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**Japan's Experiences under the Bretton Woods System:
Capital Controls and the Fixed Exchange Rate**

by

Toru Iwami
The University of Tokyo

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Toru Iwami

(The University of Tokyo)

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1. Introduction

Up to the early 1970s, the post-war capitalist economy experienced the "golden age" in her history with the high level of economic growth as well as low rates of inflation and unemployment. In which way the Bretton Woods System contributed to this good performance, is discussed in Iwami(1991). This paper reviews the role of the international monetary arrangements on the Japanese economy which showed the highest economic growth rates among the developed countries. Japan joined the International Monetary Fund in August 1952 (under the Article 14th) and GATT in 1955, her "High-Speed Growth Era"¹ coincided with the liberal international economic framework of the IMF/GATT.

The Bretton Woods Agreement authorized the pegged exchange rates and regulations on the international capital movements. The Agreement did exclude neither revaluations nor devaluations, however. In fact, even some of the developed countries resorted to the parity changes to recover external balances, and such countries as France and Canada allowed floating exchange rates for a number of years. Japan, on the other hand, stuck to the 1 dollar = 360 yen par , which was adopted in April 1949, for more than 22 years until August 1971. The Article 8 of the Agreement permitted capital controls on the belief that free capital movements inevitably disturb the maintenance of fixed exchange rates². Under these common attitudes towards capital movements, was there any characteristics of Japanese controls?

Indeed, the international financial transactions during the "high growth era" remained small scale in Japan, compared with those of the "liberalized and internationalized" 1980s. The closed, controlled system of the reconstruction period was maintained without major modifications, although such events as the liberalization of international trade and foreign exchanges in 1960, the shift to the Article 8 country of the IMF, and the membership of the OECD in 1964, constituted successive turning-points. Officially, from the mid-1960s,

¹As widely accepted, this period covers from around 1955 to the outbreak of the first oil crisis.

²Bryant(1987,pp.61-62). This assumption is not so self-evident as the founders of the Bretton Woods System thought. Under the classical gold standard before the World War I, the fixed exchange rate system survived several decades without capital controls. The Bretton Woods Agreement was based on the recognition that the international monetary system of the inter-war period collapsed due to the "disequilibrating" short-term capital movements. The actual problems were not the capital movements themselves, but the lack of confidence in the monetary stability, which led to the "hot money".

Japan opened the door to foreign investors, yet allowed only limited access. Why did Japan keep the closed international financial system for a long time, how was this attitude related to her rapid economic growth ?

In the following section 2, we review the balance of payments problems and capital controls, which determined the major course of economic policies in the post-war era. The section 3 discusses the protective effects of this closed system, and actual view of short-term capital movements. The role of the fixed exchange rate on the Japanese macroeconomic performances is the theme of section 4. Rather than discussing the fixed exchange rate in general, we consider the macroeconomic implications of the 360 yen rate. Next, the fact that Japan observed the "rules of the game", is interpreted in terms of her economic growth.

2. The External Framework of the Japanese Economy

2.1 The Balance of Payments Problems

The balance of payments situation largely determined the course of Japanese economic policy in the post-war era. While the current balance kept surplus except in the early 1960s, its components differed completely between the first post-war decade and the period after the mid-1960s. The current balance up to the mid-1950s was supported by the U.S. economic aids and wind-fall expenditures during the Korean War³ (See Table 1). The policy makers considered it as an inevitable task for the sake of the economic independence to turn the large-scale deficits of the trade balance into surplus. Such a slogan as " Export or Die" reflected

³ Between 1946 and 1950, the U.S. aid amounted to 390 million dollars at annual average and american expenditures in Japan during the Korean War (1950-1954) totaled up to 30 billion dollars (Ouchi, 1971,p.98). The former figures corresponded to about 6% of GNP, the latter to 4.1% of the aggregate GNP of this period. GNP data from Ohkawa et al,1974, p.201. The Marshall Aid, on the other hand, equals at annual average to 2% of the total national income of recipient countries, the highest figures are 6% for Austria and Netherlands in 1949 (reported in Eichengreen and Uzan, 1991, pp.2,29). According to these estimates, U.S. aids and Korean War expenditures could have played greater role in Japanese reconstruction than Marshall Aid Program in western Europe.

the critical economic situations after the war; loss of overseas assets and destructed production equipments as well as marine shipping⁴. In the early 1960s, although the balance of trade turned into surplus, the ever growing deficits in services made the current balance negative, the main causes of which were transportation and debt service payments. Besides export- promoting measures, subsidies to shipping industry were implemented in order to reduce deficits in the services balance, and net payments of investment income generated potential resistance against foreign capital imports. The surplus in official transactions, mostly military ones, continued up to the end of the 1960s.

From the mid-1960s, the current balance turned into surplus again, which expanded until the outbreak of the oil shock. The "ceiling on the balance of payments" was considered no more restraints on economic growth. As the surplus on current balance increased, long-term capital flowed out. However, from the mid-1960s to 1972, the net long-term capital export did not match the current account surplus; therefore, the positive basic balance of payments associated with net short-term capital⁵ import brought about ever growing international reserves (mainly dollars). For fear that international reserves should deplete, Japanese government tried to limit capital movements. Nearly half of the capital export during this period consisted in trade finance, reflecting the government's endeavor to promote exports.

To be questioned is why short-term capital balance remained surplus. The first answer would be interest-rate differentials. But as a matter of fact, the main motive to borrow abroad was the demand for dollar as a means of trade payments. If the international capital movements had been liberalized completely, interest rate differentials would equal to forward-spot spreads of foreign exchange rate, and borrowing cost would be the same between domestic and foreign money markets. In fact, because of capital controls, the interest parity condition did not hold, and roughly speaking up to the mid-1960s, the effective interest rates were higher at home than abroad. While interest rate differentials induced capital imports, borrowing abroad was restricted and short-term capital movements showed peculiar distortion, as is discussed later in the section 3.

⁴ The White Paper of the International Trade and Industry 1949, abridged in Kanamori(ed), 1970, pp.39-45.

⁵ Including " others " in the " balance of monetary movements ", i.e. changes in the net short-term international positions of foreign exchange banks.

In 1984, when the Japanese current account surplus increased rapidly and foreign countries commenced to regard it as a global disequilibrium factor, the White Papers of both Ministry for International Trade and Industry, and Economic Planning Agency referred to the stage theory of balance of payments⁶. Table 2 shows that the four major countries followed similar paths as the above theory predicts. Japan, in particular, seems to be a good example in the manner that the current account deficits decreased gradually, and later increased her surplus⁷. The United States seems to have reached the peak in the 1920s, and Germany in the 1950s. Britain, on the other hand, shows rather abnormally large-scale surplus in the 1950s, but we can also interpret its movement as a wave with a peak in the 1900s and a trough in the 1930s. Whether the stage theory actually holds or not, is a matter to require another paper discussing it theoretically as well as empirically. However, to be remembered is the fact that the theoretical preposition of the free capital movement is not always satisfied historically. The most liberal phase was the years under the classical gold standard, while Britain in the inter-war period⁸ and most of the developed countries under the Bretton Woods System imposed more or less capital controls. Even Japan imported far greater scale of capital, ca. 3% of GNP at annual average in the early 1900s, to finance the Russo-Japanese War expenditures. In the 1930s, she exported long-term capital at about 2% of GNP mainly to Manchuria⁹. Figure 1 reports the current and long-term capital accounts at annual data, showing abnormally high ratio to GNP before the World War I and in the 1930s as well.

⁶The policy implication was that current account surplus was historically inevitable and that Japan should not try to reduce her surplus in vain, but to recognize the role of a creditor nation.

⁷We have to take it into account that because of the U.S. economic aids and Korean War, the current account surplus expanded greater in the 1950s than the 1960s.

⁸Britain restricted long-term capital exports in the 1920s, and strengthened its control further in the 1930s. See for example, Atkin (1977, p.17ff).

⁹Of the foreign capital stock in 1910, more than 80% consisted in National Bonds denominated in foreign currencies (Teranishi, 1982, p.213, Table 3-22). For the long-term capital movements in the 1930s, see for example Teranishi (1989, p.216). That the Japan's business cycles synchronized internationally before the world war II and that this characteristics did not reappear until the 1970s (Fujino, 1991, pp.290, 519-21) may be a reflection of the difference in regulatory measures between the two periods.

Another interesting point is that the long-term capital movements of both United States and Japan showed similar scale, measured with the sum of exports and imports relative to GNP, in the 1950s and 1960s¹⁰. While the United States introduced a series of regulations on the capital outflows in the late 1960s, her capital transactions, generally speaking, remained more liberal than the Japanese case. The similar scale of both countries should be attributed to other factors than capital controls. The gap in scale between Japan and West-Germany, on the other hand, must be more or less a result of the different degree of regulations, since the latter liberalized not only current account, but also capital account transactions, when the D-mark recovered convertibility in 1958¹¹.

2.2 Capital Controls

The main features of the post-war Japan's international economic relations can be summarized as 1) capital controls, and 2) the fixed exchange rate. The abolition of the multiple exchange rates and pegging of yen at 360 per dollar in 1949 was a major turning-point for Japan to participate in the world economy, and the foreign trade was privatized in the next year, 1950.

The recognition that the feature 1) is a prerequisites for the feature 2), was widely accepted, and both the Foreign Exchange Law of 1949 and the Foreign Capital Law of 1950 constituted the legal framework for Japan. The internal counterpart of them, that is, domestic financial regulations were associated with the policy of allocating limited funds to the strategic industries, namely, the priority finance was another side of the Keisha Seisan Hoshiki (priority production system). How the capital controls contributed to the economic recovery program, is still unclear, however.

While the capital controls aimed at solving the balance of payment problems, capital imports could increase surplus (decrease deficits) above the line of the official settlements balance, at least in a short-run. Therefore, the liberalization could have been a rational policy choice. The stage theory of balance of

¹⁰ Besides, the sum of international assets and liabilities, which correspond to the gross stock of capital movements, relative to GNP is 26% for the United States and 24% for Japan in 1972. Bryant (1987, Table 3-6, 3-11).

¹¹ Monthly Report of the Deutsche Bundesbank, " Freedom of Germany's capital transactions with foreign countries ", July 1985, p.16.

payments tells that in the initial phase, when investment opportunity surpasses possible savings, higher expected rate of return induces net capital inflow, as the United States, Canada and Australia in the 19th century typically demonstrate. Korea since the mid-1960s is another example of this type. Why did Japan not choose open-door policy toward international capital movements?¹².

A hypothesis. A less-developed country hesitates to be wholly involved in the international economic system generated by developed countries. Despite recognizing the significance of imported capital to the economic development at home, they tend to be afraid of the political and economic dependence on foreign countries¹³. Unless a country lives within an autarky, foreign trade is indispensable and hence the trade finance constitutes the main stream of international capital transactions. Nevertheless, since Japan imported large scale capital even before the World War I, the capital controls in the post-world war II era cannot be attributed to the general tendency of the developing countries.

Another hypothesis. The domestic saving being insufficient, the necessary means to guide capital to the key-industries was regulations of the financial market. If the interest rate is set too low, then demand for capital surpasses its supply. The allocation of limited funds is another side of the low interest rate policy. The regulation on capital outflow is rational when the artificially determined interest rate is lower than the equilibrium level under the free capital movements. This explanation is related to a question concerning the post-war financial regulations. These regulations consisted of one on interest rates and the other on the business segmentation, the former is sometimes regarded to be the "artificially low interest rate policy". The issues at stake are how these regulations contributed to the rapid economic growth, and whether or not the priority allocation of funds was resulted from the government policy¹⁴. The important question concerning

¹² Collins(1988) stresses those differences between Japan and Korea, despite common features of rapid economic growth.

¹³ The Japanese discussions on the deregulation of capital import contained this kind of anxiety. Tsuruta (1982,128-130). The severe critique to this way of thinking was Komiya (1967).

¹⁴ Teranishi (1982, in particular Ch.8), considering the financial regulations as a component of growth-stimulating policy, stressed the significance of the maturity transformation in which the long-term credit banks acquired major part of funds from the short-term financial institutions (city-banks) in order to finance key-industries. The city-banks, on their parts, depended on the liquidity supply from the Bank of Japan

discussions below is, to what extent the concept of the "low interest rate-policy" is correct. Horiuchi (1984, pp.3-5) argues that since the nominal as well as real interest rates in Japan stayed higher than in other major developed countries in these years, the supposed " low interest rate" did not actually exist. It is rather natural that the interest rates in rapidly developing country like Japan remained high, reflecting the expected high return and high level of demand for funds.

Indeed, the international comparison of interest rates is not so simple, because exactly substitutable financial assets do not exist between different countries due to the country risk. Even for the standard interest rate like prime rates, the foreign borrowers generally have to pay more because of the risk premium. Thus, despite higher domestic interest rates, Japanese firms could not necessarily afford to reduce borrowing costs as much as the interest rate differentials would imply. Nevertheless, they could have acquired cheaper funds in the foreign financial markets than at home.

The regulations on capital movements were not designed, however, after due considerations of both their costs and benefits. Besides the anxiety for the "disequilibrating" short-term capital movements (hot money), the international long-term capital market had not recovered enough from the defaults of the 1930s. Under the circumstance, the capital controls seemed to the Japanese government to be a natural option. Their rather unexpected result was the undervaluation of the Yen.

which lent at lower rate than the unregulated call money market, thus provided a sort of subsidies to the city-banks.

Horiuchi(1984) and Horiuchi, Otaki(1987), although rather skeptical about the above argument, admitted that the government intervention had a great influence on the fund allocation in the reconstruction period after the war. Even during the high growth era, bond issues were subject to the discretionary management of the Bond Issue Council, favoring those with government guarantee and issued by financial institutions. Among the non-financial firms, major issuers were steel, transportation, electricity, and machine industries. In this sense, non-market mechanism played a role in the funds-allocation.

However, the largest financial instrument to the growing industries, namely bank-lending seems to have followed banks' own decisions rather independent from the government, whereas marginally, the contributions of such semi-official finance for foreign trade by the BOJ and ship-building finance by the Export-Import Bank of Japan, should not be underestimated.

But in the late 1960s, as we shall see in the next section, the short-term interest rate in Japan declined to the lower level than abroad, and the current account surplus generated potential pressure for a larger scale of capital export.

3. Functions of a Closed Financial System

After the mid-1960s, when the so-called liberalization of capital (in fact, deregulation of the inward foreign direct investments) commenced, the next turning-point was the breakdown of the fixed exchange rate system. Thereafter the capital controls were relaxed continuously until the amendment of the Foreign Exchange Law of 1980 and the Yen/Dollar Committee of 1984, which largely facilitated the growth of international financial business in Tokyo. We discuss in the following section how the closed financial system actually functioned, taking into account also of its gradual modifications.

3.1 Foreign Exchange and Foreign Capital Laws

The Foreign Exchange Law (1949) together with the Foreign Capital Law (1950) forbade international financial business in principle, and the government ordinances allowed necessary transactions gradually. These procedures disappeared only in 1980 with the amended Foreign Exchange Law, until then the government intervened in the foreign transactions at discretion, considering economic situations. Besides, not only in the short-run, but also with a view of the long-run effect on the balance of payments, the government made use of the Foreign Exchange Law to protect home industries. Based on this law, allocations of the scarce foreign exchanges limited the import of manufactured goods and as well favored key-industries for importing materials and technology. These measures were applied to steel and computer industries, for example¹⁵.

The Foreign Capital Law, on the other hand, formally aimed at promoting capital import, so long as it contributes to the economic independence and development of Japan. But as a matter of fact, for fear that the debt service and capital outflow should deteriorate balance of payments, the measures actually taken

¹⁵ See Komiya et al (eds), (1988, pp.158, 289-90, 356).

were very restrictive. A symbolic example is the "Yen-denominated investments" of 1956-1963, which allowed inward direct investments almost without any control, on the condition that non-residents would not remit debt-service abroad (Tsuruta, 1982, p.116ff). When Japan accepted the Article 8 of the IMF Agreement, the "Yen-denominated investments" system was finally abolished, but some non-residents complained that subsequently the strict application of the Foreign Capital Law rendered investments in Japan more difficult.

Possibly, the government applied capital controls for the sake of protection rather than the supposed balance of payment problems. Since 1967, the first year of deregulations on inward investment, it took long time for the open door policy to take full effect, until the 100% liberalization in 1973. Liberalizations for individual industries were implemented as follows; 1971 for automobile, the 1974 for integrated circuit, and 1975 for computer¹⁶. In order to see the balance of payment considerations, Figure 2 shows the authorized amount of capital import with major components of the balance of payments. The changes in international reserves correlated closely with the current balance until around the mid-1960s, which suggests that international capital transactions did not move independently from the current balance. The time series of the authorized capital import, on the other hand, did increase continuously with exceptions of temporal decline in 1965 and 1966. The balance of payments seems to have had little, if any, influence on the actual management of the capital import authorization.

The Foreign Capital Law did not solely aim at limiting capital import. Table 3 shows the components of industries which imported capital. It is not clear whether or not larger amount of borrowing than stock-acquisitions reflects the government's protective policy against take-overs by non-residents. The well known fact is that "the liberalization of capital" stimulated mutual stock-holdings between domestic firms. The industry subgroup suggests the existence of the priority policy: machine (15.9%), transport/communication (13.9%), electricity/gas (12.9%), oil-refinery (12.5%), metal (11.9%). The second and the third group constitute industrial infrastructures, the other three were the main targets of the post-war industrial policy. Since the interest rates stayed lower abroad than at home, capital imports undoubtedly benefitted the recipient industries. The actual management of the Foreign Capital Law thus contributed to the allocation

¹⁶ Komiya et al, (1988, pp.163-166). For the liberalization of the inward direct investments, see also Tsuruta (1982, p.115ff).

of the cheaper funds to the key-industries, associated with various forms of "control over the private business"¹⁷.

3.2 Trade Finance

Next to introducing the single foreign exchange rate, the Foreign Exchange Bank Law of 1954 set the basis for the development of the international finance, mainly the trade finance, in a similar way to the pre-war years. The former Yokohama Specie bank was transformed into a Specialized Foreign Exchange Bank (the Bank of Tokyo), and other banks engaged in international business received the status of authorized foreign exchange banks. The basis thus created survived through the high-growth period, and its main features were dependence on the finance by the Bank of Japan, on the export side, and the Bankers' Acceptance (BA) market in the United States on the import side. The Bank of Japan provided Loans against Foreign Exchange Bill (1953), which was replaced by the Loan Facilities of Foreign Exchange Funds (1961), and later compensated by the Foreign Exchange Purchase System (1965), and despite rare use, there existed also the Stamp Bill System (1947), and Import Bill System (1950)¹⁸, for import finance.

The "Loans against Foreign Exchange Bill", later "Loan Facilities", was a system that the Bank of Japan provided yen funds against the foreign currency bill foreign exchange banks had purchased, at lower rates than the domestic market. Since foreign exchange banks had more claims than liabilities in foreign currency, the "Foreign Exchange Purchase System" enabled them to sell their bills to the Bank of Japan, in order to avoid the currency risk. Although the foreign exchange banks, on their parts, could have sold future payments in the forward market, the spot-forward spreads typical in those years (yen discount) would have caused them loss. The institutional import finance was to lend foreign currency at a favorable rate corresponding to the usance-finance, since Japanese import was settled at sight in the 1950s. However, the

¹⁷ In the 1960s, MITI resisted to the amendment of the Foreign Exchange and Foreign Capital Laws, because the bureaucrats feared the subsequent loss of control over the companies concerned, according to the evidence by the former director of the International Finance Department of the MOF. Ekonomisuto ed. (1984, pp.380,386).

¹⁸ For the trade finance system, in particular, institutional finance and the relationships to the BA market, see Okuda(1986), Ohsa(1989) and BOJ(1985,pp.588-595).

government often intervened to restrict imports for the sake of the balance of payments, and accordingly, import finance system was only rarely used. In the 1960s, on the other hand, Japanese import shifted to the finance by usance bill, the most part of which was rediscounted in the New York BA market, and in the late-1960s, as the interest rate differentials between the United States and Japan turned to be smaller and sometimes in favor of Japan, the institutional import finance system lost its significance almost completely.

The mid- and long-term finance was undertaken by the Export-Import Bank of Japan, which mainly provided funds to the ship-building and plant-construction industries (Table 4). Between 1954 and 1967, its export finance was charged the minimum rate of 4% the corresponding law could have allowed. The Bank itself borrowed funds at 6.5% on an average, thus subsidizing for more than 2% annually (Export-Import Bank, p.128). Ships constituted 10% of the total exports in the late 1950s, and 7-8% in the 1960s, representing the exports of " heavy and chemical industries " in the high growth era (see Table 5).

The mid- and long-term finance was, from the financed industries viewed, mainly provided to big firms, while the institutional short-term finance enlarged borrowing possibilities of the medium- and small size firms (Oka, 1972, p.171). Indeed, official institutions for trade finance are not typically Japanese devices, but official support to the short-term finance is confined to France and Japan among the developed countries (Kinyu-Seido-Chosakai, 1970, pp.292-293).

The financial facilities mentioned above corresponds to the stage of current account deficits since they constituted important measures to promote exports. In the 1950s, even under the tight monetary policy, the export finance was favorably provided, and after 1955, when the official support to finance domestic bills was abolished, the export finance became a main stream of the institutional finance¹⁹. But later in the 1970s, as the current account surplus turned to be attacked by foreign countries, the export finance facilities were terminated in 1972, and the import finance was reintroduced by the Loans of Import Fund System in 1970.

3.3 International short-term capital movements

Even before Japan applied the Article 8 of the IMF Agreements, regulations on the foreign exchange

¹⁹ The Loans of Foreign Exchange Fund amounted to more than 50% of the total BOJ loans in 1955, and continued to be around that range even in 1969 and 1970. Ohsa(1989, p.428, Table 62).

business had been temporarily relaxed. Free Yen Accounts for non-residents (commenced in July 1960), for example, allowed convertibility of yen on the condition that non-residents hold payment account for current transactions at a foreign exchange bank. As limits on foreign borrowing without mortgage and on total spot holdings of foreign exchanges were abolished, transactions of foreign short-term capital were facilitated.

Until the late 1960s, short-term capital import took the form of the trade finance (see Table 1). The so-called Acceptance System was usually to rediscount import bills foreign exchange banks had bought, in the BA Market of New York. Even the main type of the import finance, Domestic Loan System, needed foreign borrowing in which foreign exchange banks used to issue refinance bills on U.S. banks. Thus, Japan's import finance depended so heavily on the BA Market in the United States that around a half of that market consisted in Japanese bills (Okuda, 1986, pp.93-96). Whether to borrow in the BA market or in the domestic market ("Yen shift") naturally depends on the cost differentials between the both markets. However, if the capital transactions are under control, foreign exchange banks cannot decide which market to choose, by the cost differentials. In other words, the degree of liberalizations can be measured, according to what extent the interest parity theorem actually holds.

Figure 3 shows covered short-term interest rate differentials, associated with spot-forward spreads as a reference. Among the three differentials, the most appropriate for considering trade finance is the (3), which reports the gap between import usance rates and discount rates charged on discountable bills at the Bank of Japan. The (2), differential on the other hand, chose the BA rate in New York for comparison. The actual costs for Japanese traders was not the BA rate, but the usance rates which foreign exchange banks imposed certain margins (their own plus commissions charged by U.S. banks: approximately 2% in total) above the BA rates. Japanese traders had usually no direct access to the BA Market. The (1) shows differentials in the short-term rates of return between the call rate in Japan and the TB rate in the United States.

The importers compared the domestic interest rate of the yen and the covered interest rate of the dollar. The spot-forward spreads stayed plus (forward discount for yen), at times as much as 3-4% at annual rate in the early 1960s, while they declined rapidly in the early 1970s when the yen revaluation was widely anticipated. The differentials (3) turned definitely to minus from the mid-1960s on, which promoted the "Yen shift" in trade finance. The government and the Bank of Japan restricted the "Yen shift" from 1965 to the

early 1966, on the ground that the international reserves did not reach the sufficient amount. Foreign criticisms on Japan's current account surplus and ever increasing international reserves induced authorities to take generous attitudes towards the "Yen shift" finally in 1968 and 1969²⁰.

If the interest arbitrages took place on a large scale, the interest differentials would come close to zero. Nevertheless, the differentials of not only (3),(2) but also (1) do not show such tendencies, suggesting the existence of still strong regulations on the short-term capital transactions. Since Japan's current account surplus and hence possibilities of the yen revaluation were increasing, those regulations on capital transactions, in effect, put a brake on the rise of the yen exchange rate.

4. In Relation to the " High-Speed Growth "

4.1 The "Undervaluation" of the Yen

While the pegging of the exchange rate was inevitable under the Bretton Woods System, developing countries in general tend to opt for fixed exchange rate, regardless of exchange rate systems. They prefer to pegging to a certain country's currency, usually to the economically most dependent country's, and whether or not that country fixes its exchange rate to another currency, does not necessarily matter. Under the current floating exchange rates, a number of LDCs peg to the dollar. Whether the fixed rate is undervalued or overvalued, depends on the type of economic transactions with the pegged country. If the country import capital on a large scale, it would resist to the undervaluation due to the debt-servicing costs. The country of regulating capital import, on the other hand, would avoid overvaluation for the sake of export growth. Which way did post-war Japan prefer to?

The resistance to the "undervaluation" seemed to be weak because of capital controls. Since the prices of imported materials and fuels, which constituted the major part of Japanese imports, showed continuous decline relative to manufactured goods²¹, the "undervalued" yen would not have been a burden on the

²⁰ See Ohsa (1989, pp.86-87), also BOJ (1986, pp.267-270).

²¹ Nakamura (1981, p.63). The best example is the crude oil, the import price of which actually declined as follows: 14.9 dollar/Kl in 1960, and 11.3 dollar /Kl in 1970. BOJ, The Economic Statistics Annual of 1974,

balance of payments, but rather an instrument to stimulate exports. Another point to mention is, why the dollar became the main transaction currency for Japan. The trade with Asian countries, in particular with Common Wealth countries, was largely transacted in the pound-sterling, and the share of the sterling exports was nearly equal to the dollar exports in the late 1950s²². In fact, the U.S. economic aids during the reconstruction period and windfall demands of the Korean War did promote transactions in the dollar, while the pound-sterling had a disadvantage of non-convertibility.

The major payment problem of those years is illustrated most clearly by the cotton textile industry, which imported raw materials from the dollar area, and exported manufactured goods to the sterling, or open account area. How to deal with the resulted sterling balance was the typical issue of international financial management²³ until the mid-1950s. After 1958, when the west-european currencies, including the sterling, recovered convertibility, the trade with the former sterling area became similar to that in dollar, because the acquired sterling could be freely converted into dollar. Thereafter, as the trade in dollar increased its share also in Asian region, and the trade finance in the New York money market became more important, the dollar stabilized its position as the key-currency for Japan.

The more important question is whether the parity of 1 dollar = 360 yen was an "undervaluation" or "overvaluation". Another question concerned is which year should be the bench mark for measuring the real exchange rate. The parity determined in April 1949²⁴ was maintained until August 1971, for 22 years.

p.205.

²² In 1950, 47% of the total exports went to the dollar area, 29% the sterling area, and 24% the open account area. 44% of the total imports came from the dollar area, 31% the sterling area, 25% the open account area. In 1957, on the other hand, 46% of the total exports went to the dollar area, 44% to the sterling area, 10% to, the open account area. 56% of the total import came from the dollar area, 37% the sterling area, and 7% the open account area. MOF, Monthly Report of the Public Finance and Banking Statistics, 1952 #28, pp.58-59, 1957 #88, p.23.

²³ Economic Planning Agency (1972,p.68). BOJ (1985,p.414ff).

²⁴ Shortly before setting the parity, the Japanese government considered the proper exchange rate for import as 130 yen, and 330 yen for export(Economic Planning Agency, 1960, p.198). According to these rates, the parity of 360 yen would have been undoubtedly an "undervaluation". Nevertheless, because of

Because the inflation rates in the mean time should have differentiated internationally, the real exchange rate would have changed, despite the fixed nominal rate. The table 6 shows that the average CPI inflation rate for 1960-1970 is the highest in Japan among the developed countries. As the rapid growth stimulated increase in wage rate and real estate price, prices of non-tradables (for example services) increased more than tradables, because the former had more difficulties to achieve productivity growth. The theory of "productivity (growth) gap inflation"²⁵, a well known explanation for the inflation gap between the WPI and CPI in those years, is basically the same as the argument above. However, it is worth to note that the low productivity, and hence higher price increase of a good in the CPI basket, if it is tradable, would lead to import and reduce inflation rate of that good. Contrary to the CPI, quite remarkable is the lowest EPI (export price index) inflation rate of Japan in the 1960s and 1970s, and the second lowest after Italy in the 1950s. The WPI inflation rate in Japan is indeed the lowest in the 1960s as well, but the inflation gap with other countries is larger for the EPI.

If the inflation rates in Japan had been quite low for every price index, one of the major reasons could have been anti-inflationary macroeconomic policy, guided by the "ceiling on the balance of payments" (discussed later). The higher inflation rate of Japan's GDP deflator suggests rather the opposite case. The lower WPI inflation rate is resulted from productivity growth²⁶, while the reason for the still lower inflation of EPI

various price controls in this period, the PPP does not hold in the theoretical sense. The government had artificially applied higher exchange rates for imports, in order to sell imported food and materials at lower yen price at home, thus providing subsidies. See also footnote 26.

²⁵ The best reference is Takasuga (1972). This theory assumes, consciously or unconsciously, that the import is restricted, while the classic statement by Balassa (1964) discusses the change in real exchange rates from the inflation differentials between tradables and nontradables.

²⁶ In the benchmark year of 1950, most of the heavy industry products were imposed low prices with compensation of subsidies. Without any subsidies, the prices of those goods would have been approximately 20 % lower in the early 1950. Economic Planning Agency (1972, p.62). Therefore, table 6 overestimates the WPI inflation rate, and underestimates the productivity growth in Japan.

is twofold: firstly, the composition of exports shifted to goods of higher productivity growth²⁷, and secondly, exporters may have reduced export prices, to get larger market shares abroad at the lower margins²⁸.

The large differentials among various sorts of inflation rates implies that the choice of price index is most crucial to calculate the real exchange rate of yen. For export competitiveness, EPI is the most appropriate. More precisely to assess competitiveness, we have to take into account of the regional composition of exports to get effective exchange rate. But the figure 4 is based on the prices relative to the United States, as most of the research have so far undertaken. Real exchange rates of the EPI continuously declined through the mid-1960s, and those of WPI almost unchanged for over ten years from 1958 to 1970, whereas CPI rates showed, on the contrary, upward trends. (Since the exchange rate is expressed in terms of Yen/Dollar, the rising trend in the Figure 4 corresponds to the depreciation of Yen).

The decline of EPI real exchange rates would suggest the "undervaluation" of yen. Shinohara (1961, Ch. 14) stressed that the "undervalued" yen contributed to export growth as an important tool of the industrial policy, with an assumption that the initial pegging at 360 yen rate itself was an "undervaluation"²⁹. Fujino (1990, ch. 12), on the other hand, concluded that yen was "overvalued" for a considerable time in the post-war years, from the relative as well as absolute PPPs based on the CPI.

As suggested above, discussions based on CPI are questionable for comparing competitiveness, and price controls in the post-war years do not provide adequate information for the issue, whether or not the initial pegging of 1949 was an "undervaluation". Fujino admitted, however, that both the relative PPP and the current accounts suggested a turning trend toward the undervaluation in the late 1960s. Undoubtedly, the continuous decline of the real exchange rate (EPI) should have brought about an "undervaluation" at a certain point in the history.

²⁷The labor productivity growth showed large differentials among industry groups, higher growth industries were machine, steel, and chemistry. MITI (1967,p.39, table 21). The former two recorded higher export growth as well.

²⁸ This behavior is better known in the floating rate era.

²⁹Shinohara does not consider the external balance as a proper measure of the equilibrium exchange rate, because many countries implemented discriminating protections against Japanese exports (1961, pp. 379, 391-392).

Analyses of factors to stimulate export tell that income (world import) elasticity was larger than price elasticity for the post-war Japan. They do not reject the favorable effects of relative prices, though. Nakamura (1981, pp.54-59) argues the large income effects, but his regressions report that in the 1960s, price elasticity is relatively large with enough statistical significance. White Paper of MITI (1970, pp. 162-169) shows that, during 1960-1968, competitiveness played larger role for metal, machine and chemicals, although income effect was generally larger than competitiveness effect. While the latter is not necessarily confined to the price competitiveness, the contribution of relative prices was large in the early 1960s, but suddenly declined in the later years³⁰.

The income elasticity is a result of the changing components of exports. That the main export shifted to the growing items of the world trade, naturally promotes export growth. Besides, the leading export goods of Japan (steel, machine, ships, and automobiles) increased shares in the world export market, suggesting rather aggressive competition than a passive dependence on the growth of the world demand .

Next point to note is the stagnation of the real exchange rate of EPI for nearly five years after a continuous fall from the early 1950s through the mid-1960s. In the late 1960s, Japanese current account turned positive and increased surplus , however. As is well known, the accelerated U.S. inflation expanded imports from the rest of the world, and the Vietnam War expenditures and various economic aids promoted imports from Japan to South-East Asia in the late 1960s. In this sense, Japanese current account surplus was a both direct and indirect result of the U.S. inflation (Ouchi, 1971, pp. 30, 52-53). Still unclear is the logical causality, how the U.S. inflation affected Japanese current account surplus.

The real (effective) exchange rate of the dollar did rise somewhat in the late 1960s, reflecting the American domestic inflation, but its level stayed at nearly the same as, or lower than, the early 1960s³¹. Considering also that the real yen/dollar exchange rate remained stable during this period, the Japanese surplus should not be attributed to the price differentials. Price levels had a tendency to be largely

³⁰Ueda (1987, pp.24-26) estimated larger price elasticity for the period 1958-1985, with other non-price competitiveness included, adding that for the period from the mid-1960s to the early 1970s, the price effect was slightly negative on Japanese current accounts.

³¹For the real exchange rate of the dollar, see IMF (1984, p.43, chart 7), and Meltzer (1991, p.77, Figure 7). The former is based on the unit labor cost, while the latter on CPI.

synchronized internationally, due to the imported inflation during the late stage of the Bretton Woods System. The U.S. inflationary policy influenced on Japanese export growth through expanded "absorption" within the United States and its counterpart in the South-East Asia. The last, but not least, factor was naturally the non-price competitiveness (quality control, after-services etc.) of Japanese products.

4.2 The "Ceiling on the Balance of Payments" and the Economic Growth

During the "high growth period", the most important barometer for the Japanese macroeconomic policy was the "Ceiling on the Balance of Payments", and its main policy tool was the monetary policy. The principle of the "balanced budget" rendered public expenditures inflexible, rather amplifying economic fluctuations (Nakamura, 1981, p.132). The tight monetary policy, induced by a decline in international reserves, led to the turning-point of a business cycle, which initially cut domestic absorption, causing increase in "involuntary inventories" and later decrease in fixed capital formations. From the early 1960s, the rise in Bank Rate began to induce short-term capital inflows, pushing the "ceiling on the balance of payments" upwards, and the decreasing relative scale of inventories (raw materials) as well transformed the business cycle patterns. However, the upper turning-point of 1964 had the common features as the predecessors : firstly, deficits in the balance of payments -- monetary tight policy -- recession, and secondly, the decline in inventories introduced cut in aggregate demand. The balance of payment deficits in 1967 also led to change in monetary policy, whereas an inflationary tendency brought about a policy change for the first time in 1969, despite the balance of payments surplus. The latter policy resulted in the ever increasing, current account surplus, causing the global imbalance of current accounts.³²

The government and the Bank of Japan maintained reluctance to the free movements of capital, and the reason is explained, for example, as follows;

"We concerned about: firstly, if the high confidence in yen induced capital inflows, then the balance of payments would not be paid enough attention, and monetary policy would become over-expansionary. When the balance of payments turned negative, the decreased confidence in yen would lead to sudden capital outflows, and hence promote decrease in

³²Economic Planning Agency (1972, p.187 ff), Nakamura (1981, pp.52-54). The features of each turning point are illustrated in Nakamura (1981, pp.146-150).

international reserves. Secondly, short-term capital inflows increase domestic liquidity which the Bank cannot impose direct control, and which renders tight monetary policy ineffective. The capital outflows, on the other hand, drive the Bank to expand credit. Thirdly, the excessive short-term borrowing by Japanese foreign exchange banks is considered by foreigners to be a means to lend at long-term, and may damage international confidence" (BOJ, 1986, p.248).

In short, 1) short-term capital movements amplify fluctuations in the balance of payments, 2) it disturbs domestic financial markets, in particular reduces tight money effects. 3) The international positions of "borrowing short, lending long" damage international credibility of Japanese foreign exchange banks. These arguments have shortcomings, however. The expressions as "cannot impose direct control", and "drive the Bank to expand credit" generate doubts whether the Bank of Japan actually had will to implement independent monetary policy. The "borrowing short" by foreign exchange banks itself does not constitute financial instability, as the banks of the key-currency country have short-term liabilities to non-residents.

Indeed, free capital movements would reduce the tight money effects when international reserves decrease. But as the classical gold standard clearly illustrates, it is not impossible to keep exchange rates fixed with unregulated capital flows. Since interest rates in Japan stayed relatively high, the dismantling of capital controls would induce capital inflows, and push the yen exchange rates upwards. In consideration of the real decline of the yen exchange rates in the mid- and long-run, the pressure for capital inflows must have been stronger, in anticipation of the revaluation. On the other hand, when capital flows out, the "ceiling on the balance of payments" would go down. The motive of capital controls was at least initially to avoid rather the latter possibility than the former, because the government was apt to underestimate the competitiveness of Japanese products. The tight monetary policy introduced by the decline in international reserves undoubtedly contributed to avoid accelerated inflation and a rise in real exchange rates. But in the high growth period, Japanese overall inflation rates was not low relative to other developed countries. Important to note is the powerful effect of the monetary policy to promote measures for productivity growth and cut in export prices.

It is not confined to Japan that the government was potentially skeptical about the balancing effects of the capital movements. But in Japan, a strong inclination to tight monetary policy resulted in a decline of the

real exchange rates and better competitiveness. Nevertheless, Japanese government did not necessarily recognize these results of its policy stance³³. Ever rising competitiveness associated with pegged exchange rate would lead to either capital outflows or increase in reserves. Japan opted to the latter, in fact.

From the 1950s through 1970, Japan's dependence on export (expressed by the export/GNP ratio) was rather smaller than pre-war years and the era after the 1970s. Although the same tendency appears in the U.S. case, the low dependence on export is more remarkable for Japan's rapid growth period (see table 7). Does this fact reject the concept of the export-led growth? Indeed, the recovery to the pre-war ratio had been undoubtedly a growth factor itself, but the large share of domestic demand implies "absorption-led" growth. However, to take note are the following facts.

Firstly, under the pegged exchange rate associated with capital controls, export growth determined import growth. Since Japanese imports consisted largely of raw materials and fuels (table 5), the export growth constituted material basis for high-speed growth³⁴.

Secondly, the export growth, if other things equal, pushed the "ceiling on the balance of payments" upwards, and enabled an expansionary monetary policy to continue for a while.

Thirdly, the developed countries other than the United States generally observed the "rules of the game" under the Bretton Woods System. Comparing the money supply functions of the developed countries, Japanese coefficient on international reserve is the largest, larger than Britain, which is well known for her "stop-go" policy (Iwami, 1991, Table 5B). Given the large coefficient, the effect of increasing international reserves on money supply and subsequent economic growth was more remarkable in Japan.

In Britain, the "stop-go" policy is claimed to have discouraged investments and hence deteriorated economic performance, whereas the same policy encouraged export and economic growth in Japan. This difference is attributed to the possibility whether or not the same policy promotes investments to raise productivity and stimulates price-cutting efforts. Table 6 shows that the CPI inflation rates in Japan is larger than Britain, and that WPI inflation rates are nearly the same in the period from 1950 to 1970, while WPI as well as EPI

³³In the early post-war years, the economic policy generally, not confined to foreign policy, was largely influenced by traditions of the controlled economy since the pre-war and war era (Komiya et al, 1988, p.6). Controls on international financial transactions were particularly strengthened during the war.

³⁴Shinohara (1961, p.17), Nakamura (1981, pp.59-61).

inflation rates are far smaller in Japan. Such a large gap in EPI inflation rates would naturally generate different performance in exports, despite possible differences in price elasticity of both countries' export goods.

5. Concluding Remarks

Main features of capital controls in post-war Japan can be summarized as follows. These controls had undoubtedly disadvantage in the sense that capital import would have cut interest costs. The composition of industries importing capital suggests the existence of a discretionary policy in favor of industries with larger growth potential. But these industries would have had better access to the foreign capital market even without capital controls. These capital controls had not enough effects in cutting interest costs and of introducing foreign technology, while protecting domestic industries and, in effect, promoting economic growth. The semi-official finance by the Bank of Japan and the Export-Import Bank of Japan supplied funds with lower interest rates, in compensation for the higher financial costs imposed by capital controls.

Another question to note is the considerations of the balance of payments. The capital import would have had undoubtedly favorable effects on the balance of payments in the short-run, but whether or not the debt-service payments would deteriorate the balance of payments in the future, depends on the employment of the imported capital. The fund allocation by the government would promote efficiency if the government could collect and analyze information concerned better than the private market. In view of the fact that the departments of the MITI controlled each industry group and collected necessary information at will, the government could make better decisions on investments. But it would be also questionable, because there existed conflicts between the departments within the ministry.

AS for the engines of economic growth, it is worth recalling that the "undervalued" exchange rate parity was maintained for a long time, longer than the high-growth period. The macroeconomic policy stance was largely determined by the "ceiling on the balance of payments" associated with capital controls, both of which were based on the experiences of the balance of payment difficulties in the post-war years, and which resulted in the obedience to the "rules of the game". Japan was, in this sense, the best example of the developed countries. The tight monetary policy, induced by the decline in international reserves, brought

about productivity growth and decrease in relative export prices. The declining real exchange rate, in terms of EPI, until the mid-1960s facilitated export growth.

The finance by the Bank of Japan and the Export-Import Bank of Japan contributed to the export growth as well, but its effect was smaller than the decline in the real exchange rate, because interest costs constitute only a smaller part of the export price. The institutional finance for imports terminated its working in fact in the 1960s, its effect was therefore still smaller than the export finance.

Since the mid-1960s, as the international environment around the Japanese economy transformed itself, the international reserves increased and the capital controls were partly relaxed. This change was a result of the accelerated inflation in the United States. During this period, when the "undervalued" yen was criticized by foreign countries, the price effect on export growth turned to be rather smaller, and the world's income growth resulted from the U.S. inflation as well as the non-price competitiveness of Japanese products became main factors for export growth.

The closed financial system since the reconstruction era was transformed largely in the early 1970s, after successive partial modifications. The definitive reform of a system is sometimes delayed by the resistance of fixed ideas and vested interests. This delay could hinder economic development. However, Japan's experience shows that the resistance to radical reforms, directly and indirectly, resulted in maintaining the low level of exchange rate and contributed to the economic growth. This fact does not necessarily imply that the government could have chosen the best option, considering correctly the overall effects of a conservative policy.

6. References

Atkin, J.M.(1977), *British Overseas Investment 1918-1931*, New York Arno Press

Balassa, Bela (1964), "The Purchasing-Power Doctrine: A Reappraisal", in *The Journal of Political Economy*, Vol.72,pp.584-596.

The Bank of Japan (1985, 1986), *Nippon Ginko Hyakunenshi, (Centennial History of the Bank of Japan)*, Tokyo.

Bryant, Ralph C. (1987), *International Financial Intermediation*, Washington D.C. Brookings Institution.

Collins, Suzan M. (1988), "Saving and Growth Experiences of Korea and Japan", in *The Journal of the Japanese Economy and International Economics*, 2. pp. 328-350.

Economic Planning Agency (1960), *Sengo Keizaishi, Keizaiseisakuhen (Post-War Economic History: Economic Policy)*, Tokyo.

Economic Planning Agency, Research Department (1972), *Shiryoh, Keizai Hakusho 25 nen, (Documents: 25 Years of the White Paper on Japanese Economy)*, Nihon Keizai Shimbun.

Eichengreen, Barry and M. Uzan (1991), "The Economic Consequences of the Marshall Plan", mimeo.

Ekonomisuto (ed) (1984), *Shohgen Kohdo Seichohki no Nihon (ge), (Evidence on the Japan's High-Speed Growth)*, Mainichi Shimbun.

The Export-Import Bank of Japan (1983), *30nen no Ayumi, (Thirty Years' Experiences)*, Tokyo.

Fujino, Shohzaburo (1990), *Kokusai Tsukataisei no Doyo to Nihon Keizai*, (*The Dynamics of International Monetary Systems and Japanese Economy*), Keiso Shobo.

Horiuchi, Akiyoshi (1984), "Economic Growth and Financial Allocations in Postwar-Japan", The University of Tokyo, Research Institute for the Japanese Economy, Discussion Paper Series, 84-F-3.

Horiuchi, Akiyoshi, and Masayuki Ohtaki (1987), "Kinyu: Seifu kainyuh to Ginkokashidashi no Jyuhyohsei", (Finance: Government Interventions and Significance of Bank Loans), in Koichi Hamada et al (eds), *Nihon Keizai no Makuro Bunseki*, (*Macroeconomic Analysis of Japan*), Univ. of Tokyo Press., pp. 123-148.

International Monetary Fund (1984), "Exchange Rate Volatility and World Trade", *Occasional Papers*, No.28.

Iwami, Toru (1991), "The Bretton Woods System as a Gold Exchange Standard", The University of Tokyo, Research Institute for the Japanese Economy, Discussion Paper Series, 91-F-11.

Kanamori, Hisao (ed) (1970), *Boheki to Kokusai Shushi*, (*Foreign Trade and Balance of Payments*), Nihon Keizai Shimbun.

Komiya, Ryutaro (1967), "Shihon Jiyuhka no Keizaigaku", (Economics of Capital Liberalization), "*Ekonomisuto*", in *Gendai Nihon Keizai Kenkyu* (*Studies of Contemporary Japanese Economy*), Univ. of Tokyo Press, 1975, pp. 195-223.

Komiya, Ryutaro, Masahiro Okuno, Kotaro Suzumura, *Industrial Policy of Japan*, Academic Press, 1988.

Meltzer, Alan (1991), "U.S. Policy in the Bretton Woods Era", *Federal Reserve Bank of St. Louis Review*, 73, pp. 54-83.

Ministry of Finance, Working Group on Financial Institutions (1970), *Kinyu Seido Chosakai Shiryo Dai 4*

Kan, Futsuginko, *Boekikinyu, (Documents Vol.4, Ordinary Banks and Trade Finance)*, Kinyu-Zaisei Jijo Kenkyukai.

Ministry of International Trade and Industry (1967), *Sengo Nihon Boheki 20nenshi, (Twenty Years' History of Foreign Trade in Post-War Japan)*, Tsusho-Sangyo Chosakai.

Nakamura, Takafusa (1981), *The Postwar Japanese Economy: its Development and Structure*, University of Tokyo Press.

Ohkawa, Kazushi et al (eds) (1974), *Choki Keizai Tokei, (Long-term Economic Statistics: National Income)*, Toyo-Keizai Shimpo.

Oka, Masanobu (1972), "Yushutsunyu Kinyu" (Export-Import Finance), Kojima Kiyoshi and Komiya Ryutaro (eds), *Nihon no Hikanzei Shoheki, (Japan's Non-Tariff Barriers)*, Nihon Keizai Shimbun, pp. 162-174.

Okuda, Koji (1986-1987), "Sengo Nihon no Boeki Kinyu" (Foreign Trade Finance in Post-War Japan (1)-(3)), Oita University, *Keizai Ronshuh*, vol. 37. 4/5 - 38. 2/5, pp. 76-107, 28-60, 1-31.

Ohsa, Masayuki (1989), *Sangyo Boekishinko to Kinyuseisaku, (Encouraging Industry and Foreign Trade and Monetary Policy)*, Toyo Keizai Shimpo.

Ouchi, Tsutomu(ed) (1971), *Gendai Nihon Keizairon, (Modern Japanese Economy)*, Univ. of Tokyo Press.

Shinohara, Miyohai (1961), *Nihonkeizai no Seicho to Junkan, (Growth and Cycles of Japanese Economy)*, Sobunsha.

Takasuga, Yoshihiro (1972), *Gendai Nihon no Bukka Mondai, (Price Problems in Contemporary Japan)*,

Shinhyoron.

Teranishi, Juro (1982), *Nihon no Keizaihatten to Kinyu*, (*Finance and Economic Development in Japan*), Tokyo Iwanami Shoten.

Teranishi (1989), "Fukinkoseicho to Kinyu", (*Disequilibrium Growth and Finance*), in Nakamura and Odaka (eds), *Nijuhkohzo (Dual Economy)*, Iwanami Shoten, pp. 185-229.

Tsuruta, Toshimasa (1982), *Sengo Nihon no Sangyoseisaku*, (*Industrial Policy of Post-War Japan*), Nihonkeizai-Shimbun.

Ueda, Kazuo (1987), "Kokusai Shushi, Keijoshushi no Chokihendo to Tankihendo", (*Balance of Payments: the Long- and Short-term Fluctuations of the Current Accounts*), Hamada et al (eds), op. cit.

Yamazawa, Ippei and Yuzo Yamamoto (1979), *Choki Keizai Tokei, Boeki to KokuSaishushi*, (*Long-term Economic Statistics: Foreign Trade and Balance of Payments*), Toyo-Keizai Shimpo.

Table 1. The Balance of Payments

(1946-1973, fiscal year average, million dollars)

| period | 1946-50 | 1951-55 | 1956-60 | 1961-65 | 1966-70 | 1971-72 | 1973 |
|-------------------|---------|---------|---------|---------|---------|---------|---------|
| current balance | 145 | 104 | 23 | -205 | 1,310 | 6,241 | -3,918 |
| trade balance | -188 | -395 | 93 | 494 | 2,862 | 8,377 | 789 |
| exports | 395 | 1,507 | 3,120 | 6,116 | 14,024 | 27,045 | 38,943 |
| imports | 583 | 1,900 | 3,027 | 5,622 | 11,162 | 18,669 | 38,154 |
| services | -68 | 442 | -20 | -640 | -1,368 | -1,807 | -4,370 |
| transport | | | | -470 | -890 | 919 | -2,083 |
| | -94 | -177 | -292 | | | | |
| travel/insurance | | | | -39 | -126 | -558 | -1,254 |
| invest.income | -2 | -22 | -39 | -137 | -221 | 275 | 309 |
| official | | | | | | | |
| transactions | -26 | 665 | 429 | 343 | 551 | 649 | 666 |
| others | 3 | -23 | -118 | -337 | -681 | -1,254 | -2,008 |
| transfers | 401 | 55 | -50 | -59 | -184 | -329 | 337 |
| U.S.aids | 390 | 32 | --- | --- | --- | --- | --- |
| indemnity | -4 | -4 | -89 | -69 | -60 | -49 | -62 |
| long-term capital | -15 | -35 | -22 | 36 | -729 | -3,803 | -9,110 |
| Japan.capital | -20 | -73 | -148 | -383 | -1,342 | -4,310 | -7,688 |
| foreign capital | 4 | 37 | 126 | 419 | 613 | 507 | -1,422 |
| basic balance | 130 | 69 | 1 | -169 | 519 | 2,438 | -13,028 |

| | | | | | | | |
|----------------------------------|-----|----|------|-----|-------|-------|---------|
| short-term capital | 0 | 23 | -1 | 83 | 334 | 2,633 | 2,283 |
| trade finance | | | | 74 | 308 | 2,467 | 2,241 |
| errors & omissions ¹⁵ | | 1 | 28 | 6 | 112 | 432 | -2,662 |
| <hr/> | | | | | | | |
| overall balance | 145 | 93 | 28 | -80 | 1,028 | 5,503 | -13,407 |
| <hr/> | | | | | | | |
| monetary movements | | | | | | | |
| internat.reserves* | 108 | 71 | 211 | 22 | 670 | 6,334 | -5,699 |
| others | 37 | 22 | -183 | -67 | 408 | -751 | -7,708 |
| <hr/> | | | | | | | |

Note:*including changes in IMF positions and SDR.

Source: Amano, Kajin (ed), *Zusetsu Kokusaikinyu (International Finance Illustrated)*, Zaikei Shoho Sha, 1974, Bank of Japan, *Kokusaishushi Tohkei Geppoh (Balance of Payments Monthly)*, MITI (1967), Yamazawa and Yamamoto (1979).

Table 2. Historical Change of Current Accounts and Long-term Capital

Flows (UK, USA, Germany and Japan , year average, %)

| period | 1900-13 | 1920-29 | 1930-39 | 1950-60 | 1960-70 | 1970-85 |
|--------------------------|---------|---------|---------|---------|---------|---------|
| <u>Britain</u> | | | | | | |
| current balance | 4.97 | 2.58 | -0.93* | 0.99 | 0.07 | 0.24 |
| long-term | | | | | | |
| capital balance | -5.49 | -2.35 | -0.26* | -0.59 | -0.37 | -1.45 |
| gross capital | | | | | | |
| movements | 5.49 | 3.30 | 2.75* | ---- | 3.03 | 6.09 |
| <u>The United States</u> | | | | | | |
| current balalance | 1.14 | 1.65 | 0.74 | 0.68 | 0.76 | -0.14 |
| long-term | | | | | | |
| capital balance | -0.14 | -0.71 | 0.31 | -0.45 | -0.24 | -0.12 |
| gross capital | | | | | | |
| movements | 0.85 | 1.09 | 0.42 | 0.61 | 1.01 | 1.85 |
| <u>Germany</u> | | | | | | |
| current balance | -3.80* | | -1.41** | 1.83 | 0.65 | 0.75 |
| long-term | | | | | | |
| capital balance | -0.94 | | -0.77** | -0.27 | -0.68 | -0.07 |
| gross capital | | | | | | |
| movements | --- | | 0.99** | 0.61 | 2.09 | 3.26 |
| <u>Japan</u> | | | | | | |
| current balance | -1.88 | -1.52 | -0.12 | 0.68 | 0.16 | 0.90 |
| long-term | | | | | | |
| capital balance | 2.71 | -0.68 | -2.37 | -0.18 | -0.18 | -1.28 |

gross capital

| | | | | | | |
|-----------|------|------|------|------|------|------|
| movements | 3.51 | 1.21 | 3.14 | 0.71 | 1.13 | 2.43 |
|-----------|------|------|------|------|------|------|

Note: gross long-term capital movements = long-term capital export + capital import.

Source: Britain; C. H. Feinstein, *Statistical Tables of National Income, Expenditure and Output of the U.K. 1855-1965*, Central Statistical Office, *Economic Trends*. M. Simon, "The pattern of New British Portfolio Foreign Investment, 1865-1914", in A. R. Hall(ed), *The Export of Capital from Britain 1870-1914.*, R. S. Sayers, *The Bank of England*, Central Statistical Office, *Economic Trends, United Kingdom Balance of Payments*.

*1930-1938. After 1960, excluding changes in assets and liabilities of banks. U.S.; U.S. Department of Commerce, *Historical Statistics of the United States, Colonial Times to 1970, Survey of Current Business*.

After 1971, excluding changes in assets and liabilities of banks.

Germany; Deutsche Bundesbank, *Deutsches Geld- und Bankwesen in Zahlen 1876-1975. 40 Jahre Deutsche Mark, Monetäre Statistiken 1948-1987*.

* trade balance only. **1925-1935.

Japan: Ohkawa (1974), Yamazawa/Yamamoto (1979), BOJ, *Keizai Tohkei Nenpo (Economic Statistics Annual)*, various issues.

Table 3. The Foreign Capital Import of Various Industrial Sector

(Fiscal year 1950-1967, million dollars)

| sector | borrowing | stock-acqui. | bond-issue | DAR | total | % |
|-----------------------------|--------------|--------------|------------|-----------|--------------|--------------|
| machine | 588 | 81 | 117 | 53 | 839 | 15.9 |
| metal | 590 | 23 | 13 | --- | 626 | 11.9 |
| chemistry | 366 | 87 | 31 | --- | 484 | 9.2 |
| oil refinery | 567 | 94 | --- | --- | 661 | 12.5 |
| textile | 101 | 2 | 38 | --- | 141 | 2.7 |
| construction | 483 | 1 | --- | --- | 484 | 9.2 |
| gas/electricity | 658 | --- | --- | 22 | 680 | 12.9 |
| transport/ communication | 582 | 1 | 121 | - | 704 | 13.3 |
| trade | 9 | 13 | 23 | 2 | 47 | 0.9 |
| finance | 28 | --- | 100 | 12 | 140 | 2.7 |
| others | 129 | 41 | 306 | --- | 476 | 9.0 |
| total | 4,102 | 344 | 748 | 89 | 5,282 | 100.0 |

Source: *Gaishi Donyu Nenkan (Annual Report of Foreign Capital Import)*,
1968-69, p.16.

Table 4. The Composition of Finance provided by the Japanese Export-Import Bank (100 million Yen, % in parentheses)

| period | 1950-1956 | 1957-1967 | 1968-1973 |
|---------------------|------------|-------------|-------------|
| export finance | 1,908(99) | 13,163(76) | 19,173(61) |
| ships | 1,334(69) | 8,393(48) | 11,009(35) |
| plant construction | 574(30) | 4,770(28) | 8,164(26) |
| technology | | | |
| cooperation finance | ---- | 83(0) | ---- |
| import finance | 1 | 165(1) | 3,749(12) |
| foreign investment | 19 | 1,035(6) | 4,728(15) |
| loans | ---- | 2,874(17) | 3,937(12) |
| total | 1,928(100) | 17,320(100) | 31,585(100) |

Source: EIBJ (1983), Table 1-1, 2-2, 3-15.

Table 5. The Composition of Japanese Foreign Trade (%)

Export

| year | 1950 | 1960 | 1970 | 1980 |
|----------------------|------|------|------|------|
| textiles | 48.6 | 30.2 | 12.5 | 4.8 |
| metal & products | 19.4 | 13.8 | 19.7 | 16.4 |
| iron & steel | 8.8 | 9.6 | 14.7 | 11.9 |
| machine/equipments | 10.5 | 22.9 | 46.3 | 62.8 |
| transport equipments | 5.0 | 10.7 | 17.8 | 26.5 |
| automobiles | --- | 2.6 | 6.9 | 17.9 |
| ships | 3.2 | 7.1 | 7.3 | 3.6 |
| electric machine | 1.4 | 6.8 | 14.8 | 17.5 |

Import

| year | 1950 | 1960 | 1970 | 1980 |
|-----------------------|------|------|------|------|
| foodstuffs | 33.3 | 12.2 | 13.6 | 10.4 |
| raw materials | 56.6 | 48.3 | 35.4 | 16.9 |
| mineral fuels | 5.5 | 16.5 | 20.7 | 49.8 |
| crude oil | 2.5 | 13.1 | 11.8 | 37.5 |
| manufactured products | 3.4 | 22.1 | 30.4 | 22.8 |
| chemicals | 2.6 | 5.9 | 5.3 | 4.4 |
| machine/equipments | 0.8 | 9.0 | 12.2 | 7.0 |
| others | --- | 7.3 | 12.9 | 11.4 |

Source: MITI, *Twenty Years' History of the Post-War Foreign Trade, White Papers of Foreign Trade.*

Table 6. International Divergence of Inflation Rates (year average, %)

| CPI | 1950-1960 | 1960-1970 | 1950-1970 | 1970-1980 |
|---------|-----------|-----------|-----------|-----------|
| U.S. | 2.09 | 2.75 | 2.42 | 7.82 |
| Japan | 4.01 | 5.74 | 4.87 | 8.97 |
| Germany | 1.88 | 2.59 | 2.23 | 5.08 |
| France | 5.58 | 4.04 | 4.81 | 9.63 |
| Britain | 3.33 | 4.05 | 3.69 | 13.09 |
| Italy | 3.15 | 3.64 | 3.39 | 13.97 |
| Canada | 2.20 | 2.72 | 2.46 | 8.04 |

| GDP Deflator | 1950-1960 | 1960-1970 | 1950-1970 | 1970-1980 |
|--------------|-----------|-----------|-----------|-----------|
| U.S. | 2.61 | 3.10 | 2.86 | 7.39 |
| Japan | 3.67* | 4.30 | 4.09** | 7.62 |
| Germany | 2.84 | 3.71 | 3.27 | 5.31 |
| France | 6.03 | 4.35 | 5.18 | 9.49 |
| Britain | 4.08 | 4.23 | 4.16 | 13.95 |
| Italy | 3.19 | 4.50 | 3.84 | 16.40 |
| Canada | 3.43 | 3.01 | 3.22 | 8.76 |

| WPI | 1950-1960 | 1960-1970 | 1950-1970 | 1970-1980 |
|---------|-----------|-----------|-----------|-----------|
| U.S. | 1.50 | 1.52 | 1.51 | 9.31 |
| Japan | 2.21 | 1.28 | 1.75 | 7.53 |
| Germany | 2.03 | 1.32 | 1.68 | 5.10 |
| France | 5.00 | 2.86 | 3.92 | 8.07 |
| Britain | 2.87 | 3.08 | 2.98 | 13.57 |
| Italy | 0.54 | 2.49 | 1.51 | 15.42 |
| Canada | --- | 1.77 | --- | 9.68 |

| EPI | 1950-1960 | 1960-1970 | 1950-1970 | 1970-1980 |
|---------|-----------|-----------|-----------|-----------|
| U.S. | 1.26 | 1.52 | 1.39 | 14.55 |
| Japan | 0.29 | 0.28 | 0.28 | 3.69 |
| Germany | 3.89 | 0.76 | 2.31 | 5.15 |
| France | 4.80 | 2.49 | 3.64 | 9.14 |
| Britain | 2.60 | 3.11 | 2.85 | 14.51 |
| Italy | -0.55 | 0.55 | 0.00 | 16.14 |
| Canada | 1.28 | 2.16 | 1.72 | 11.29 |

Note: *1955-1960, **1955-1970. Inflation rate is calculated as $\log(1+p) = (\log P_t - \log P_o) / t$. p: average inflation rate, P_t: Price index of the t-th year. P_o: Price index of the bench mark year.

Source: *International Financial Statistics, Supplement 1987*

Table 7. The Dependence on Foreign Trade of Major Countries (%)

Export/GNP

| | 1913 | 1929 | 1939 | 1950 | 1960 | 1970 | 1985 |
|---------|------|------|------|------|------|------|------|
| Britain | 23.4 | 16.9 | 7.9 | 17.0 | 14.4 | 15.6 | 22.2 |
| U.S. | 6.6 | 5.2 | 3.5 | 3.8 | 3.9 | 4.4 | 5.4 |
| Germany | 19.3 | 17.0 | 5.4* | 8.5 | 15.8 | 18.6 | 27.3 |
| Japan | 13.8 | 16.0 | 11.9 | 7.5 | 9.2 | 9.8 | 12.8 |

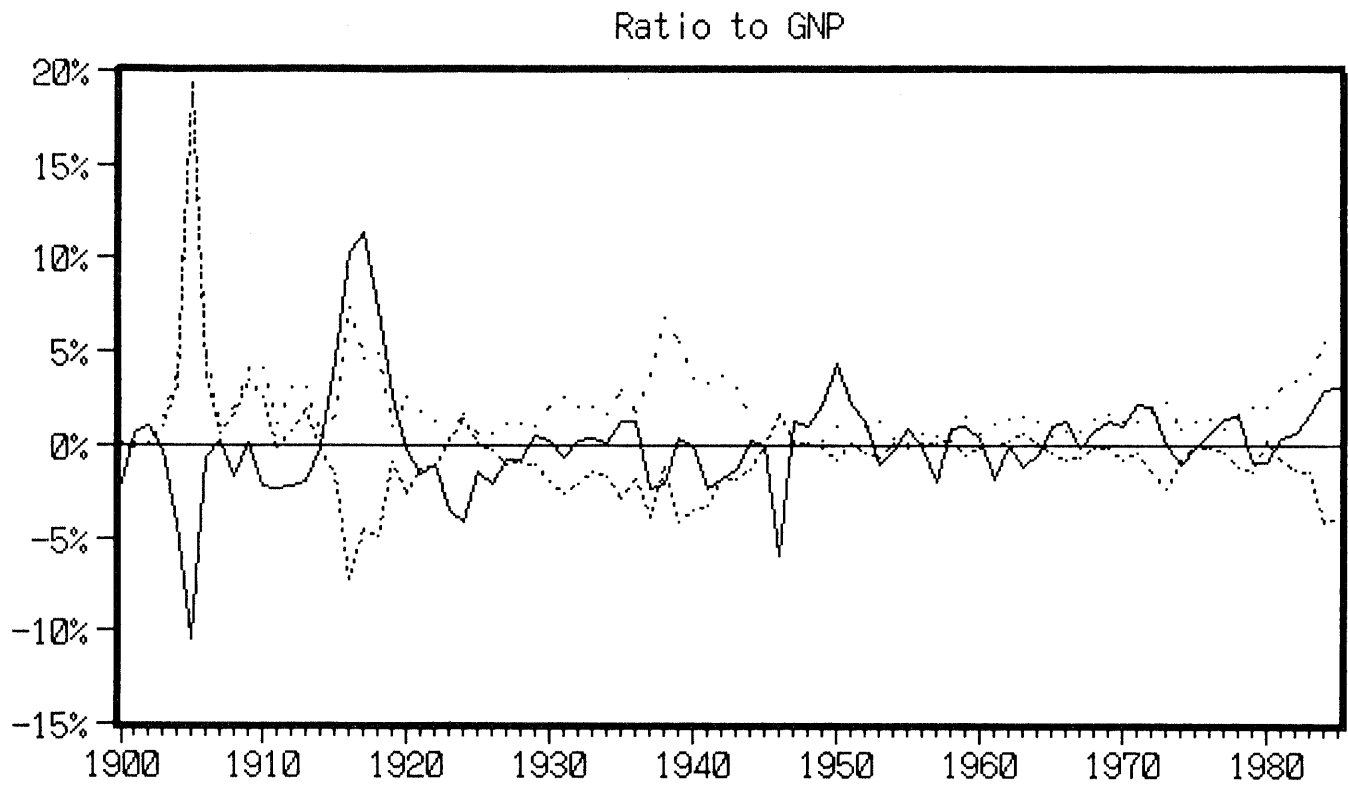
Import/GNP

| | 1913 | 1929 | 1939 | 1950 | 1960 | 1970 | 1985 |
|---------|------|------|------|------|------|------|------|
| Britain | 28.3 | 24.6 | 14.5 | 19.6 | 17.7 | 17.5 | 22.8 |
| U.S. | 4.6 | 4.3 | 6.6 | 3.2 | 2.9 | 4.1 | 8.5 |
| Germany | 20.5 | 16.8 | 5.6* | 11.6 | 13.1 | 15.5 | 23.0 |
| Japan | 16.5 | 16.9 | 9.5 | 8.8 | 8.6 | 9.6 | 8.7 |

Note: *1938

Source: The same as the table 2.

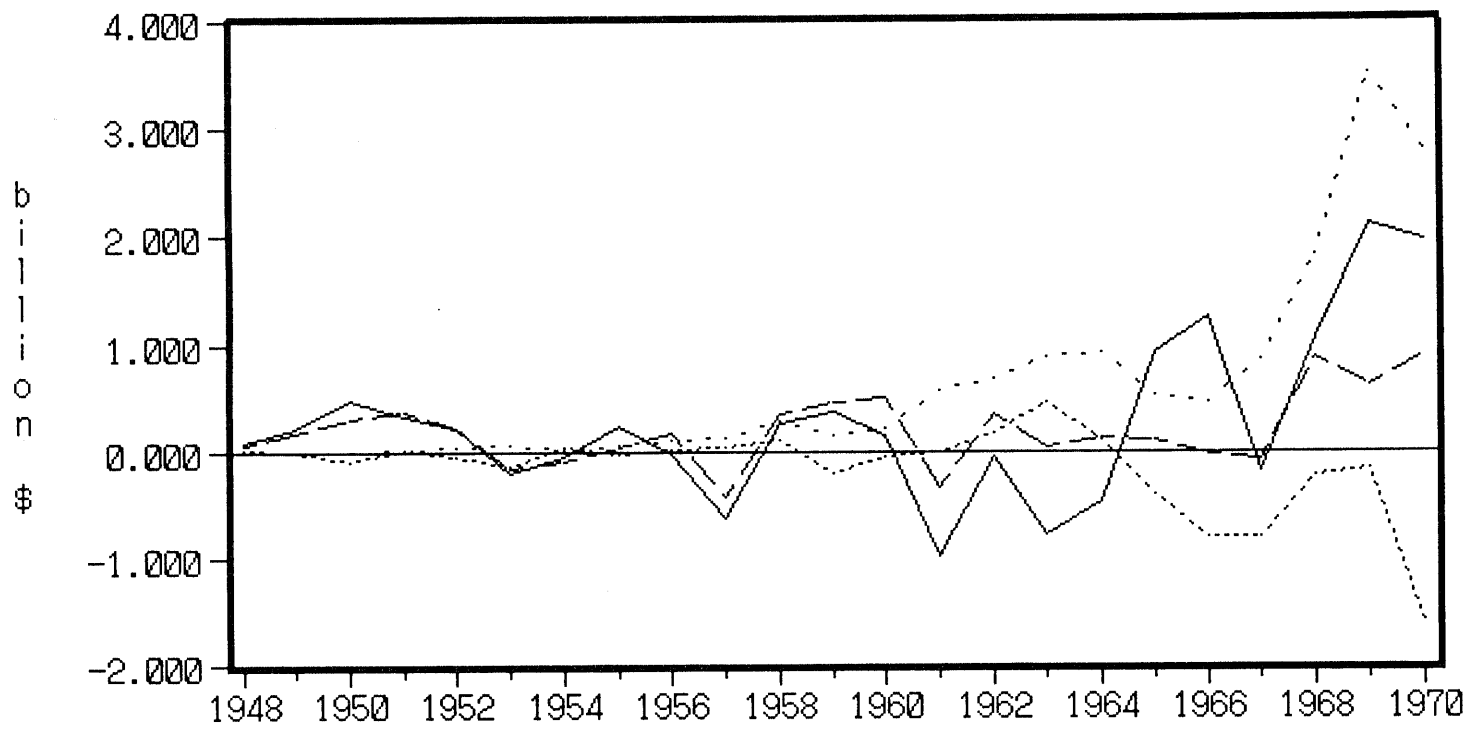
Figure 1. Current and Long-Term Capital Balance (1900-1985)



—— current balance long-term capital balance
- - - - - gross long-term capital movements

Source: Yamazawa/Yamamoto (1979), Ohkawa et al (1974).

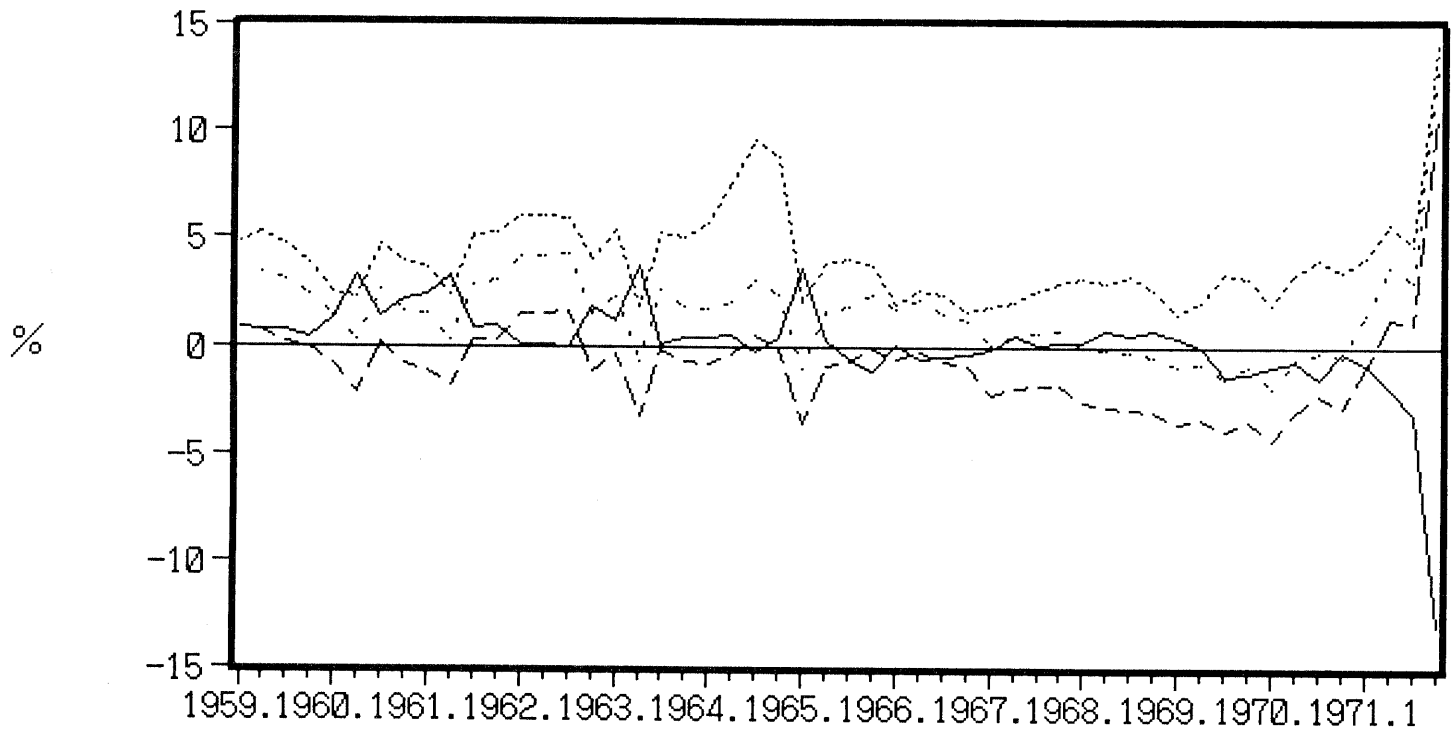
Figure 2. Balance of Payments (1948-1970)



——— current balance long-term capital balance
 - - - - authorized capital import - - - - changes in international balance

Source: BOJ, *The Economic Statistics Annual*, various issues, *Gaishi Donyu Nenkan*.

Figure 3. Covered Short-Term Interest-Rate Differentials (1959/I-1971/IV)

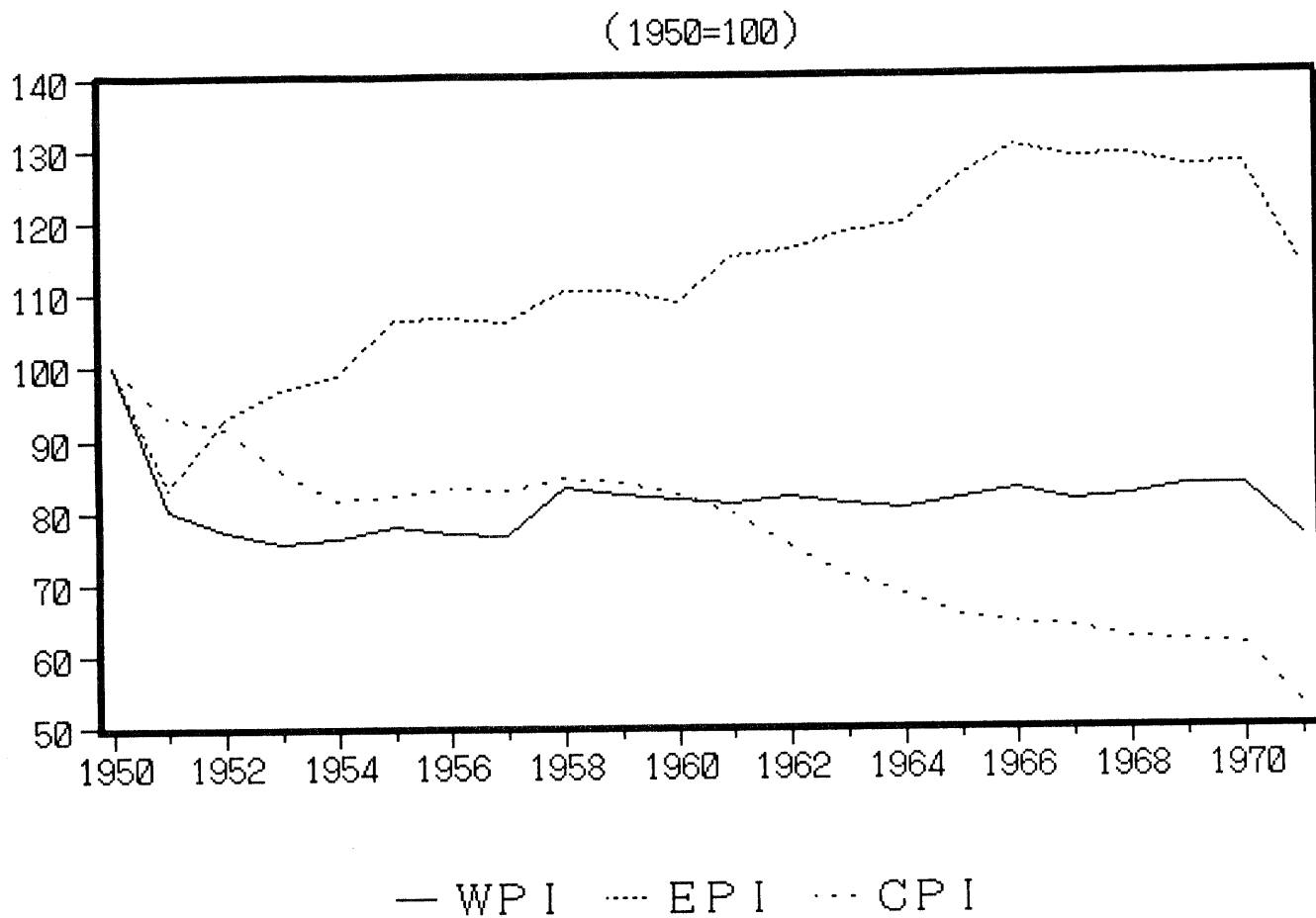


—— forward-spot spreads ····· differential (1)
 - - - - differential (2) - · - · - differential (3)

Note: Forward-spot spreads are calculated from 3-month forward exchange rates, and then converted to annual rates. Plus sign means forward yen discount, minus sign forward yen premium. Differential (1) = call rates (over month) - TB rates (90 days), differential (2) = Discount rates for the bills discountable at BOJ (over 3 million Yen) - BA rates (90 days), differential (3) = Discount rates for the bills discountable at BOJ (over 3 million Yen) - import usance rates (3 months, with L/C). Interest rates and foreign exchange rates are all at the beginning of each quarter.

Source: *Gaitame Nenkan (Foreign Exchange Annual)*, BOJ, *The Economic Statistics Annual*, various issues.

Figure 4. Yen/Dollar Real Exchange Rate of WPI,CPI and Export Price (1950-1971)



Note: Exchange rate is expressed in terms of Yen/Dollar.

Source: IMF, *International Financial Statistics, Supplement 1987*.