōhōsha, 1988.
- Ministry of Finance, *Zaisei Kinyū Tōkei Geppō: Kokusai Shūshi Tokushū*, Printing Bureau, Ministry of Finance, August 1988.
- , *Kokusai Kinyū Kyōku Nempō* (in Japanese), Kinyū Zaisei Jijō, annual.
- Nihon Keizai Shimbunsha, *Tōkyō Kokusai Kinyū Shijō* (in Japanese), Nihon Keizai Shimbunsha, 1987a.
- , *Nikkei Financial* (in Japanese), Nihon Keizai Shimbunsha, 1987b.
- , "Gaisai Unyō Waku Sueoki: Shikin Unyōbu 63 Nendo mo 1000 Oku Yen (in Japanese)," *Nihon Keizai Shimbun*, February 22, 1988, p.3.
- Nihon Waribiki Tanshi, *Waga Kuni no Gaikoku Kawase Shijō* (in Japanese), 1980.
- Nishibori, Yasuo, "Sengo Waga Kuni Kokusai Shūshi no Suii (in Japanese)," *Zaisei Kinyū Tokei Geppō*, No. 244, Printing Bureau, Ministry of Finance, 1972.
- Nomura Research Institute, *Kōshasai Yōran* (in Japanese), 1987.
- Okina, Kunio, "80 Nendai no Kikan Tōshika no Gaisai Tōshi Kōdō ni tsuite (in Japanese)," paper presented to the University of Tokyo, Faculty of Economics conference on "Land and Equity Price Formation in Japan," 1989.
- Organisation for Economic Cooperation and Development, "The World Current Account Discrepancy," *OECD Occasional Studies*, June 1982.
- Otani, Ichiro, and Siddharth Tiwari, "Capital Controls and Interest Rate Parity: The Japanese Experience 1978-81," *IMF Staff Papers*, December 1981.
- Quirk, Peter J., "Exchange Rate Policy in Japan: Leaning Against the Wind," *IMF Staff Papers* 24, November 1977.
- Seki, Kaname, and Takayuki Watanabe, *Atarashii Gaikoku Kawase Kanri Hō 100 Mon* (in Japanese), Zaikai Shōhōsha, 1981.
- Ueda, Kazuo, and Mariko Fujii, "Saikin ni okeru Waga Kuni no Shihon Ryūshutsu ni tsuite (in Japanese)," *Financial Review* 3, 1986.

Supplement A: A History of Japanese Exchange Controls

- | | |
|-------------------------|--|
| 1945/ 8
(Year/Month) | End of the Second World War.
The management of all overseas transactions and foreign exchange reserve assets was transferred to the General Headquarters of the Allied Powers (GHQ). Because both capital and trade transactions were directly controlled by the authorities, the exchange controls per se had little effect. |
| 1949/ 3 | The Foreign Exchange Control Board (FECB) was created by the Japanese government, and GHQ transferred the management of overseas transactions and exchange reserves to it. |
| / 4 | The FECB set a unified exchange rate of ¥360/\$. |

- /11 Foreign exchange transactions permitted for 11 Japanese banks.
- /12 Private parties allowed to undertake exports.
The "Foreign Exchange and Foreign Trade Control Law" was promulgated and implemented. Under this law, foreign exchange transactions were prohibited in principle, and permitted only in specified cases. This situation continued until the implementation of the new Foreign Exchange Control Law in December 1980.
- 1950/ 1 Ten foreign banks were permitted to engage in foreign exchange transactions.
Implementation of the "Foreign Exchange Budget System."
Private parties permitted to undertake imports. Foreign exchange was allocated on a quarterly basis at first, and then on a semi-annual basis from fiscal 1952.
- / 5 The "Law Concerning Foreign Capital" was promulgated and implemented in June.
- / 6 Introduction of the "foreign exchange concentration system," a system totally concentrating foreign exchange. All residents were obligated to sell all foreign exchange claims to authorized foreign exchange banks at the official exchange rate. Foreign exchange banks were, in turn, obligated to sell foreign exchange holdings to the Bank of Japan.
- 1952/ 4 Peace Treaty with Japan concluded, and GHQ abolished.
Shift to concentration of net foreign exchange positions of banks; authorized foreign exchange banks (11 Japanese banks) were allowed to hold foreign currency deposits up to certain limits at banks abroad (i.e. to conclude correspondent banking relationships). From June, the settlement of export and import payments could be made through these accounts.
Foreign exchange banks prohibited to have short spot positions. At this time, no controls on the net foreign exchange positions of foreign exchange banks existed.
- / 7 Start of the Tokyo foreign exchange market. Official selling and buying rates (concentration rates) between the government and foreign exchange banks were set at ¥360.35 for selling one U.S. dollar and ¥359.65/\$ for buying one U.S. dollar (from the viewpoint of the government) respectively.
- / 8 Abolition of the FECB. Management of exchange controls and foreign reserves was transferred to the Ministry of Finance.
Japan joins the IMF. As a member, Japan accepted the obligation of maintaining a 1% band around a parity of ¥360/\$.
- 1953/ 1 Official exchange rates (concentration rates) were set at ¥360.80 for selling one U.S. dollar and ¥359.20 for buying one U.S. dollar (from the viewpoint of the government), respectively.
- 1955/10 Japan joins GATT.

- 1957/ 9 Introduction of controls on the overall foreign exchange positions of foreign exchange banks.
- 1959/ 9 Official exchange rates (concentration rates) for the U.S. dollar were widened to 0.5% either side of IMF parity, and the interbank exchange rate was allowed to fluctuate within this band. Banks were also permitted to set exchange rate vis-à-vis customers within these bands. Forward rates were allowed to be set completely freely, and the government stopped being a counterparty of forward covers.
- 1960/ 6 The government adopted the "Trade and Exchange Liberalization Plan," and prepared for IMF Article VIII status and OECD membership.
- / 7 Creation of free yen accounts for non-residents.
This liberalized the conversion to foreign currency of yen earned by non-residents in current transactions.
Introduction of yen exchange for the settlement of international transactions.
- 1963/ 4 Beginning of official intervention in the foreign exchange market.
Fixed official rates (concentration rates) for transactions with the Ministry of Finance became flexible. Moreover, spot exchange rates for transactions between banks and their clients were liberalized. Hitherto, the Foreign Exchange Fund Special Account automatically bought and sold at official rates (concentration rates) but, after this change, intervened to restore equilibrium within the range of 0.75% either side of IMF parity.
- 1964/ 4 Japan becomes IMF Article VIII status nation, as a result of which Japan abolished exchange controls on current transactions (specifically, abolition of the foreign exchange budget system and permission for tourists to acquire foreign exchange). Japan joins OECD.
- 1968/ 2 Introduction of yen conversion quotas. (These were quotas on the total amount of foreign exchange that could be converted to yen in the foreign exchange market and invested domestically.)
- 1970/ 4 Japanese securities investment trusts permitted to include foreign securities in their portfolios (with an upper limit of \$100 million).
- 1971/ 1 Insurance companies permitted to include foreign securities in portfolios (up to \$100 million).
- / 7 Abolition of upper limits on foreign securities purchases by investment trusts and insurance companies.
Comprehensive permission for general investors to purchase and sell foreign securities.
Relaxation of controls on the acquisition of foreign real estate.
- / 8 The United States suspends dollar conversion to gold (the so-called Nixon Shock).
Exchange rates float from August 28 to December 19.

- Controls imposed on the receipt of advances of export proceeds (amounts exceeding \$10,000 required approval).
- Introduction of controls on outstanding balances of non-resident free yen accounts.
- / 9 Legal formalization and strengthening of yen conversion quotas and free yen balance controls at foreign exchange banks.
- /12 IMF parity changed to ¥308/\$ (Smithsonian rate) and the band widened to 2.5% either side.
- 1972/ 1 Abolition of controls on the receipt of advances of export proceeds and the outstanding balances of non-resident free yen accounts.
- / 2 Liberalization of the purchase of foreign securities by trust banks.
Resumption of controls on the receipt of advances of export proceeds (amounts above \$10,000 required approval).
- / 3 Japanese banks permitted to buy foreign securities.
Foreign investors prohibited from acquiring short-term government bills.
- / 4 Establishment of the Tokyo Dollar Call Market, allowing interbank transactions in short-term foreign currency funds in Tokyo.
- / 5 Abolition of the foreign exchange concentration system. (This move rescinded the administrative order on which the system was based, although regulation under the Foreign Exchange Law continued until December 1980.) With this move, the opening of foreign exchange accounts by both residents and non-residents in Japan was partially liberalized.
- / 6 Tightening of controls on the receipt of advances of export proceeds (approval required for all transactions above \$5,000).
Imposition of a 25% marginal reserve requirement on non-resident free yen accounts.
- / 7 Increase in the marginal reserve requirement on non-resident free yen accounts to 50%.
Liberalization of the acquisition of foreign real estate by residents.
- /10 Foreign investors' purchases of Japanese securities limited to the amount sold by other foreign investors.
- 1973/ 2 Yen moves to the floating exchange rate regime.
- /11 Relaxation of controls on the receipt of advances of export proceeds from \$5,000 to \$10,000 as the approval threshold.
Abolition of limits (to the amount sold by other foreigners) on the acquisition of Japanese equities by foreigners.
- /12 Relaxation of yen conversion controls on foreign exchange banks (non-resident free yen accounts other than inter-office accounts excluded from the calculation of net short spot positions).
Marginal reserve requirements on free yen accounts lowered from 50% to

- 10%.
- Abolition of limits (to amounts sold by other foreigners) on the acquisition of Japanese bonds by foreigners.
- 1974/ 1 Relaxation of controls on the receipt of advances of export proceeds from \$10,000 to \$100,000 as the approval threshold.
- Prohibition of resident purchases of short-term foreign currency securities.
- Introduction of upper limits on increases in foreign currency deposits of residents to levels at or below average end-month levels during October-December 1973.
- Approval required for opening of new foreign currency deposits.
- Introduction of "voluntary restraints" by banks, securities companies, investment trusts, and insurance companies to hold net increases in foreign securities investment to zero.
- / 7 Relaxation of controls on the receipt of advances of export proceeds from \$100,000 to \$500,000 as the approval threshold.
- / 8 Liberalization of the acquisition of short-term government bills by foreign investors. (With this move all controls on inward investment were abolished.)
- / 9 Reduction in the marginal reserve requirement on free yen liabilities from 10% to zero.
- 1975/ 6 "Voluntary restraints" on the purchase of foreign securities lifted for all institutions except banks.
- 1977/ 3 Abolition of "voluntary restraints" on the purchase of foreign securities by banks.
- / 6 Abolition of controls on the acquisition of short-term foreign securities by residents (hitherto de facto prohibited).
- Acquisition of equities and bonds by non-residents shifted to automatic approval.
- Shift from yen-conversion quota system to controls on net short spot positions.
- Abolition of controls on balances of residents' foreign currency deposits.
- Introduction of 0.25% reserve requirement on foreign currency deposits and non-resident free yen liabilities.
- /11 Introduction of 50% marginal reserve requirement on non-resident free yen accounts.
- De facto prohibition of non-resident acquisition of short-term government bills through cessation of public subscription for such bills.
- 1978/ 3 Introduction of controls on the acquisition of yen-denominated bonds by foreign investors. (Acquisition of general bonds of less than five years and one month remaining maturity prohibited.)
- Marginal reserve requirement of 100% reintroduced for non-resident free yen accounts. (This was a de facto prohibition of interest payments on such

- accounts.)
- / 4 Repeal of prohibition of forward transactions for hedging external securities investment.
Expansion of the foreign currency deposit system for residents. (Permission to open accounts of less than ¥3 million by selling yen.)
- / 6 Extension of period of import usance (from 120 to 140 days).
- 1979/ 1 Partial relaxation of controls on the acquisition of yen-denominated bonds by non-residents, from those of five years and one month remaining maturity to those of one year and one month remaining maturity.
- / 2 Abolition of controls on the acquisition of Japanese bonds by foreign investors.
Abolition of marginal reserve requirements on non-resident free yen liabilities.
- / 5 Non-residents permitted to engage in repo transactions (gensaki market).
Abolition of controls on the receipt of advances of ex post proceeds.
Extension of period of import usance (from 140 to 180 days).
Permission to introduce short-term impact loans (untied foreign currency borrowings by Japanese companies).
- /12 Flexible conditions introduced for impact loans (untied foreign currency borrowings by Japanese companies).
- 1980/ 3 Repeal of interest rate ceilings on free yen accounts held by foreign governments.
Flexibility added to the introduction of foreign yen funds through the inter-office accounts of foreign exchange banks, by excluding these amounts from controls on net short spot positions.
- /12 Implementation of the New Foreign Exchange Control Law. (This changed from a system of prohibiting transactions in principle to one of allowing them in principle.)
Complete liberalization of the foreign currency deposits of residents at foreign exchange banks in Japan.
Complete liberalization of impact loans (untied foreign currency borrowings by Japanese companies).
Liberalization of import usance to periods of up to one year.
Liberalization of the acquisition of foreign securities by residents when made through designated securities dealers (except for transactions deemed direct investment which are subject to notification).
Liberalization of the acquisition of domestic securities by non-residents when made through designated securities dealers (except for transactions deemed direct investment which are subject to notification).
Liberalization of foreign real estate investments by residents.
Shift from non-resident free yen accounts to non-resident yen accounts, since the total removal of convertibility restrictions on resident yen accounts elimin-

- ated the need to distinguish between “free” and “non-free” yen.
Shift to the concept of exchange controls only in cases of emergency. (No such emergency has yet been declared.)
- 1981/ 1 Increase in the reserve requirements on foreign currency deposits. (Time deposits: 0.25% to 0.375%; other deposits: 0.5% to 1.25%)
/ 3 Decrease in the reserve requirements on foreign currency deposits. (Time deposits: 0.375% to 0.25%; other deposits: 1.25% to 0.5%)
- 1982/ 3 Introduction of “voluntary restraint” on the purchase of zero coupon bonds.
/ 4 Introduction of controls on increases in the foreign currency assets of life insurance companies. These continued in force until August 1986.
- 1983/ 2 Abolition of “voluntary restraint” on the purchase of zero coupon bonds.
/ 5 Start of foreign securities investment by the Postal Life Insurance System (limited to 10% of total assets).
Limits were also placed on increases in such assets, and which remained in force until September 1986.
/ 6 Liberalization of short-term Euro-yen lending to non-residents by foreign branches of foreign exchange banks.
/11 Introduction of controls on increases in the foreign currency assets of pension trusts (in force until August 1986).
- 1984/ 4 Abolition of the real demand principle for forward contracts.
Extension of import usance from one to two year.
Domestic sales of foreign CDs and CP commence.
Liberalization of yen-denominated foreign loans by banks.
/ 6 Abolition of spot position controls (yen conversion quotas) on foreign exchange banks. (This gave banks total freedom to borrow in foreign currencies and invest the funds locally in yen.)
Liberalization of yen remittances abroad from the Japanese offices of foreign exchange banks through inter-office accounts.
Liberalization of short-term Euroyen lendings to residents.
/ 7 Liberalization of the acquisition of domestic real estate by non-residents.
/12 Permission to float short-term Euroyen CDs.
- 1985/ 4 Liberalization of medium- and long-term Euroyen lending to non-residents by overseas branches of Japanese banks.
/ 5 Elimination of the prior notification requirement for residents borrowing short-term Euroyen.
/ 9 The Plaza Agreement among the G5 nations agreed to address the overvaluation of the U.S. dollar.
- 1986/ 2 Loan trusts and jointly-managed money trusts permitted to invest in foreign bonds to an upper limit of 1% of total assets.
/ 3 Relaxation of the upper limit on investment in foreign securities by life insur-

- ance companies from 10% to 25% of total assets.
- / 4 Relaxation of the upper limit on investment in foreign currency assets by pension trusts from 10% to 25% of total assets.
- / 6 Relaxation of the upper limit on investment in foreign bonds by loan trusts and jointly-managed money trusts from 1% to 3% of total assets.
- / 8 Relaxation of the upper limit on investment in foreign securities by life insurance companies and pension trusts from 25% to 30% of total assets.
- /10 A portion of uncovered foreign securities investment excluded from calculation of the overall foreign exchange position of banks affected by the prudential regulation of position limits.
- /12 Establishment of the Japan Offshore Market (JOM).
Offshore transactions between banks and non-residents (deposits, borrowings, and loans) were separated from domestic transactions, so that such transactions were exempted from reserve requirements, interest rate controls, deposit insurance, and withholding tax.
- 1987/ 4 Trust Fund Bureau starts to invest in foreign securities (limited to 10% of total assets).
- / 5 Liberalization of overseas financial futures transactions by financial institutions.
- / 6 Relaxation of the upper limit on investment in foreign bonds by the Postal Life Insurance System from 10% to 20% of total assets.
- /11 Liberalization of Euroyen CD issues by non-residents.
- 1989/ 2 Relaxation of the upper limit on investment in foreign bonds by loan trusts and jointly-managed money trusts from 3% to 5% of total assets.
- / 5 Abolition of voluntary restraint on medium- and long-term (greater than one year) Euroyen loans to residents by banks.

Memorandum: Important exchange controls in force as of March, 1990

Controls on overall currency positions of foreign exchange banks.

Existence of the authorized foreign exchange bank system—under this system, approval is needed for residents other than such banks to engage in foreign currency transactions or to lend foreign currencies.

An approval system for special settlement methods.

An approval system for resident deposits in banks abroad.

A screening system for securities issued overseas by residents, for foreign currency bonds issued in Japan by non-residents, and for all Euroyen issues.

A prior notification system for direct investments.

Controls on the participation of general residents in overseas futures markets.

Controls on foreign investments by some institutional investors (see Supplement B).

Supplement B: Chronology of Controls on Foreign Investment by Institutional Investors

This chronology consolidates information from several sources regarding controls on foreign investment by institutional investors. It is based on the following published materials: Economic Planning Agency (1984), Ueda and Fujii (1986), Deguchi (1987), Kondo (1987), Nomura Research Institute (1987), Koo (1987), Nihon Keizai Shimbun (1987a, 1987b, 1988), and Kinyū Zaisei Jijō Kenkyū Kai (1987) (see references of the main text).

Life Insurance Companies

Total assets: ¥92.4 trillion (Dec. 1988)

Controls on the ratio of foreign investments to total assets:¹

1971	Up to 10% of total assets could be invested in foreign securities (i.e. securities issued by non-residents, including yen-denominated foreign bonds). Resident issues of foreign currency bonds and foreign currency deposits were not included in this limit.
Mar. 1986	Up to 25% of total assets could be invested in foreign securities (including yen-denominated foreign bonds). Up to 25% of total assets could be invested in foreign-currency assets (including foreign currency deposits and resident-issued foreign currency bonds, but excluding forward-covered investments).
Aug. 1986	The above limits were raised from 25% to 30%.

Controls on increases in foreign investments:

Apr. 1982	Foreign bond acquisition limited to 5% of the increase in total assets.
May – Dec. 1982	Foreign bond acquisition limited to 10% of the increase in total assets.
Apr. 1983 – Mar. 1986	Foreign bond acquisition ² limited to 20% of the increase in total assets.
Apr. – Aug. 1986	Foreign securities acquisition ³ limited to 40% of the increase in total assets.
Mar. 1986	Decontrol.

¹Foreign loans limited to yen and 10% of total assets.

²Foreign currency-denominated bonds issued by residents (so-called sushi bonds) were subject to an 8% limit of the increase in total assets (this limit was outside the 20% limit).

³Including foreign equities and foreign currency-denominated bonds issued by residents.

Casualty Insurance Companies

Total assets: ¥19.6 trillion (Dec. 1988)

Controls on the ratio of foreign investments to total assets:¹

Identical in principle to those applicable to life insurance companies

Controls on increases in foreign investments:²

Early 1980s – Aug. 1986	Controls existed that limited the acquisition of foreign bonds to less than certain proportions of the increase in total assets. ³
Aug. 1986	Decontrol.

¹Foreign loans limited to yen and 10% of total assets.

²Details of these controls are unclear.

³Including foreign equities and foreign currency-denominated bonds issued by residents.

Pension Trusts

Total assets: ¥17.7 trillion (Dec. 1988)

Controls on the ratio of foreign investments to total assets:¹

Jan. 1981	Foreign currency-denominated assets, including deposits, limited to 10% of total assets. ² Yen-denominated foreign bonds not included in this limit.
Apr. 1986	Foreign currency assets limited to 25% of total assets.
Aug. 1986	Foreign currency assets limited to 30% of total assets.

Controls on increases in foreign investments:

Nov. 1983	Controls on increases in foreign currency assets introduced, but details unclear (see Ueda and Fujii, 1986).
Apr. 1986	Acquisition of foreign currency assets limited to 40% of the increase in total assets.
Aug. 1986	Decontrol.

¹Yen-denominated foreign lending began in March 1978, and yen-denominated foreign bond investment in September 1979 (see Kinyu Zaisei Jijo Kenkyu Kai, 1984).

²Ueda and Fujii (1986) state that foreign investment by pension trusts began in 1979. However, it seems that the acquisition of foreign bonds was limited to yen-denominated ones at the time. The date used here (January 1981) is based on Kinyu Zaisei Jijo Kenkyu Kai (1984, p.175).

Loan Trusts and Jointly-Managed Money Trusts

Total assets: ¥37.3 trillion (Dec. 1988; loan trusts only)

Controls on the ratio of foreign investments to total assets:*

Feb. 1986	Foreign bonds: less than 1%
June 1986	Foreign bonds: less than 3%
Feb. 1986	Foreign bonds: less than 5%

*Foreign investment was not possible before February 1986. Equity holdings not permitted. These ratios are voluntary restraints.

Specified-Money-in-Trusts (*Tokutei Kinsen Shintaku* <*Tokkin*>)

Total assets: ¥13 trillion (Mar. 1987)*

No legal restraints on the acquisition of securities.

*These accounts are held at seven banks, including the Daiwa Bank (Nihon Keizai Shinbun [1987b]).

Securities Investment Trusts

Total assets: ¥53.1 trillion (Dec. 1988)

50% of total assets as the upper limit. (But no limit for so-called "domestic and foreign bond funds" [naigaisai fund])

Postal Life Insurance

Total assets: ¥39.9 trillion (Dec. 1988)

Controls on the ratio of foreign investments to total assets:*

May 1983	Up to 10% of total assets permitted in foreign bonds, including yen-denominated foreign bonds.
June 1987	Upper limit raised to 20%.

Controls on increases in foreign assets:

May 1983 - Mar. 1986	Acquisition of foreign securities limited to 10% of the increase in assets.
Apr. - Sept. 1986	Acquisition of foreign securities limited to 20% of the increase in assets.

*Equity holdings prohibited. Foreign investment not permitted before May 1983.

Trust Fund Bureau

Total assets: ¥209.4 trillion (Dec. 1988)

Controls on the ratio of foreign investments to total assets:*

Apr. 1987 Foreign bonds (including yen-denominated foreign bonds)
limited to 10% of total assets.

*Equity investment not permitted. Foreign investment not permitted before April 1987.

Authorized Foreign Exchange Banks*

There are no controls on foreign investments. Each bank faces individual limits on its overall spot-forward exchange position (its net outstanding foreign assets or liabilities, including forward positions, converted to dollars). Net positions are not permitted to exceed these limits at the end of any business day. Since October 1986, foreign securities investments held for more than one year without forward cover may be excluded from overall position limits up to certain amounts. These amounts are 3% of total assets for long-term credit banks and 0.5% of total assets for other banks. Banks have to obtain approval within these limits which are applicable only for new investments.

*This section based on Koo (1987) and Kondo (1987).

Supplement C: Data Sources for Tables and Graphs

1. Seasonally-adjusted balance of payments figures and ratios to GNP:
 - 1946 - 59: Nishibori (1972) Table 1 (annual)
 - 1960 - 88: Seasonal adjustment using the X11 method; data from *Balance of Payments Monthly*, Foreign Department, Bank of Japan.GNP ratios are calculated using nominal GNP for corresponding periods converted to U.S. dollars.
2. Ratios of Japanese assets and liabilities to GNP:
 - Data from Ministry of Finance, *Zaisei Kinyu Tokei Geppo* divided by fourth quarter nominal GNP converted to U.S. dollars.
3. Domestic and foreign yen interest rates:
 - Repurchase agreement rates (gensaki), Euroyen rates, and spot-forward spreads are all for 3-month instruments as of the last business day of each month.