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The Role of Foreign Contributions in Japanese Capital Formation, 1868-1936
with Special Reference to the Period 1904-1914

By

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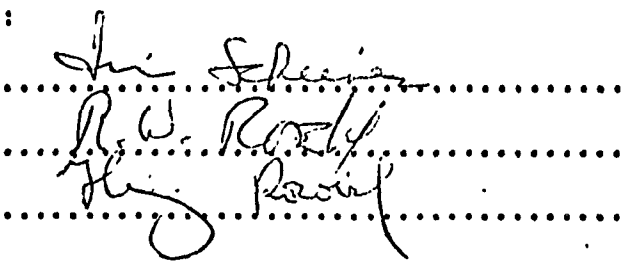

Committee in Charge

THE ROLE OF FOREIGN CONTRIBUTIONS IN PREWAR JAPANESE CAPITAL FORMATION - WITH SPECIAL REFERENCE TO THE PERIOD 1904-14.

ABSTRACT

Bernard Key

The purpose of this dissertation is essentially twofold: 1. to fill the empirical void which has persisted in Balance of Payments work for Japan and 2. to offer, based on this empirical work, an analysis of a long glossed over factor in Japan's economic development: the role of foreign capital in the financing of Japanese capital formation.

The results of my empirical work appear in the Statistical Appendicies, where I have attempted to provide for the first time annual, current account (including invisibles as well as merchandise trade) data for Japan over the entire prewar period presented throughout according to the International Monetary Fund format. While this Balance of Payments data could be used for a variety of purposes, I have chosen to focus here on one aspect of these accounts: the estimation of the flow of capital across Japan's international frontier. Based on this Balance of Payments data, I have been able to obtain via the indirect estimation method comprehensive annual estimates for capital flows, heretofore unavailable, for the entire prewar period.

Couched in this newly derived empirical framework, the three analytical chapters presented here aim, respectively, at reexamining the

following issues relating to the role of foreign capital in prewar Japanese capital formation: First, the long pattern and investment implications of our capital flow estimates; Second, the impact of foreign capital inflow on private investment during the period where the connection between capital inflow and domestic investment seems strongest, namely, the years between the Russo-Japanese War and World War I (1904-14); and Third, the broader perspective of capital flow within the framework of the investment spurt.

In Chapter I, The Pattern of Capital Movements: Long Term Investment Implications, an analysis of the more aggregate first question is presented centered about the capital flow periodization based on level and trend movements in I_f/GDCF. We then seek to explore the investment implications of this capital flow periodization by a comparison with the Ohkawa-Rosovsky real side, investment spurt periodization, by an analysis of the cyclical or contra cyclical relationship between the gold flows and the trade balance, and, finally, by an examination of the long term or short term nature of the capital flows. Taken together, this macro data suggests the need to focus on the period 1904-14, the only time when capital inflow appears strongly connected to domestic capital formation.

Having singled out the 1904-14 period for its strong investment implications, we will next want to investigate the capital inflow-domestic investment relationship in greater detail. To this end, Chapter II, Capital Inflow in the Second Spurt, 1904-13: The Transfer Mechanism, represents a more disaggregate attempt to relate capital inflow and private investment. Here we first challenge the traditional notion that capital inflow was related to a balance of trade deficit, generated in large part

by military imports. Instead, we suggest that the capital inflow of this period can best be linked to the expanding investment of the private sector. To substantiate this connection we offer an explanation of the transfer mechanism from the Rest of the World to the Japanese Central Government via a treatment of movements in gold and specie held abroad. We then examine the Japanese Central Government to Private Sector transfer through a money flow analysis of the relevant economic categories over this period. Finding that there was a large net financial transfer to the Private Sector from the Japanese Central Government following the conclusion of the Russo-Japanese War, we then conclude by tracing the impact of this transfer by offering two examples at the firm level.

In Chapter III, Toward a Broader Perspective: Capital Flow and the Investment Spurt, we try to place our financial side, capital flow pattern in broader perspective by a comparison with the Ohkawa-Rosovsky real-side, investment spurt periodization. Comparing the two we are able to suggest that the large foreign capital inflow of 1904-13 is the key link from their first, concurrent growth investment spurt to their second, differential structure investment spurt.

THE ROLE OF FOREIGN CONTRIBUTIONS IN PREWAR JAPANESE CAPITAL FORMATION - WITH SPECIAL REFERENCE TO THE PERIOD 1904-14.

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INTRODUCTION

At present it is widely held in Japan and abroad that foreign capital played only a minor role in financing prewar capital formation. Furthermore, even the few who concede a greater importance to foreign capital have centered their attention exclusively on the financing of military related imports during the periods of capital inflow which occurred after the Sino-Japanese War, 1868-98, and during the Russo-Japanese War, 1904-05. No attention has been given to a long term, comprehensive analysis of foreign capital within the framework of domestic capital formation.

This dissertation will then aim to bridge one of the most important remaining gaps in our knowledge of modern economic growth in prewar Japan: The role of foreign contributions in the financing of domestic capital formation. Specifically, the contribution of this research can be said to be essentially twofold: 1. to fill the empirical void which has persisted in Balance of Payments data for Japan and 2. to offer, based on this empirical work, an analysis of the pattern and transfer mechanism of capital flow as well as its broader investment implications.

The results of my empirical work appear in the Statistical Appendix I. Balance of Payments Estimates, Table I: Balance of Payments of the Japanese Empire, 1868-1936, where I have attempted to provide for the first time annual, current account (including invisibles as well as merchandise trade) data for Japan over the entire prewar period presented

according to the IMF format. While this Balance of Payments data could be used for a variety of purposes, I have chosen to focus here on one aspect of these accounts: the estimation of the flow of capital across Japan's international frontier. Based on this Balance of Payments data of Table I, I have been able to obtain via the indirect estimation method comprehensive annual estimates for capital flows, heretofore unavailable, for the entire prewar period. These capital flow estimates appear here in the Statistical Appendix, Table II: Balance of Payments Summary. Those interested in the derivation of these statistics are referred to the detailed explanations on estimating procedure which accompany the Balance of Payments tables of Statistical Appendix I as well as Statistical Appendix II for a comparison with previous Balance of Payments estimates.

Couched in this newly derived empirical framework, the three analytical chapters presented here aim, respectively, at re-examining the following issues relating to the role of foreign capital in prewar Japanese capital formation: First, the long term pattern and growth-external equilibrium nature of our capital flow estimates; Second, the impact of foreign capital inflow on private investment during the period where the connection between capital inflow and domestic investment seems strongest, namely, the years between the Russo-Japanese War and World War I (1904-1914); and Third, the broader perspective of capital flow within the framework of the investment spurt.

In Chapter I, the Pattern of Capital Movements: Growth vs. External Equilibrium, an analysis of the more aggregate first question is presented centered about the capital flow periodization based on level and trend movements in the ratio of capital flow to gross domestic capital formation.

We then seek to explore the growth-external equilibrium nature of this capital flow periodization by an analysis of the contra cyclical or cyclical relationship between the gold flows and the trade balance and by an examination of the long term or short term nature of the capital flows. Taken together, this macro data suggests the need to focus on the period 1904-14, the only time when capital inflow appears strongly connected to domestic capital formation.

Having singled out the 1904-14 period for its strong connection to domestic capital formation, we will next want to investigate the capital inflow-domestic investment relationship in greater detail. To this end, Chapter II, Capital Inflow in the Second Spurt, 1904-13: The Transfer Mechanism, represents a more disaggregate attempt to relate capital inflow and private investment. Here, we first challenge, on the basis of our original data work, the traditional notion that capital inflow was related to a Balance of Trade deficit, generated in large part by military imports. Instead, we suggest that the capital inflow of this period can best be linked to the expanding investment of the private sector. To substantiate this connection we offer an explanation of the transfer mechanism from the Rest of the World to the Japanese Central Government via a treatment of movements in gold and specie held abroad. We then examine the Japanese Central Government to Private Sector Transfer through a money flow analysis of the relevant economic categories over this period. Finding that there was a large net financial transfer from the Japanese Central Government to the Private Sector following the conclusion of the Russo-Japanese War, we then conclude by tracing the impact of this transfer at the firm level through two examples: The Murai Tobacco Company, Ltd. and the Hokkaido Tanko Kisen Company, Ltd.

In Chapter III, Toward a Broader Perspective: Capital Flow and the Investment Spurt, we try to place our financial side, capital flow pattern in broader perspective by a comparison with the Ohkawa-Rosovsky real-side, investment spurt periodization. Comparing the two, we are able to show a striking similarity between our broad two-phase division of chronic inflow and cyclical oscillation and their Transition-Concurrent Growth-Differential Structure periodization. Furthermore, we are able to suggest that the large foreign capital inflow of 1904-13 is the key link from their first, concurrent growth investment spurt to their second, differential structure investment spurt.

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CHAPTER I

THE PATTERN OF CAPITAL MOVEMENTS: GROWTH VS. EXTERNAL EQUILIBRIUM

Our first objective in this chapter will be to derive a periodization of Japan's modern economic growth from the perspective of the impact of capital flow on domestic capital formation based on the trend and levels shown in our long term series I_f/GDCF. Following this, our second objective will be to determine the investment implications of our capital flow periodization which we will be able to do in the following ways: 1. by testing the cyclical-contra cyclical nature of the relationship between gold flows and movements in the trade balance; and 2. by determining the long term-short term nature of the capital flows.[1]

The Pattern of Capital Flow: Level and Trend in I_f/GDCF

As mentioned in the above, what we are aiming for here is a series with which to indicate the relative importance of capital movements, inflows and outflows, on domestic investment. For this purpose the conventional choice is the proportion of contributions in gross domestic capital formation: I_f/GDCF.[2] Using our indirect estimates of I_f and Emi's newly calculated series for GDCF (Emi, 1970: 2-3), the I_f/GDCF ratio is presented in Chart I in terms of period averages to indicate the relative level of capital flow and in terms of seven year moving averages to indicate the trend of capital movements. Taken together, the level and trend information will provide the basis for our capital flow periodization.

It might be useful to first take a long run view and use the trend line of Chart I to examine the prewar period as a whole. Although the measure we are dealing with is sufficiently rough as to leave room for debate over exactly where to place the division, the trend line would suggest the division of the prewar period at about 1903-04 into two distinct parts, each about 30 years in length, which we shall call phases. The first phase, 1868-1903 is clearly marked by high initial levels of capital inflow after which we see a steady decline, interrupted only once over 1896-98, in capital inflow to almost zero levels in the early part of the 20th Century. In contrast to this pattern of steady decline in capital inflow, we see a second phase marked by an entirely different pattern of capital flow: alternate swings in inflow and outflow, which, on closer examination appear to become progressively smaller in amplitude.[3]

In developing further the implications of this Phase I-Phase II division, it will be necessary to introduce the information on the relative levels of capital flow which we have shown in Chart I via period averages. It should be noted that we have chosen to avoid the mechanical device of averaging over any period of set length, but instead have let the periods take shape from the grouping of years of outflow, inflow or large change in the level of either[4] which emerge from an examination of the annual data for I_f/GDCF. Grouping and averaging in such a way the following periods, ranging in length from 2-9 years, stand out sharply: 1874-79 (highest level inflow), 1880-84 (high level inflow), 1885-90 (low level inflow), 1891-95 (low level outflow), 1896-98 (high level inflow), 1899-1903 (zero in .ow-outflow), 1904-13 (high level inflow), 1914-19 (high level outflow), 1920-29 (moderate level inflow), and 1930-36 (low level outflow).

These various periods can now be combined under the longer run phase divisions suggested earlier to give the following overall description of the pattern of capital flow which incorporates both the trend and level series of Chart I.

1. Phase I. 1868-1903: Chronic but declining inflow. Over the first period, 1874-79, we find the highest relative inflow, some 60% of GDCF, of the whole prewar period. Although this is most likely exaggerated, due in no small part to the low GDCF estimates, even a considerable upward adjustment of GDCF would still leave a high relative level of capital inflow. Following the high average level of inflow of the initial period we see a sharp drop over 1880-85, but capital inflows still remained at high levels of 35%. The 1885-90 period represents a substantial reduction over the previous period, but still indicates a small capital inflow. This declining trend of capital inflow continued into the 1891-95 period where, for the first time since the Restoration, we see a capital outflow. The steady downward trend is, however, broken by the large inflow of 1896-98 after which capital inflow again sharply declines and oscillates close to the zero line over 1899-1903. Because of the sharp break in the declining inflow trend of 1896-98, it could be argued that the Phase I-II demarcation be placed somewhat earlier than we have chosen to, say at about 1895. But, as will be discussed in detail later, we shall stress the short term, one-shot nature of the inflow and the quick return to the trend line which leads us to place the point of division at about 1903.

2. Phase II. 1904-36: Long swings in capital inflow-outflow, but of declining amplitude. Again using the periods derived earlier, we see a reversal of the long term decline of Phase I with the high level and sustained capital inflow of 1904-13. This inflow is followed by the

1914-19 outflow, large to be sure, but of decreased amplitude when compared with its predecessor. Over 1920-29 we again see a change in the direction of capital flow whereby capital flows in; this is followed by another change of direction and the outflow of 1930-36. In each of these final two swings, we note successively smaller amplitudes of fluctuation. In Phase II, then, we see two complete swings, that is two alternate periods of inflow and outflow, with the amplitude of fluctuation becoming progressively smaller.

In what follows we will want to breathe some analytical and historical life into the above capital flow periodization by an examination of its investment implications. More specifically, we will be most interested in identifying those periods where there seems to be a strong connection between capital inflow and domestic investment. To this end we shall utilize the following macro series derived from our Balance of Payments data to develop the investment implications of foreign capital inflow:

(1) The Cyclical-Contra Cyclical nature of movements in the gold flows and the trade balance and (2) The long and short term nature of the capital flows.

Investment Implications (1): The Cyclical-Contra Cyclical Nature of Movements in the Trade Balance and Gold Flows

As the first tool of establishing the investment implications of our capital flow periodization we will want to explore here the relationship between trade balance movements and gold flows. Borrowing from the current development literature, we have chosen to pose the question of the use of capital inflow for a country adhering to the rules of a gold standard (or

gold exchange standard) system in terms of the growth vs. external equilibrium dichotomy: either growth, i.e., capital import to finance domestic investment or external equilibrium, i.e., capital inflow to insure adequate specie reserves and/or finance a trade deficit.[6]

Stated in a form more suitable to the application of Balance of Payments data, the question becomes whether the gold flows (or gold plus key currency for a country on the gold-exchange standard) are cyclical to, (that is the growth case) or contra cyclical to, (that is the external equilibrium case) the trade balance movements. (Of course a neutral, third case is possible where the gold flow and trade balance movements are equal and offsetting leaving a zero capital movement.) Prototypes of the cyclical-growth and the contra cyclical-external equilibrium effects can be illustrated by the following examples:

1. Cyclical-Growth. Where a gold inflow and a deficit trade balance occur together the resulting capital inflow will serve not only to finance the real transfer of the goods and services contained in the trade deficit, but will also make possible an expansion of domestic liquidity, thus facilitating or encouraging domestic investment and growth.

2. Contra Cyclical-External Equilibrium. Where a trade deficit occurs with a gold outflow of an amount less than sufficient to cover the deficit, a capital inflow will occur to restore the equilibrium in the international accounts. In the classical view this trade deficit-capital inflow-gold outflow would lead to a contraction of domestic liquidity and a resulting decline in investment and growth.

The trade balance-gold flow data for prewar Japan is presented here in Chart 3 for Phase I and Chart 4 for Phase II from which charts the following general conclusions can be drawn.

1. Excepting only two of the periods defined by the average capital flow levels, the relationship between the trade balance movement and gold flows over all other periods of Phase I and II is contra cyclical. That is to say, the gold either flows out to cover a current account deficit or flows in to offset a trade surplus.

2. In Phase I the movement is contra cyclical throughout (with the exception of the 1896-98 period to be dealt with under 3 below) with a tendency toward equilibrium. This pattern thus further corroborates the weak investment connection to capital inflow earlier suggested by our capital flow-investment spurt comparison.

3. The period 1896-98 does not conform to the contra cyclical pattern suggested in the above, but is instead characterized by a heavy trade deficit occurring together with moderate gold inflows, the breakdown being 80% trade deficit and 20% gold inflow. In our more detailed treatment of the relationship between capital flow and other financial factors which follows, we shall suggest that the effect of this gold inflow was not to stimulate investment and growth via an increase in liquidity, but to build up a stock of gold sufficient to allow Japan to adopt the gold standard.

4. Phase II, with the exception of the first part 1904-13 period to be dealt with under 5, is likewise marked by a contra cyclical relationship which alternates, with decreasing amplitude, from trade deficit-gold outflow to trade surplus-gold inflow according to a time sequence which corresponds very well with our capital flow periodization developed earlier. Exceptions are confined to the Balance of Payments disturbances which followed the 1923 earthquake and the return to the gold standard in 1929.

5. The first half of the 1904-13 period is, however, marked by a heavy trade deficit and gold inflow greater in amount and duration than for any other time in the prewar period, the breakdown being 60% trade deficit and 40% gold inflow. Thus, as suggested by our capital flow-investment spurt comparison, the 1904-13 period seems unique in its strong connection of capital inflow to domestic investment. This uniqueness is further underscored by the comparison which follows with the capital inflow-investment connection of the only other cyclical period, 1896-98 of Phase I.

The general upshot of the cyclical-contra cyclical analysis, is that the period 1904-13 should be singled out for further investigation on the nature of the relationship between foreign capital inflow and domestic capital formation. To this rather broad conclusion we will now want to add certain specific factors relating to individual periods of Phases I and II.

1. Phase I. The contra cyclical relationship and the trend toward equilibrium can be placed in better historical perspective if considered in context with the following: the establishment of a stable currency and modern financial institutions; the depreciation of silver versus gold; and the implementation of modern economic growth.[7] The lack of modern financial institutions and the inflationary bias of an unstable currency were important factors in the early export of gold to cover a large portion of the trade deficit; the remainder was covered by capital inflow. This situation began to improve with the institutional and currency reforms commonly referred to as the Matsukata Deflation (1881-85) and account for much of the move to equilibrium which occurred from the 1876-80 period to 1881-85.

Another factor which began to play a major role at about this time was the depreciation of silver. On a de facto silver standard since 1878, Japan saw her trade balance improve with the moderate depreciation of silver over 1886-90 and enjoyed her first period of trade surplus (and gold import) with the sharp depreciation of silver that continued over 1891-95. By the time Japan adopted the gold standard in 1898, the silver depreciation had occurred to the extent that the currency stood at 50% of the 1871 gold-silver par.

After the establishment of the gold standard in 1898 at the de facto par mentioned above Japan's trade position was stable enough to maintain a near equilibrium position over the period 1899-1903 avoiding any great deficit and the resulting disruption that would have been caused by any decrease in the newly acquired gold reserves. This trade balance stability doubtless followed from the preceeding decade's growth and its effect on the ability to export. As has been noted by others, the role of the traditional sector in exports was considerable over the years of concurrent growth which followed the Matsukata Deflation.

2. Trade Deficit and Gold Inflow: 1896-98 vs. 1904-13.

The source of the large inflow of capital which followed the Sino-Japanese War is accounted for by the reparations gained from China. As mentioned previously, 80% of this inflow was used to cover the huge trade deficit generated by Japanese government armaments purchases in Europe and the U.S. The remainder enabled the Japanese government to purchase, with gold, the silver deposits of the Bank of Japan which then became the reserves that enabled Japan to adopt the gold standard in 1898 (Matsukata, 1899: 166-174, 219-225). This exchange of silver for gold stock, at moderate levels, did little to increase domestic liquidity and stimulate the pace of economic activity.

In contrast to the post Sino-Japanese War pattern, we have the trade deficit-gold inflow which followed the 1904-05 war with Russia. In the first year of hostilities, 1904, Japan was forced to part with almost 90% of her gold holdings to cover a rapidly worsening trade deficit (Department of Finance, 1910: 99). This gold outflow was reversed in the following year by the large gold and specie holdings built up (net of the trade deficit) as a result of long term loans floated in the London money market over late 1904-05. The amounts, both relative and absolute, differ greatly from those of the earlier cyclical period. The gold and specie flow was some 6-7 times that of the 1896-98 level; only 60% of the capital inflow of the 1904-06 period went to cover the trade deficit where some 40% is accounted for by the increase in gold and specie holdings. Thus, contrary to the earlier gold inflow, a considerable amount (almost equal to the trade deficit itself) was left after covering the trade deficit and replenishing the gold reserves. In the chapters which follow we shall maintain that this increased liquidity was used by the government to facilitate investment, particularly private, in the second investment spurt.

3. Phase II. Following the Russo-Japanese War this stock of gold and specie, replenished by additional long term borrowing in 1909 and 1910, was drawn down to finance an increasing trade deficit which accounts for the return to the contra cyclical pattern which we see from about 1908. As this stock of gold and reserves were beginning to run out, and more long term loans did not seem forthcoming, WWI broke out and dramatically reversed the traditional pattern of capital flow. Because of the enormous trade surplus which continued from 1915-19, Japan was able to build up large stocks of gold and specie while becoming a net capital exporter. The

subsequent inflation and distortions of the 1920's have been the subject of considerable comment. For our purposes it is necessary to add here only that at the beginning of the period a contra cyclical pattern of trade deficit plus gold and specie outflow can clearly be seen. The pattern of the latter part of the period becomes somewhat less clear because of the disruptions created by the earthquake of 1923 and the government's vascillating policy toward restoring the yen to its pre WWI gold par and the yen speculation which resulted from this uncertainty. This destabilizing element was not removed without a sizeable loss of gold in the early 1930's after which the return to the gold standard was abandoned. What followed, albeit under the abnormal international conditions of the 1930's, was another contra-cyclical period of trade surplus and capital outflow.[8]

Investment Implications (2): Long and Short Term Nature of Capital Flows

As the next tool of establishing the investment implications of our capital flow periodization we will want to examine, from the source side, the long and short term nature of capital flows paying particular attention to the external source of foreign capital inflow. When combined with the preceeding material on the cyclical-contra cyclical relationship between the trade balance and gold flows, this information can help to establish the growth or external equilibrium uses of capital inflow: capital inflow of a long term type is most often equated with growth (i.e. investment) uses whereas short term capital inflow is subscribed to covering a current account deficit or insuring adequate currency or specie reserves.

Viewed in this somewhat oversimplified dichotomy of long term-growth and short term-external equilibrium, we will want to examine the

pattern which emerges over Phases I and II. The relevant long and short term data is presented here in Charts 5 and 6, respectively, from which the following general conclusions can be drawn.

1. Throughout almost all of Phase I we see high, but decreasing, at least in relative terms, levels of short term capital inflow together with an almost constant and negligible level of long term capital outflow. This pattern serves to further confirm the weak capital inflow-investment relationship also suggested earlier.[9]

2. The movements in short term capital correspond well to the periods of Phase I. By the outbreak of the Sino-Japanese War the level of short term capital flows have declined sharply, in both relative and absolute terms, and are almost equal and offsetting with the long term capital outflow, thus confirming the general trend to equilibrium which prevailed in the other macro indicators over Phase I.

3. This general trend to equilibrium is broken by the large short term capital inflow, accounted for in this case by the reparations which followed the Sino-Japanese War. As mentioned previously, these reparations went to finance a large trade deficit generated by military imports and secondarily the stockpiling of gold, a pattern which would tend to confirm the essentially external equilibrium nature of this brief period of inflow.

4. As the reparations payments were nearing an end, we note the first inflow of long term capital, of a public portfolio type, together with a smaller amount of short term capital outflow. This issue of long term securities abroad marks the return to the London money market after a lapse of almost 25 years since the government borrowing of 1873 (Moulton, 1931: 274). This borrowing long and lending short pattern

continued over 1895-1903, producing a small net capital inflow.

5. Phase II is here also marked by the alterations, at decreasing relative amplitudes, that have marked the previous indicators, but this time between high long term inflow-moderate short term outflow and high short term inflow-moderate long term outflow.

6. Most striking for its connection with investment is, again, the 1904-13 period where the long term capital inflow is at the largest and most sustained levels of the whole prewar period. This capital inflow is of course accounted for by the issue of some 880,000,000 ¥ of long term Japanese government securities during the War years and later in 1907, 1909 and 1910 (Moulton, 1931: 488-89). Thus, the pattern produced by the massive inflow of long term capital, together with a small, partially offsetting outflow of short term capital, would also suggest that this is the period to be singled out for a more disaggregate investigation of the capital inflow-domestic capital formation connection.

7. The following period, the WWI trade boom, is marked by large, short term capital inflows together with moderate outflows of long term capital. This pattern can be subscribed to the large trade surplus which Japan enjoyed over the war years together with the gold embargo in effect over most of the period. Under these conditions Japan accumulated specie abroad while undertaking foreign long term investment. Little of the loans of the 1904-13 period, however, were redeemed.

8. With the 1920's we see a move toward the reversal of the WWI pattern with the sharp decline of short term capital inflow and long term capital outflow. The decline of short term capital outflow is interrupted in the middle 1920's by the 1923 earthquake, which at the

same time disrupted Japan's capacity to export while increasing her import needs, thus necessitating an accelerated drawing down of previously accumulated specie held abroad. Long term capital outflow declined rapidly, and by the early 1920's Japan was a net importer of long term capital, but this time in the form of private direct and portfolio investments. As noted by others (Patrick, forthcoming), this was the period when joint ventures had their heyday in some of the heavier and more technologically advanced industries such as electronics and automobiles. It was also a period when the long term securities of Japanese companies sold well abroad. By the middle 1920's the peak of this net long term inflow had passed and Japan again rapidly moved toward the position of a net exporter of long term capital.

9. As it became clear by the end of the 1920's that Japan would return to the gold standard at the pre WWI parity, which was widely considered to be a highly overvalued rate, speculative capital moved in in large amounts in anticipation of quick conversion and profit taking following the return to parity. Over 1929-30 this hot money moved out in such large amounts that the government was forced to abandon its attempt to maintain the old par, declare a gold embargo and let the currency seek an unpegged value, which meant a considerable depreciation over the WWI parity. Thus, by the early 1930's we see a pattern of short term capital inflow and long term outflow with the long term outflow being somewhat greater giving on balance a small net capital outflow.

In short, then, the above material on the investment implications of the long and short nature of the capital flows runs well to the grain of what has been suggested by the previous cyclical-contra cyclical data:

in the whole prewar spectrum, the 1904-13 period is the most interesting for its connection between capital inflow and domestic investment. A more disaggregate analysis of this connection will be the objective of the chapter which follows.

FOOTNOTES CHAPTER I

1. I_f refers here to our capital flow estimates, mentioned earlier, calculated via the indirect estimation method from the Figures of Statistical Appendix I, Table I. The results of these calculations appear here in Table II. Summary of Balance of Payments of the Japanese Empire: 1868-1936.

GDCF refers here to the Emi estimates for Gross Domestic Capital Formation, which exclude agricultural investment and include military investment (Emi, 1971).

We accept here the conventional IMF demarcation between long and short term capital. Any capital account entry whose period of repayment is fixed as greater than one year is classified as long-term capital. Any entry whose repayment period is equal to or less than one year is classified as short-term capital (IMF, 1961).

2. See (Kuznets, 1961) for a general treatment and Williamson (Williamson, 1965) for a detailed analysis of the U.S.

3. While no comparative analysis will be attempted here, the reader is referred to works of similar scope by Williamson for the U.S. (Williamson, 1965), Imlah for England (Imlah, 1958), Hartland for Canada (Hartland, 1960) and Butlin for Australia (Butlin, 1964).

4. The criteria for which is minimum variance within a period of less than decade length.

FOOTNOTES - continued

5. We follow the Williamson approach (Williamson, 1965) in using a zero lead-lag between I_f and GDCF. At some later stage it may prove fruitful to attempt a simple regression analysis.

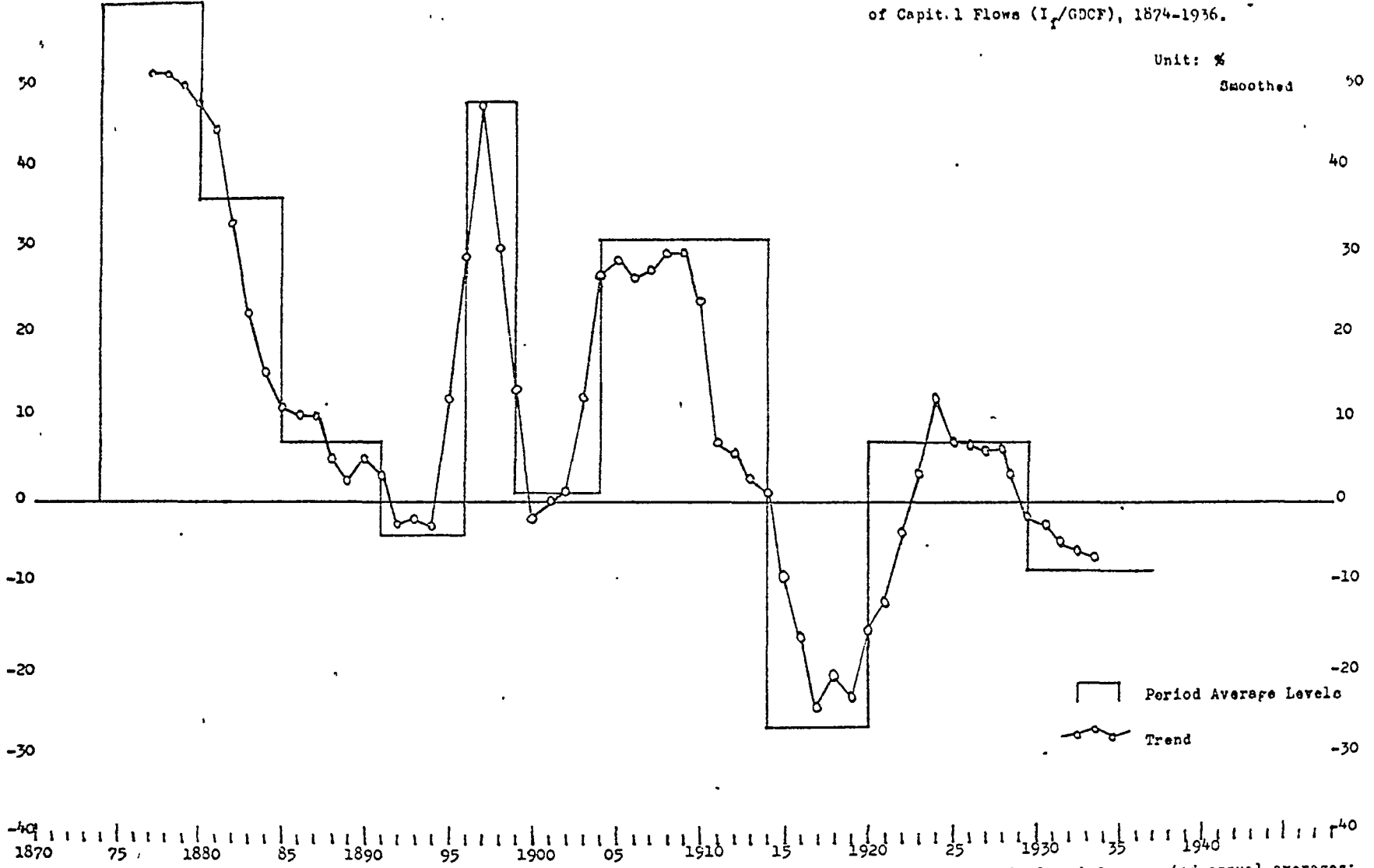
6. For a summary treatment of this argument see (Gordon, 1965).

7. For a more detailed treatment of these factors over Phase I see (Patrick, 1965).

8. For a more detailed treatment of these factors over Phase II see (Patrick, forthcoming).

9. This low level of long-term capital may be in part due to an omission of direct, private investment which took place by the many foreign firms which seem to have established offices, and even joint ventures in Japan during the first half of Meiji (Williamson, 1958) and (Williamson, 1963). At some time thought should be given to a careful investigation of foreign views of the Japanese economy during these years. Perhaps it will be found that these early investors were not as timid about investing in Japan as the record of long-term securities alone would indicate.

of Capital Flows (I_f/GDCF), 1874-1936.

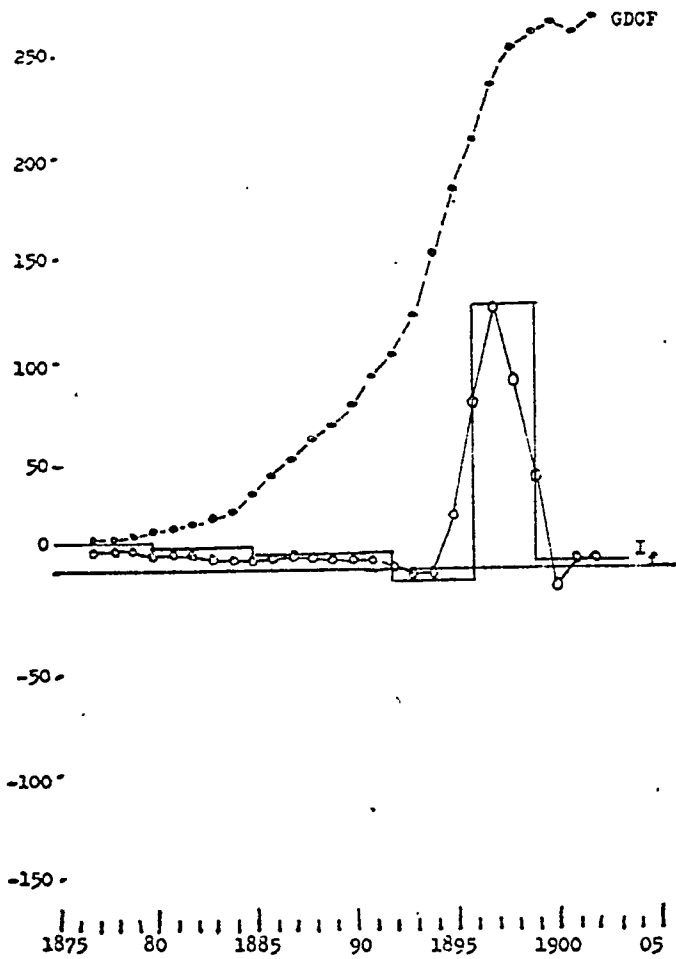


* I_f data from Appendix Table II, column 5; GDCF data from (Emi, 1970).

a) Plus indicates inflow; minus inducates outflow

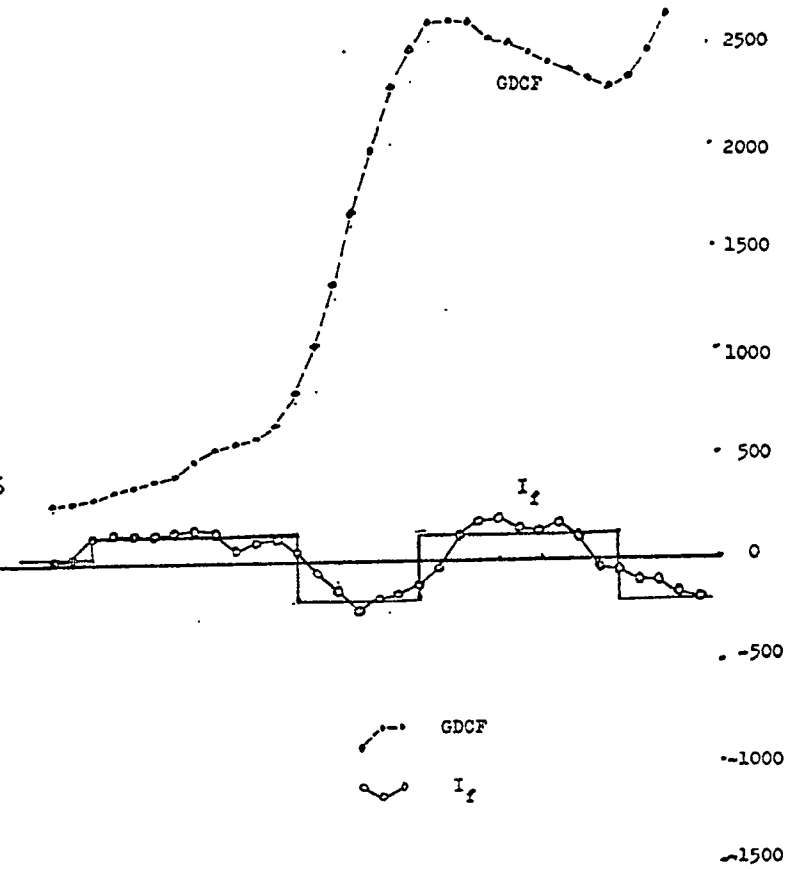
b) The average level line is calculated from period annual averages; the trend line is calculated from 7 year moving averages except for 1891-1902, which is calculated in 3 year moving averages.

Gross Domestic Capital Formation (GDCF), 1874-1936. •



I_f Period Averages

Unit: Million ¥
Current Prices
Smoothed



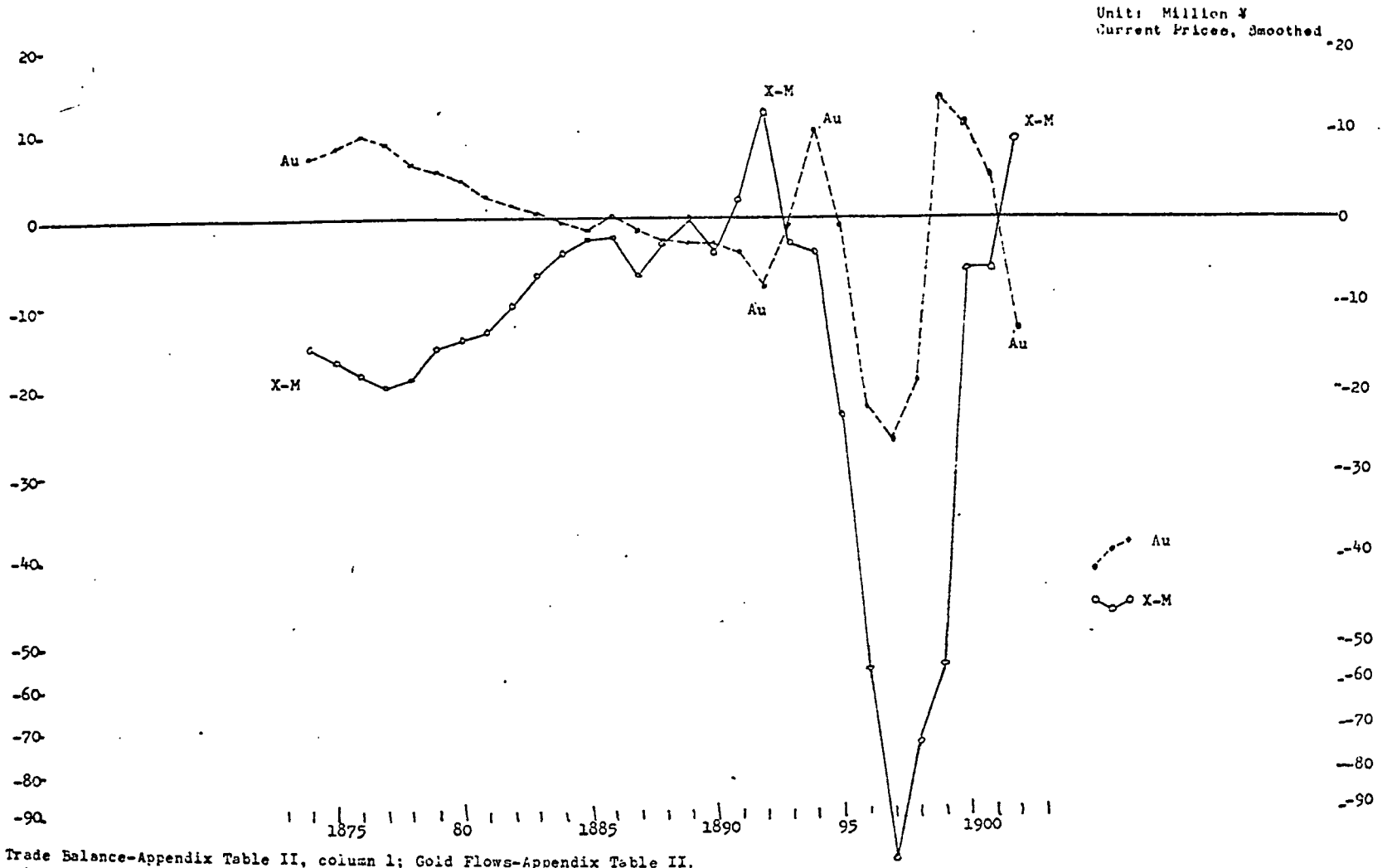
• I_f data from Appendix Table II, column 5.
GDCF data from (Emi, 1970: 2-3).

a) Plus indicates inflow; minus indicates outflow.

b) Smoothing is done via 7 year moving averages except for I_f over 1891-1902, which is done in 3 year moving averages.

c) GDCF includes military investment, but excludes agricultural and inventory investment.

Chart 5. The Cyclical-Scheme Cycles [illegible] between the Trade Balance Movements and Gold Flows, Phase I, 1874-1903. *

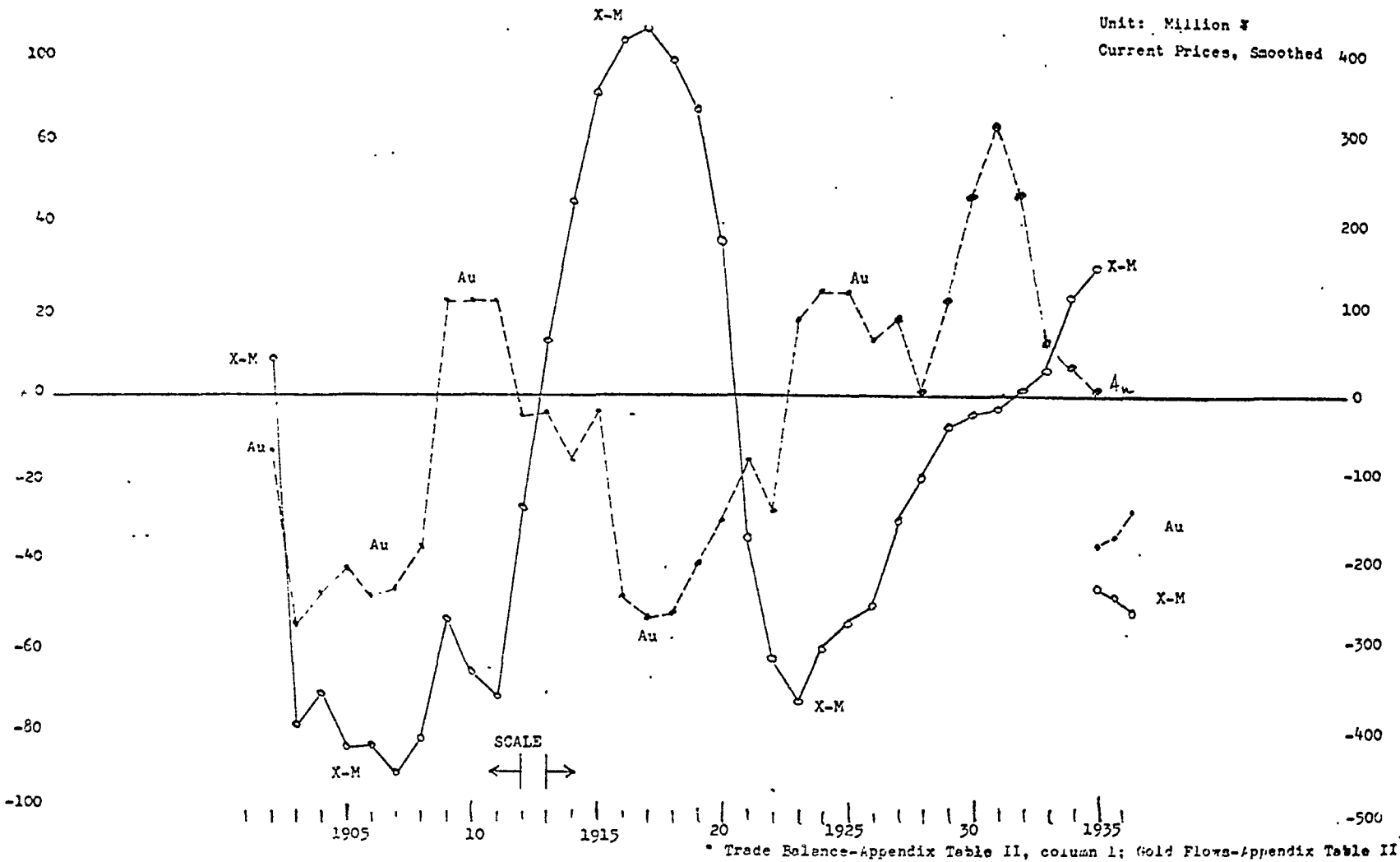


* Trade Balance-Appendix Table II, column 1; Gold Flows-Appendix Table II, columns 2 & 4.

a) Plus indicates inflow; minus indicates outflow.

b) Both series appear smoothed via 7 year moving averages except for 1890-1902, smoothed via 3 year moving averages.

Trade Balance Movements and Gold Flows, Phase II, 1904-36. a



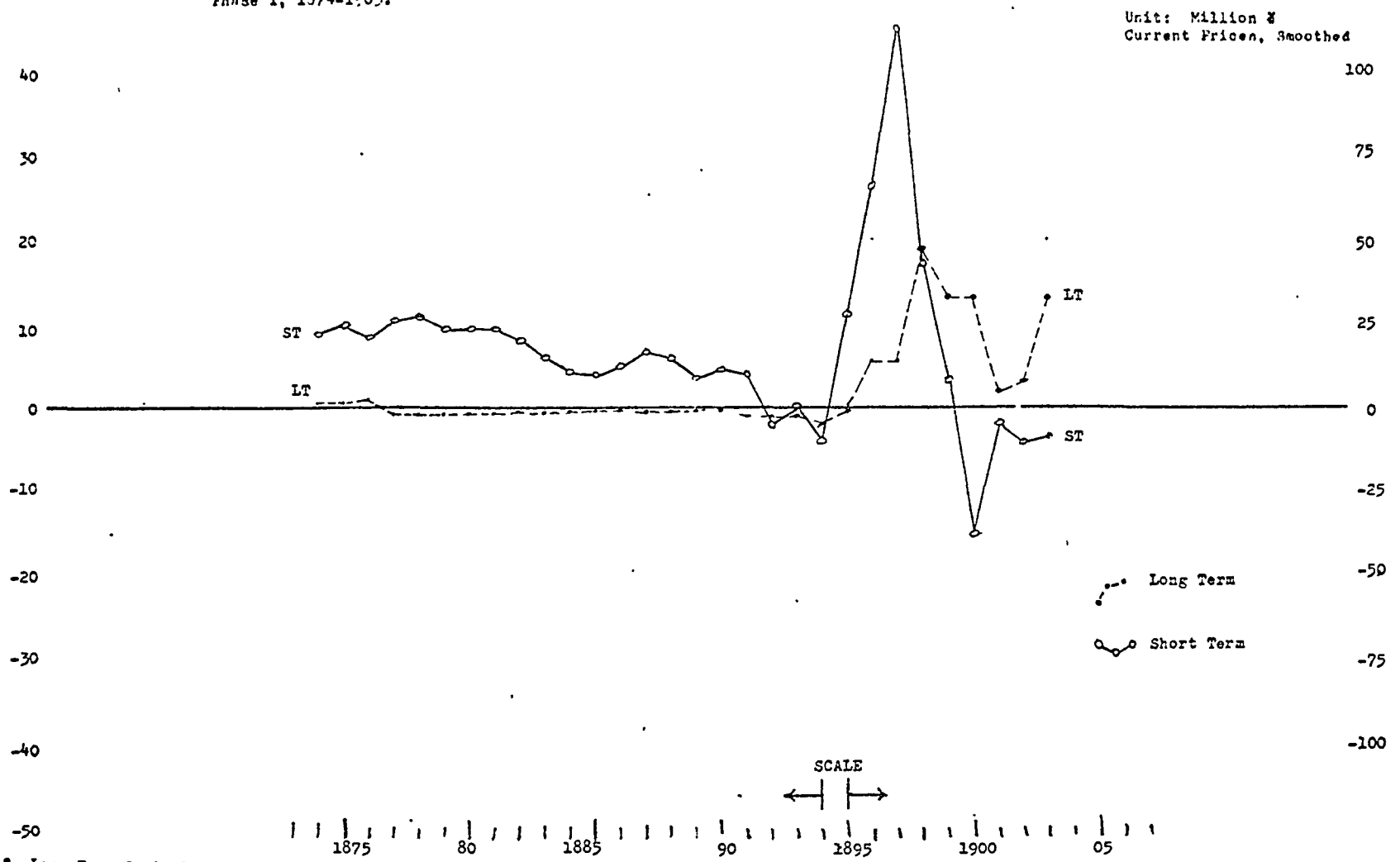
* Trade Balance-Appendix Table II, column 1; Gold Flows-Appendix Table II, columns 2 & 4.

a) Plus indicates inflow; minus indicates outflow.

b) Both series appear smoothed via 7 year moving averages except for 1926-35, smoothed via 3 year moving averages.

Chart 5. The Long Term-Short Term Nature of Capital Flows (I_t).

Phase I, 1874-1903. *

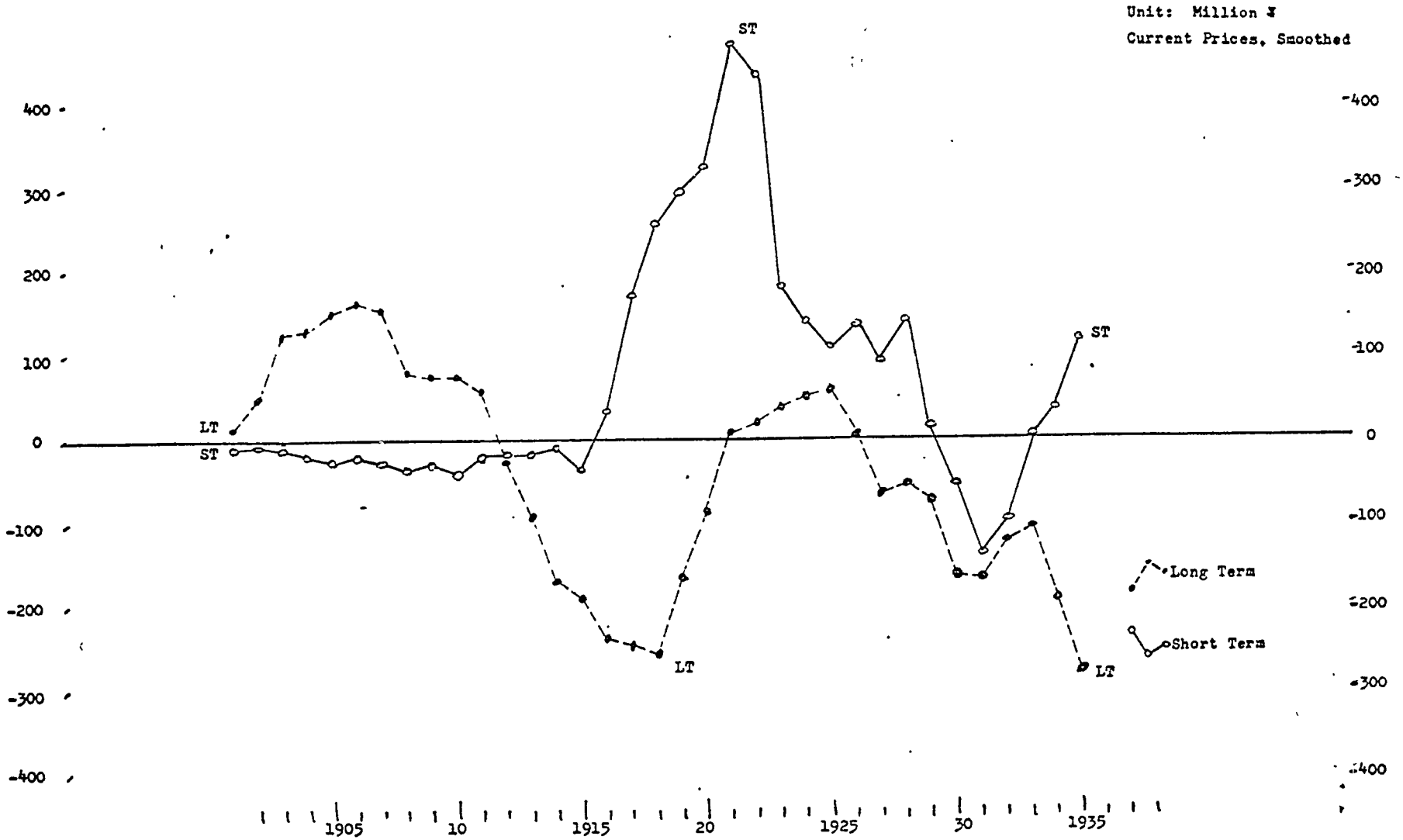


* Long Term Capital-Appendix Table II, column 6; Short Term Capital-Appendix Table II, column 7.

a) Plus indicates inflow; minus indicates outflow

b) Both series appear smoothed via seven year moving averages except for 1891-1902, smoothed via 3 year moving averages.

Chart 6. The Long Term-Short Term Nature of Capital Flows (I_f), Phase II, 1904-36. *



* Long Term Capital-Appendix Table II, column 6; Short Term Capital-Appendix Table II, column 7.

a) Plus indicates inflow; minus indicates outflow.

b) Both series appear smoothed via seven year moving averages except for 1928-35, smoothed via 3 year moving averages.

CHAPTER II

CAPITAL INFLOW IN THE SECOND SPURT, 1904-13: THE TRANSFER MECHANISM

Our purpose here will be to carry the investment implications work of the preceeding chapter a step further via an examination of the transfer mechanism from which we will be able to suggest more precisely the uses of the large and sustained capital inflows which marked the second spurt. To this end, we shall first examine the transfer from the Rest of the World (hereafter RW) to the Japanese Central Government (hereafter JCG) with an eye to challenging the commonly held view (Cairncross, 1964) (Fujino, 1968) that the transfer was almost entirely real, involving purchases abroad by the JCG of military related goods. After reevaluating the relative magnitude of this real transfer, we shall emphasize the almost completely neglected financial transfer carried out through an increase in the specie holdings abroad (as opposed to gold) of the JCG. Next, we shall draw attention to the eventual impact of the capital inflow on the private sector (hereafter Priv) by an examination of the subsequent transfers which took place from the JCG to Priv. Having examined the aggregate money flow data for this JCG-Priv transfer, we shall conclude with a more disaggregate analysis of the impact of the capital inflow at the level of the firm. In this case we shall offer a brief treatment of the role of foreign capital in the development of the Murai Tobacco Company, Ltd. and the Hokkaido Tanko Tetsudo Company, Ltd.[1]

Rest of World to Japanese Central Government: Real vs. Financial Transfer

At present several misconceptions persist concerning the RW-JCG transfer: 1. That the transfer was largely real; 2. That this real transfer was particularly weighted with military imports; and 3. That the predominance of the real cum military transfer is further corroborated by the small gold flows which followed Japan's large long term borrowings over 1904-14. In contrast to this view, we will present evidence in the following to suggest that there were sizeable financial as well as real transfers, that the importance of military imports has been overemphasized and that, even though gold movements were small, there were large fluctuations in specie held abroad which served to effect the financial transfer.

I. Relative size of real and financial transfer.

Without doubt the factor that has contributed most to obscuring the nature of the capital flows generated by the massive borrowing of the JCG over the Russo-Japanese War years has been the great emphasis placed by most authors on the real transfer. In its simplest and most extreme form this view holds that the foreign borrowings of this period were used entirely by the JCG to purchase military equipment abroad (Fujino, 1968: 49). To support our view that the transfer was more of a mixed nature, financial as well as real, and that the role of military imports has been over-emphasized, we will want to present evidence on the relative size of the real and financial transfer followed by data concerning the share of military imports in total imports.

Concerning the former, it will be recalled that the relationship between the trade balance and gold flows was treated earlier in the

cyclical-contra cyclical analysis of Chapter I. Drawing from that data, presented in Chart IV of Chapter I, the relationship of the trade deficit to the gold and specie flows over the period of heavy borrowing, 1904-06, was cyclical and stood at the ratio of approximately 3 to 2. That is to say the capital flows of this period can be subscribed some 60% to a real transfer (i.e. the trade deficit) and some 40% to a financial transfer (i.e. the increase in gold and specie holdings). Thus, contrary to the prevailing view, we see in addition to the real transfer an extremely large financial transfer from RW to JCG, in relative terms approximately 1.4 times the annual government ordinary receipts for the entire three year period concerned (Emi, 1966: 150-51).[2]

Before taking the heretofore ignored questions of the means by which this financial transfer was effected and its subsequent impact, we will want to examine in greater detail the chief factor behind the emphasis on the real transfer: military imports.

II. Military imports in total imports.

We might best begin our assessment of the share of military imports in total imports by specifying a definition of what is to be included in military imports. Although this is not a matter devoid of controversy, the term is usually defined to include at least the first, and sometimes both of the following two categories of goods.

1. Directly related imports of finished articles useable without further processing for military purposes. These include (in order of importance) warships, arms, ammunition and explosives (Oriental Economist, 1930: 457-60).

2. Indirectly related imports of a usually semi or unfinished

goods (the major exception being machinery, a finished good used for the processing of other materials in the military factories) not useable without significant processing (Hijikata, 1940: 232-33). These include (again in order of importance) hides/wool (for shoes and uniforms), metals (for the manufacture of weapons and ship fitting and repair), fuel (coal and oil for ships) and machinery (necessary for the processing of the above).

Narrowly defined, then, military imports would include only the directly related goods of category 1; more broadly defined, military imports would include as well the indirectly related items of category 2. The results of both calculations appear in Chart 7. Problems of estimation of each of these categories are dealt with in detail in the accompanying notes, but suffice it to say here that the narrow-broad definitions should be viewed as a rough minimum maximum band.

Using first the narrow definition, military imports almost always accounted for less than 10% of total imports over the period for which data is available. The two periods when directly related military imports exceeded 10% of total imports were the years of the Sino-Japanese War, where the proportion reached 15%, and the years of the Russo-Japanese War, where the proportion slightly exceeded 30%. On the basis of the broader definition, the percentage ranged between 25-30% of total imports over most of the period surveyed. During the Russo-Japanese War, however, the proportion of military imports climbed to almost half of total imports.[3]

The upshot of the above would certainly seem to be that we move away from the prevailing emphasis on the dominance of the real transfer, itself ascribed to military imports, and begin to think in terms of a mix,

in almost equal terms, of financial and real transfer. After all, the trade deficit as a whole was only 60% of I_f, and military imports at the maximum probably accounted for no more than half of this - that is about one-third of I_f. The meaningful question which remains is how the financial transfer, involving the considerable funds which remained net of the trade deficit was effected. The key to understanding this transfer lies in a comparison of the movements of gold and specie held abroad.

III. Specie held abroad and the financial transfer.

Those who have emphasized the real transfer have often reinforced their argument by pointing to the small gold flows over the period of Japan's heavy long term borrowing. After all, for a country on the gold standard, large net borrowing and small gold flows can be reconciled only by a large trade deficit, i.e. real transfer. What this approach overlooks is the important role specie held abroad had come to play by the end of the Russo-Japanese War.

Japan's first real experience with foreign holdings of specie came following the Sino-Japanese War and the heavy reparations received from China. At the urging of the Bank of England, a sizeable portion of the payments were not converted into gold and returned to Japan, but left on deposit at the Bank of England (Moulton, 1931: 498-99). Data for these reserves of specie and gold are available from 1903 and are presented here in Table 3 and in Chart 10 in absolute magnitude and in Chart II in relative magnitude (where gold flow is shown as a percentage of the gold reserves of the Bank of Japan; changes in specie held abroad are shown as a percentage of total specie holdings). For the years prior to 1903 we have only data for gold flow (the difference between the gold on hand

at the end of year t with that at the end of year t-1) presented here in Chart 9 and in Chapter I in Chart 3.

From these Charts 9-11 we can draw the following inference concerning the role of gold and specie held abroad in effecting the financial transfer.

1. From 1905, Japan had moved virtually onto a gold exchange system (with the key currency being the £ sterling), relying almost entirely on movements in specie - not gold - to make adjustments in the Balance of Payments accounts. Referring to Chart 10, we can see that there were no sizeable outflows of gold from the large outflow of 1904 to the outflow of 1930-31.[4] Current accounts deficits not covered by additional borrowing were met by a drawing down of specie held abroad. Over the years 1905-13 the gold outflow was of an almost constant magnitude of 20 million yen annually as can be seen in Chart 10. From Chart 11 we can note that the relative magnitude of the gold outflows over this period was always less than 10% of the gold reserves of the Bank of Japan.

On the other hand, fluctuations in specie held abroad were much more violent and ranged from 500% of total specie held abroad during the peak of inflow (i.e. the period of long term borrowing) to a consistent outflow of about 20% annually over the years which followed the Russo-Japanese War (1906-13). Because of the much larger specie stock, the absolute amounts of specie fluctuations were, vis a vis the gold flows, much greater than even the relative percentages imply, often being 5-10 times the absolute magnitude of the gold flows.

2. In spite of the primary role of specie in making Balance of Payments adjustments, gold left Japan in the six successive years from

1910-15, each year, on the order of 8-10% of the reserves of the Bank of Japan. In the absence of new foreign loans, which were not forthcoming, and a dwindling stock of specie that had been used to cover increasingly large trade deficits and service charges on the earlier loans, Japan appeared headed for a severe Balance of Payments crisis. This was averted by the World War I export boom which placed Japan in the unusual position of being a large scale net capital exporter.

3. As mentioned previously, the gold standard was not adopted until 1897 and gold outflows before that time did not present a serious problem for internal financial stability. From 1897-1903, as shown in Chart 9, there appear wide fluctuations in the movement of gold. These have been stressed by those who emphasize the fragility of the gold standard in the years shortly after its establishment (Patrick, 1965: 208-10). On the other hand, it could also be said that the period as a whole showed a small net gold inflow with the last three years showing successive inflows. This might give support to a less pessimistic view of the early years of the operation of the gold standard in Japan.

Japanese Central Government to Private Sector

As the next step in investigating the eventual impact of foreign capital inflow on private investment, we will want to examine via a modern flow-of-funds approach the financial transfers which took place between the JCG and Priv over 1904-13. Lack of reliable monetary data has precluded the construction of a comprehensive financial-side Flow-of-Funds Table; nevertheless, a reasonable facimilie can be devised from the accounts which showed the major changes. These accounts have been determined as the result of the following inquiry.

1. First, through general historical reading it has been possible to determine the major financial events which transpired between the JCG and Priv sectors over 1904-13. These transactions have provided the basis of selection of the major financial accounts of Table 4 which include Temporary Loans and Transfer Payments; Purchase and Sale of Existing Assets and Redemption and Issue of JCG long term securities.

2. Second, it has been necessary to inquire at some length into the accounting procedures used to record these transactions in order to be able to interpret existing official financial series (Nihon Ginko, 1913) and (Nihon Ginko, 1956).

3. Third, on the basis of the above work, available official series were then chosen and revised to best represent the various JCG-Priv financial transfers in accord with the Federal Bureau's flow-of-fund's convention.[5]

Before examining the means by which the JCG-Priv financial transfers were effected, we will want to look at the macro implications of the net transfer. To this end the major JCG receipts and expenditure accounts of Table 3 have been combined to obtain the annual Net Financial Transfer figures shown in Table 5, column four. These figures have, in turn, been compared with the Emi series for Real Private Investment (Emi, 1970: 2-3) to indicate a rough measure of the relative importance of the financial transfers, plotted here in Chart 12. From this graph the following pattern emerges in the financial transfers between JCG and Priv over 1904-13: (a) 1904-05: Russo-Japanese War years and tight public constraint on the private sector; (b) 1906-10: Major postwar financial transfer from JCG to Priv; and (c) 1911-13: Minor postwar financial transfer from JCG to Priv.

From the above it is clear that the War years were marked by tight constraint on the private sector with an average annual transfer equal to 150% of private investment being transferred from Priv to JCG. The direction of transfer, however, becomes quickly reversed upon the cessation of hostilities when large financial transfers begin to move from JCG to Priv over 1906-10 at an annual average of 81% of real private investment. By the end of the period the relative importance of the financial transfer in real private capital formation had dropped sharply to a level of about 10% over 1911-13.

To add to our understanding of the JCG-Priv relationship both during and after the Russo-Japanese War, it might be helpful to treat briefly here one of the financial flow-of-funds accounts not included in Table 3: Transfer Receipts (taxes). This account has been omitted here because of the relatively modest increase in the tax burden which Priv had to bear during the War years. While the annual increase in the JCG tax receipts was large over 1904-05 (about 34% over the two year period), local taxes declined almost equally sharply (Okurasho, 1952: 67). Thus, the private sector's tax burden probably increased no more than some 15-20% over the two year period. As has been often emphasized elsewhere (Emi, 1965: 187) some 85% of the increased revenue needed for the War came from public (both domestic and foreign) loans with about 10% being raised from tax increases.[6] These so-called temporary wartime taxes remained in effect until 1910 when rates were modified "with a view to the recuperation of the economic powers of the nation" (Department of Finance, 1910: 12).

If, in the aggregate, changes in the amount of taxes paid by Priv were relatively small and if the increased tax burden continued past the end of the War, how can we account for the dramatic reversal in the

direction of financial flows shown in Table 5 and Chart 12. To be able to explain this reversal we will want to examine in detail the following financial events which served as the mechanism of large scale financial transfer from JCG to Priv over 1906-10: the JCG's monopolization of the tobacco industry; the JCG's nationalization of privately owned railways; the JCG's grants of rewards to members of Priv for distinguished wartime service; and JCG redemption of domestic bonds issued previously to Priv.

I. Postwar JCG-Priv transfer (1): Government monopolization of tobacco.

Since the Matsukata Deflation of the early and middle 1880's, the policy of the JCG had been not to engage in commercial activities which could be handled by the private sector and/or to dispose of such holdings as soon as feasible. At the time of the Russo-Japanese War this general trend was reversed with respect to the monopolies of tobacco, salt and camphor, which we shall discuss here, and the railways, which shall be treated in the following. It seems to be generally held that the motive behind the monopolization of tobacco, salt and camphor was to secure revenue sources susceptible to indirect taxation while the government's purpose in the nationalization of the railways was to guarantee greater control and efficiency of operation in times of national emergency (Moulton, 1931: 204).[7]

Questions of motive aside, only the government's monopolization of the tobacco industry involved the purchase of existing capital goods and the subsequent supervision of production. The amounts involved in the purchase of the facilities for tobacco production from the private sector are shown in Table 4-b and extend over 1904-05. In both years the amounts are, in the aggregate, modest, never exceeding 10% of private

capital formation. On the other hand, as we shall see in the case of the Murai Tobacco Company, Ltd., of Kyoto this involved the transfer of considerable sums to certain firms which were shortly put to productive use in new investments in manufacturing industries.

The first step toward the monopolization of the tobacco industry came in 1898 when the government assumed the sole right of import and purchase of domestically grown tobacco leaf and sale of this leaf, at a fixed profit, to private tobacco manufacturers. Over 1904-05 the government's role was expanded to include exclusive manufacturing rights while leaving cultivation of tobacco leaf in private hands (Department of Finance, 1905: 23-24). Indemnity was paid for plant and equipment (including land) on the basis of 20% of the average 1902-03 sales for machine tools and as much as 1/6th of this amount for buildings and sites. In addition, a certain Transfer Fee was paid as compensation where land and buildings were not purchased (Department of Finance, 1907: 28). As can be seen in Table 4-b, the means of payment was divided almost equally between cash and government securities.

II. Postwar JCG-Priv transfer (2): Government nationalization of the private railways.

Serious proposals for the purchase of the most important private railways had been in the offing since the carly 1890's, but were finally given impetus by the events of the Russo-Japanese War when the military became displeased by the "deficiencies" shown by private ownership (Watarai, 1915: 60). Thereafter the major private lines were nationalized speedily over 1906-07.

Contrary to the case of the JCG's monopolization of the tobacco

industry, the railroad nationalization involved, in the aggregate, the considerable sum of 470 million yen, which even when spread over the two year period of nationalization as shown in Table 4-a, exceeded the amount of total private capital formation during 1906 and 1907. As might be expected, this transfer placed large sums in the hands of the former railroad company stockholders and must have had a significant impact on subsequent private investment. In the closing section we shall attempt to trace one example of this railroad nationalization-private investment effect through the example of the Hokkaido Tanko Kisen Company, Ltd., the fourth largest railway at the beginning of nationalization in 1906. Here we shall confine our attention to the details of the aggregate transfer.

The purchase price formula for the nationalization of the private railways was calculated as follows (Department of Finance, 1907: 170-71).

1. An amount equal to 20 times the sum obtained by multiplying the cost of construction at the date of purchase by the average ratio of the profit to the cost of construction during the six business terms of the company from the second half of 1902 to the first half-year of 1905.

2. The amount of the actual cost of stored articles converted according to current prices thereof into public loan bonds at face value, except in the case of articles which have been purchased with borrowed money.

The means of payment was set as 45-year, 5% government loan bonds which were to be delivered 5 years after the nationalization. Thus, this government loan bond (at face value) private stock swap returned to the former owners of the railroad some 44 yen on an initial investment of 23 yen, considered a very generous return by observers at that time (Watarai, 1915: 64).

The JCG was obliged to pay 5% interest on the face value of the bonds from the date of nationalization although it did not have to turn over the bonds to the former shareholders (and thus permit open market trading of these bonds) until 5 years following the receipt of the stock.[8] It must be added, however, that all other privileges associated with Japanese government loan bonds accrued to the holder upon the transfer of the railway stock (Department of Finance, 1907: 170-71).

III. Postwar JCG-Priv transfer (3): JCG loan bond rewards for services rendered during the Russo-Japanese War.

As a reward in lieu of cash Japanese government loan bonds were granted to those who had rendered distinguished service during the Russo-Japanese War. The single most striking aspect of this transfer is its large amount: in 1906 this one-shot reward totalled some 104 million yen, or in relative terms over 50% of private investment for that year. At that sum the government's gift could indeed have had considerable impact on "promoting industry, education and relief" (Department of Finance, 1912: 79).

In many ways these Loan Bonds closely resembled the earlier Hereditary Pension Bonds issued in 1873 to commute the annual rice stipend of the samurai (Department of Finance, 1904: 34): they were interest bearing, at a rate of 5% of face value over a period of 25 years, and carried with them the important privileges of having tax free interest payments and the ability to be accepted as bank loan collateral (Fuji Bank, 1967: 58-59). In another respect, however, they more closely resembled the bonds issued over 1906-07 to finance the nationalization of the railways: they bore the condition that they were not to be redeemable or saleable during the first five years of issue, although all other privileges would

apply during this interim period (Department of Finance, 1906: 46).[9]

IV. Postwar JCG-Priv transfer (4): Domestic issue and redemption of JCG bonds.

Whereas the net JCG-Priv transfer of the first few years following the Russo-Japanese War can be traced to the JCG's tobacco monopolization, railway nationalization and reward payments, the subsequent public-private transfer over 1908-10 resulted from a net redemption of government bonds issued during the War years.

As mentioned briefly in the above, the JCG saw fit to issue large amounts of long term securities at home (as well as abroad) during the years of the Russo-Japanese War, 1904-05. The quantity of domestic bonds alone issued during this two year period came to some 480 million yen of which the 200 million ¥ 1st-3rd Exchequer Issue of 1904 were 5% bonds while the remaining 280 million ¥ of the 4th-5th Exchequer Issue of 1905 had to be issued at the high rate of 6%. (It will be recalled that the 200 million ¥ foreign issue of 1904 had to be issued at the high rate of 6% while the 480 million ¥ issue of March-July 1905 were 4½% bonds. For the final 200 million ¥ issue of November 1905, the interest rate had fallen to 4%.)

Following the end of the War, the JCG immediately devoted itself to the task of reducing the burden of interest payments on its domestic and foreign loans. First, the 1904, 200 million ¥ 6% domestic issue was redeemed in 1906 by the proceeds gained from a domestic issue of an equal amount of 4% bonds. In the following year, 1907, the government turned its attention to the interest payment on the foreign issue and was able to redeem its 6% 200 million ¥ issue of 1904 with the proceeds of a 5% issue

of equal amount in the London and New York markets. While this policy of interest arbitrage was successful in reducing interest payments, there was, of course, no net transfer involved in the issue and redemption of domestic bonds as can be seen in Table 5.

By 1908, however, the JCG was willing to go beyond its interest arbitrage policy and move toward a net redemption of domestic loans issued earlier. The 1904, 1st Exchequer Issue of 100 million ¥ was redeemed largely (70%) from JCG cash holdings and a small issue (30 million ¥ at 4%) of Consolidated Public Loan Bonds making a net transfer to Priv of some 70 million ¥ or 20% of real private investment of that year.

This policy of redemption was greatly accelerated over 1909-10 when the JCG redeemed some 480 million ¥ of previously issued 5% domestic bonds (including the 100 million ¥ of the 1904 2nd-3rd Exchequer Issue, the 1907 180 million ¥ 5% Public Loan Bonds and the 200 million ¥ of the 1906 5% issue, itself used to redeem an earlier 6% wartime issue). This redemption, unparalleled in the history of JCG bond market transactions was financed by the proceeds of a 4% 200 million ¥ domestic issue and a 281 million ¥ foreign issue in the London and Paris markets (Bank of Japan, 1966: 250-51). Thus, over this brief period the net transfer from JCG to Priv amounted to almost 300 million ¥ that is some 55% of real private investment over this period.

From 1911 until the outbreak of World War I in 1914 there were no major issues or redemptions of domestic bonds. Thus, we notice from Table 12 a small and unchanging net transfer from JCG to Priv over most of this period. In 1913 the last foreign issue brought slightly over 108 million ¥ on 5% JCG bonds in the Paris market (Moulton, 1931: 488).

While this ussue was used to redeem a small amount of domestic and foreign loans, its primary function was to facilitate the foreign interest payment, totalling some 70 million yen annually by this time (Watarai, 1915: 58). This interest payment foreign exchange drain, together with the merchandise trade and invisibles deficits, were, in the absence of further borrowing, financed by drawing on the stock of specie accumulated abroad during the War years. Over the last several years of the 1904-13 period this specie outflow had come to annually exceed some 10% of the specie holdings of the Bank of Japan and was of no small concern to the Japanese government (Inoue, 1931: 1-4).

Under these circumstances it was natural that the JCG was reluctant to engage in further JCG to Priv transfers which might serve to worsen the Balance of Payments position. In fact, some restraints on the private sector may well have been in the offing, but the crisis was averted by the outbreak of World War I, which was to thrust Japan for the first time, into the role of an international creditor (Inoue, ibid).[10]

Impact of Foreign Capital Inflow at the Firm Level: Two Examples

Perhaps it would be wise to recall here that our original objective in examining the transfer mechanism over the 1904-13 period was to suggest somewhat more precisely the ultimate direction or use to which the large foreign capital inflows were put. On the basis of what we know about the financial transfers involved, we have a strong indication that a significant part of the initial foreign capital inflow found itself into private sector hands whose proclivity for investment was high. Furthermore, this view from the financial side in no way contradicts, and in fact seems to run well to the grain of, the picture of real investment which is

emerging in the literature: namely that this interwar period was marked by a spurt in investment, both public and private. As a means of making more precise the connection between foreign capital inflow and private investment we will present here the results of a brief investigation into the impact of the inflow of this period on two firms.[11]

After an examination of the four categories of JCT-Priv transfer described in the foregoing section, it quickly became apparent that it would be impossible to trace any further transfers (3) and (4). No published records are available of the Government Loan Bond recipients or the holders of JCG domestic securities. While such information may exist in some form in the Ministry of Finance or the Bank of Japan unpublished records, such an extensive and time consuming investigation is clearly beyond the scope of the present work. On the other hand, the JCG-Priv transfers involved in the tobacco monopolization and the railway nationalization are well documented in published materials making it possible to trace the details of the transfer. Specifically, we shall be dealing here with one example in each category: the Murai Tobacco Company, Ltd. for the tobacco monopolization and the Hokkaido Tanko Kisen Company, Ltd. for the railway nationalization.[12]

As will be shown in the following, a detailed examination of each transfer reveals a strikingly similar pattern: 1. In both cases the increased liquidity position which resulted from the transfer from JCG was utilized for new investment in the industrial sector, and 2. In both cases this involved the import of foreign technology and equipment which eventually led to the establishment of joint ventures for production with the foreign company regarded to be the technological leader in the field.

Thus, in each of the examples we will see an initial foreign capital inflow, via transfer from JCG to Priv, leading to increased liquidity which in turn resulted in new investment followed by the import of foreign technology.

I. Murai Tobacco Company, Ltd.

At the time of its takeover by the Japan Monopoly Corporation in 1905, the Murai Tobacco Company, Ltd. (with production facilities in Kyoto and Tokyo) was the largest producer in Japan (Okurasho, 1955: 191). Because the purchase-price formula used in the monopolization was weighted toward existing plant and equipment instead of sales, Murai Tobacco took a hefty 46%, or 11.2 million yen, of the total payment made by the government for monopolization (Tobacco Sembaiho no Setsuritsu, 1915: 223).[13] In relative terms this placed the equivalent of 5% of gross private investment of that year, half in cash, in the hands of the head of the Murai clan, Murai Kichibei.

Following the receipt of this large sum for its tobacco holdings the Murai family began to build a financial organization somewhat resembling a miniature zaibatsu built around a bank, a savings and loan association and a holding company, all bearing the family name. On the basis of this financial organization several new undertakings were begun including participation in the Kyoto Gas Company (the only privately financed gas company in Japan), the manufacture of soap, the purchase of several mines and the establishment of a trading house and an affiliated steamship company.[14]

The family's largest investment undertaking, however was in the construction of a cotton spinning factory in Osaka under the name of Teikoku Seishi, which was completed in 1907.[15] In this regard it is

significant to note that Teikoku Seishi was established as a joint venture with J.W. Coates and Company, the leading British spinning company of the time, from which Murai was able to obtain the most advanced spinning machinery of 3,000 spindles (Otani, 1964: 244). Teikoku Seishi gradually came to overshadow the activities of the other companies mentioned above with the other companies being sold to various of the emerging zaibatsu.

II. Hokkaido Tanko Kisen Company, Ltd.

As indicated in Table 7, the Hokkaido Tanko Kisen Company, Ltd. was at the time of its nationalization in 1906 the fifth largest privately held railway in Japan. It has been singled out for examination here because its stock holders were not as dispersed (as was the case with the mammoth Nihon and Kyushu railways), being centered about a small group of investors formed to promote the industrial development of Hokkaido. At the head of this group was another dynamic businessman, Inoue Kakugoro, who had taken the company's presidency some years prior to the nationalization in anticipation of the investment opportunities that would be made possible with the receipt of the government bonds (Fujiseitetsu Kabushikigaisha, 1958: 47-75).[16]

Upon nationalization some 30 million was received in the form of 5%, 45 year government certificates, an amount which was almost equal to 15% of gross private investment in that year. Almost immediately upon receipt of payment the group's attention became centered on the possibility of the manufacture of steel in Hokkaido in response to the increased domestic demand (particularly military) which followed the Russo-Japanese War. By 1907, aided greatly by the impetus brought by the leadership of Inoue, construction of Japan's first privately financed steel mill had commenced;

production began some four years later in 1911 (Hokkaido Tanko Kisen Kabushiki Gaisha, 1935: 99-102). The firm was called the Nihon Seikosho and was finally incorporated into the Dainippon Seitetsu Company in 1935.[17]

Again noteworthy here is the import of foreign technology and the tie-up with a leading British manufacturer. From the outset, the Nihon Seikosho was closely associated with Armstrong-Vickers of England who furnished its initial equipment for the production of steel, steel pipe and steel plate. The construction of the plant and the early years of operation were also undertaken on a joint venture basis. In spite of the early close cooperation, the original reliance on foreign management and technology gradually diminished, and by the end of WWI the British managers and technicians had been eased out with Mitsui taking over full management prerogatives (Hokkaido Tanko Kisen Kabushiki Gaisha, 1935: 99-102). The firm now survives as the Muroran Seitetsusho of Shin Nippon Seitetsu.

FOOTNOTES CHAPTER II

1. It would of course be desirable before taking up the three aspects of the transfer mechanism mentioned in the above to offer a general survey of the major real and monetary long term series now available for this period and their relationship in some kind of a simple model. In this way we could offer a comprehensive and integrated framework for our analysis of foreign capital. Unfortunately, the building of even a simple 'foreign capital model' is at this time too ambitious an undertaking due to the controversial nature of most of the aggregate monetary data (e.g. money supply, bank debits) and the availability-consistency problems with the real series. At this point we can do little more than point out the concurrence of capital inflow with private investment and then attempt to trace the transfer of this liquidity to those whose investment proclivity was high.

2. Another relative measure of great interest, which will be developed in greater detail later (see Table 6) is I_f/Private Investment. Net capital inflow over this three year period was, on the average, slightly more than double private investment in each year.

3. The 65% figure shown in Chart 7 is doubtless overestimated due to the tendency of our estimating procedure to double count indirectly related military items over this period. A rough correction of this, assuming that 50% of the indirect military items are double counted over 1904-14, would place the proportion of military imports in total imports at about 45%.

FOOTNOTES - continued

4. It is interesting to note here the destination of the 100 million yen gold outflow of 1904. Some 85% went to the U.S. with 10% going to Hong Kong and 5% to Siantiang (Department of Finance, 1910: 99). Thus, while the financial transfer was effected largely in the London money market, the real transfer of goods and services took place largely between Japan and the U.S.

5. Steps 2 and 3 will be especially important for those non Japanese reading scholars who will be relying on the Hundred Year Statistics of the Bank of Japan (Bank of Japan, 1966). Although a convenient and handy, one-volume reference, great care should be taken when using any of the more aggregate of the financial series. My partial check of certain of these series (including such heretofore unquestioned series as gold flow and issue and redemption of JCG securities) has revealed that major revisions may be necessary.

6. It is interesting to note here that over the War years direct taxes increased proportionately to indirect taxes. This marked a reverse of the steady increase, following the Matsukata Deflation, shown in the proportion of indirect taxes in total taxes. The share of direct taxes increased from 35% in 1902 to 40% in 1905, while the share of indirect taxes declined from 56% in 1902 to 48% in 1905 (Okurasho, 1952: 67). The relative increase in the direct tax proportion can be traced to an increase in the land tax revenues, not from farm land but from urban land, obtained by a sharp upward reevaluation of land used for nonagricultural purposes (Okurasho, 1921: Appendix 3).

FOOTNOTES - continued

7. The case of the monopolization of salt and camphor was of a different type with the JCG assuming exclusive right of purchase (or import) and resale of these final products. Accordingly, manufacture was left in private hands with the JCG given the prerogative to set price as well as production quotas (Department of Finance, 1906: 27-28). The JCG was further given the exclusive right of sale abroad, important in the case of camphor, a major source of foreign currency earnings. Because the monopolization of salt and camphor involved no transfer of existing facilities, the corresponding items of Table 4 include only entries for the tobacco monopolization and the railway nationalization. It might be added here that at the time of nationalization there were 4,783 miles of railway in Japan, 3,283 miles held by the private sector and 1,500 miles by the government (Moulton, 1931: 548).

8. In fact, however, the transfer of the paper was effected almost immediately because of the government's promissory notes which were widely accepted as collateral for bank loans (Okurasho, 1955: 197).

9. As with the railway bonds this saleability hedge was bypassed by the circulation and discounting of the government's promissory notes (Okurasho, 1955: 197). Another point of interest here is the distribution of these rewards between officers and enlisted men. The Statistical Bureau Office of the Prime Minister holds that, of the total amount, officers received about 1/3rd, with the remaining 2/3rds going to the enlisted men. On the basis of very rough calculation this would mean that an officer would have received several times an annual salaried income (say, 3-5 times),

FOOTNOTES - continued

while an enlisted man would have gotten roughly the equivalent of one year's salaried income.

10. It should be mentioned here that there were issues of municipal and other loan bonds abroad over the entire period. They were small until 1910 and even thereafter accounted for no more than 10% of the net capital inflow in any given year. They were, however, important in financing local facilitating investments (e.g. electricity generation, tramways).

11. On the real side the investment series which have appeared in the past several years all indicate an investment spurt over the Russo-Japanese-WWI interval: (Shinohara, 1960), (Ohkawa/Rosovsky, 1962) and (Emi, 1970). On the monetary side, some macro series (money supply, bank deposits) are still difficult to evaluate while others (paid in capital) show clearly this investment spurt (Fujino, 1968).

12. No claim is made that these two firms are perfectly representative of a general pattern of the use of foreign capital. Rather, the criteria of their selection was essentially pragmatic: data availability.

13. At the time of purchase by the government, finished tobacco was produced by some 4,500 private companies which could be divided into two categories: the big 3 (Murai, Yuwatani and Chiba) and other numerous small producers. The small producers received, on the average, less than 500 yen cash as compensation (Okurasho, 1955: 211-13).

14. All these investment activities led the Kokumin Shimbun in 1908 to rate Murai Kichibei (formerly known as the Tobacco King) as Japan's number 3 businessman (Otani, 1966: 240).

FOOTNOTES - continued

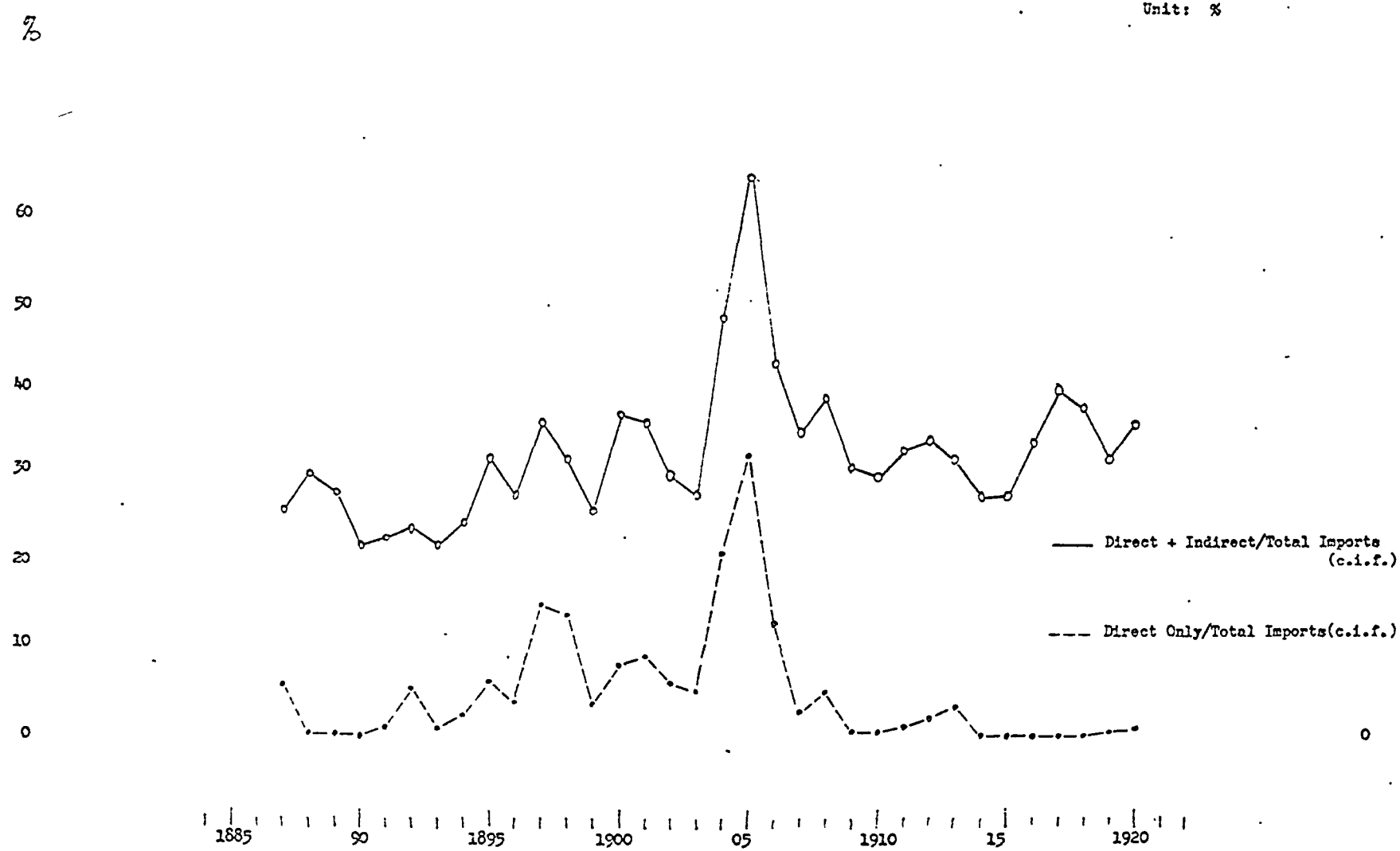
15. It should be noted that this came at a time of great investment in improved spinning technology (Ogura, 1907: Chronological Tables Appendix).

16. Inoue's activities following the nationalization led him to be listed as Japan's number 1 businessman in the Kokumin Shimbun survey of 1908 (Otani, 1966: 240).

17. In the same year, 1907, Inoue also founded Wanishi Seitetsu for the production of iron from iron ore locally available, but operations were shortly suspended due to management and production difficulties. All facilities were taken over by Mitsui and reopened in 1917 as Hokkaido Seitetsu. In 1919 the plant management was transferred to Nihon Seitetsubu of Muroran Kogyo (Fuji Seitetsu Kabushikigaisha, 1958: 47-75).

Chart 7. Relative Importance of Direct Imports

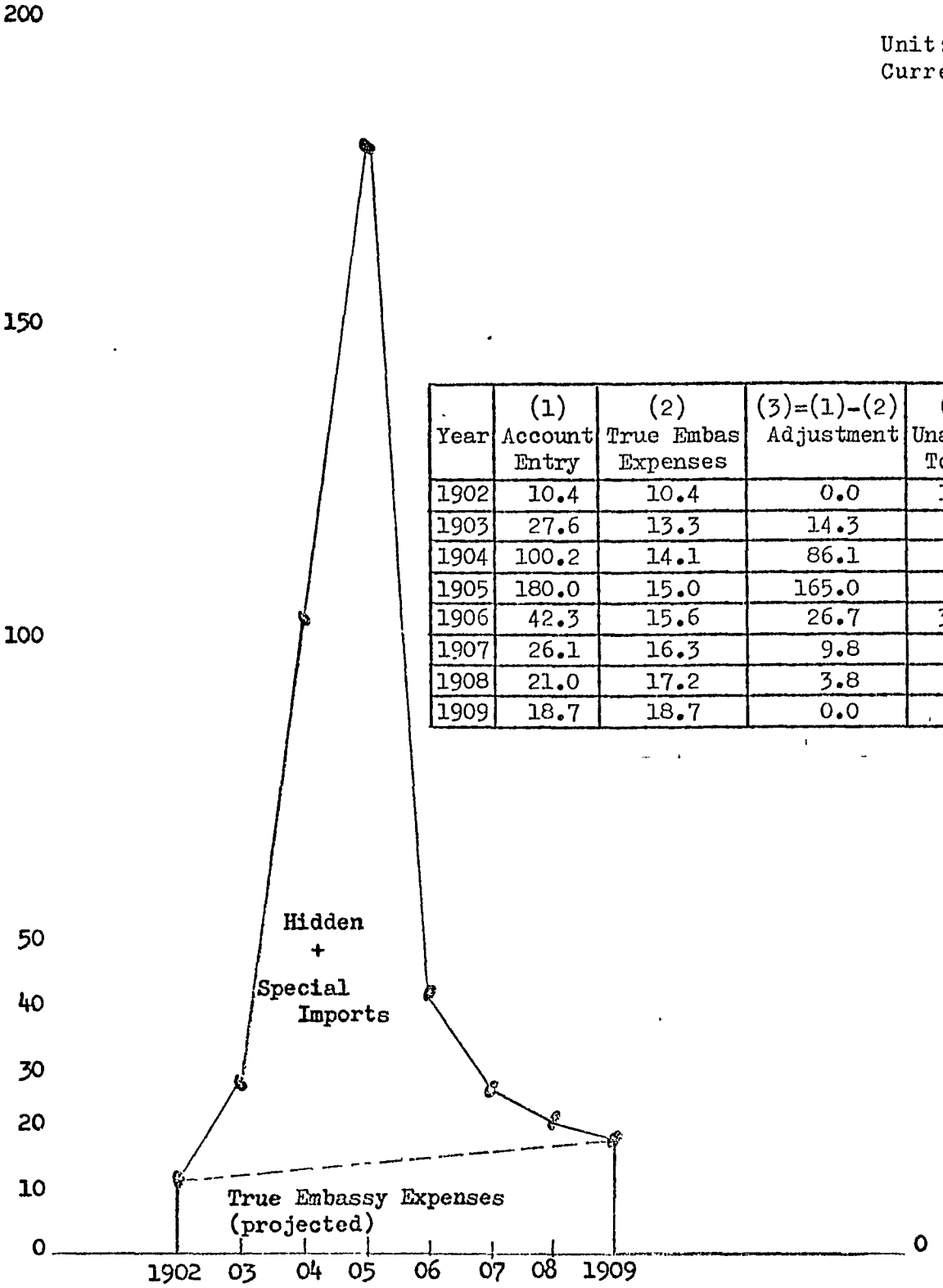
Direct and Indirect in Total Imports, 1887-1920 *



* Plotted From Data of Table 2 including revisions of Chart 8.

Military Goods, 1902-09 *

Unit: Million ¥
Current Prices



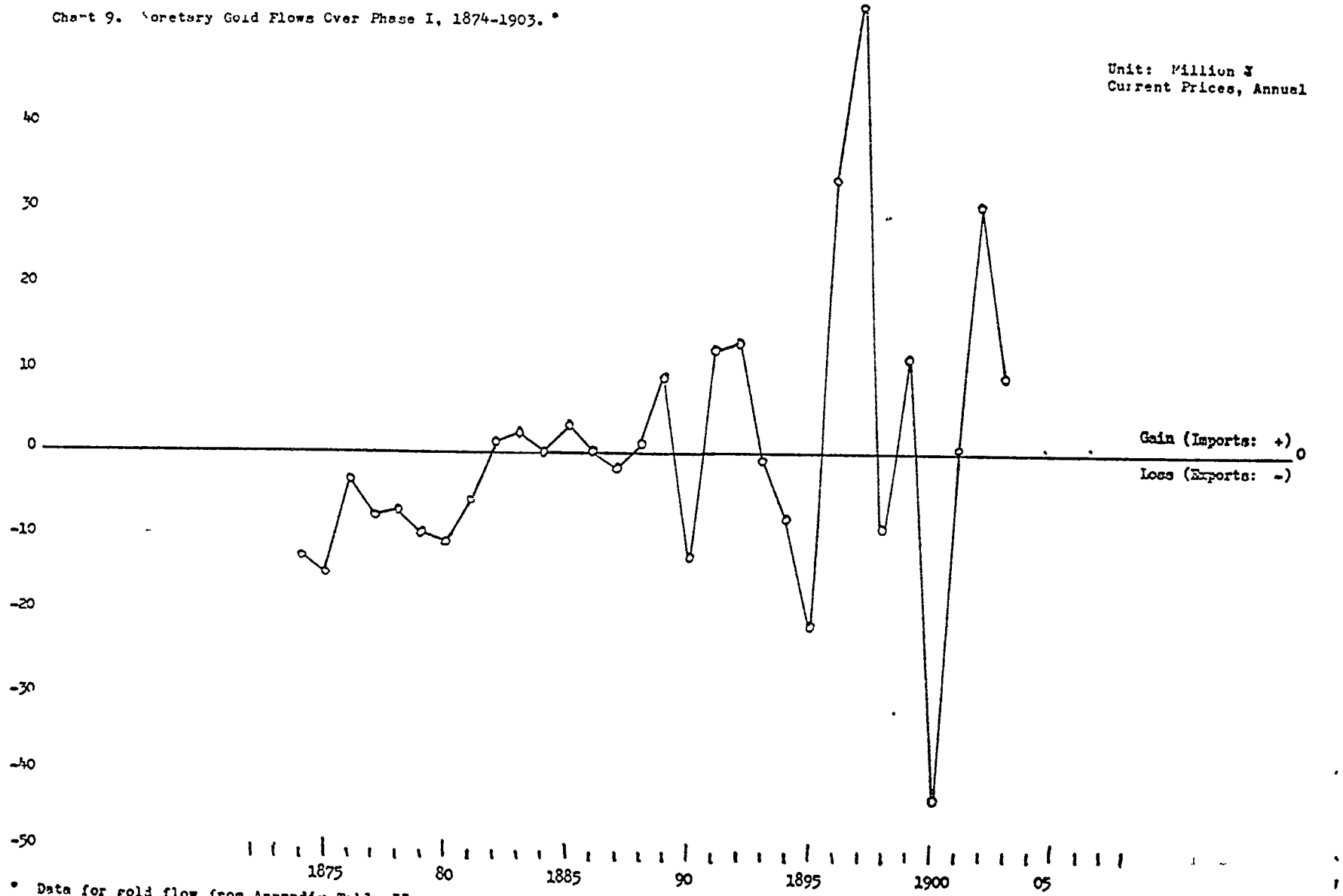
Year	(1) Account Entry	(2) True Embas Expenses	(3)=(1)-(2) Adjustment	(4) Unadjus. Total	(5)=(4)+(3) Adjusted Total
1902	10.4	10.4	0.0	18.8	18.8
1903	27.6	13.3	14.3	4.0	18.3
1904	100.2	14.1	86.1	0.0	86.1
1905	180.0	15.0	165.0	0.0	165.0
1906	42.3	15.6	26.7	33.4	60.1
1907	26.1	16.3	9.8	5.9	15.7
1908	21.0	17.2	3.8	5.7	9.5
1909	18.7	18.7	0.0	2.7	2.7

* Data for Invisible's Account entry of column 1 from(Okurasho, 1950: 44-45).

Data for Unadjusted total of column 4 from (Oriental Economist, 1935: 457-60).

a Data for True Embassy Expenses of column 2 calculated assuming equal annual percertage increase (27.8%) between the end points 1902 & 1909.

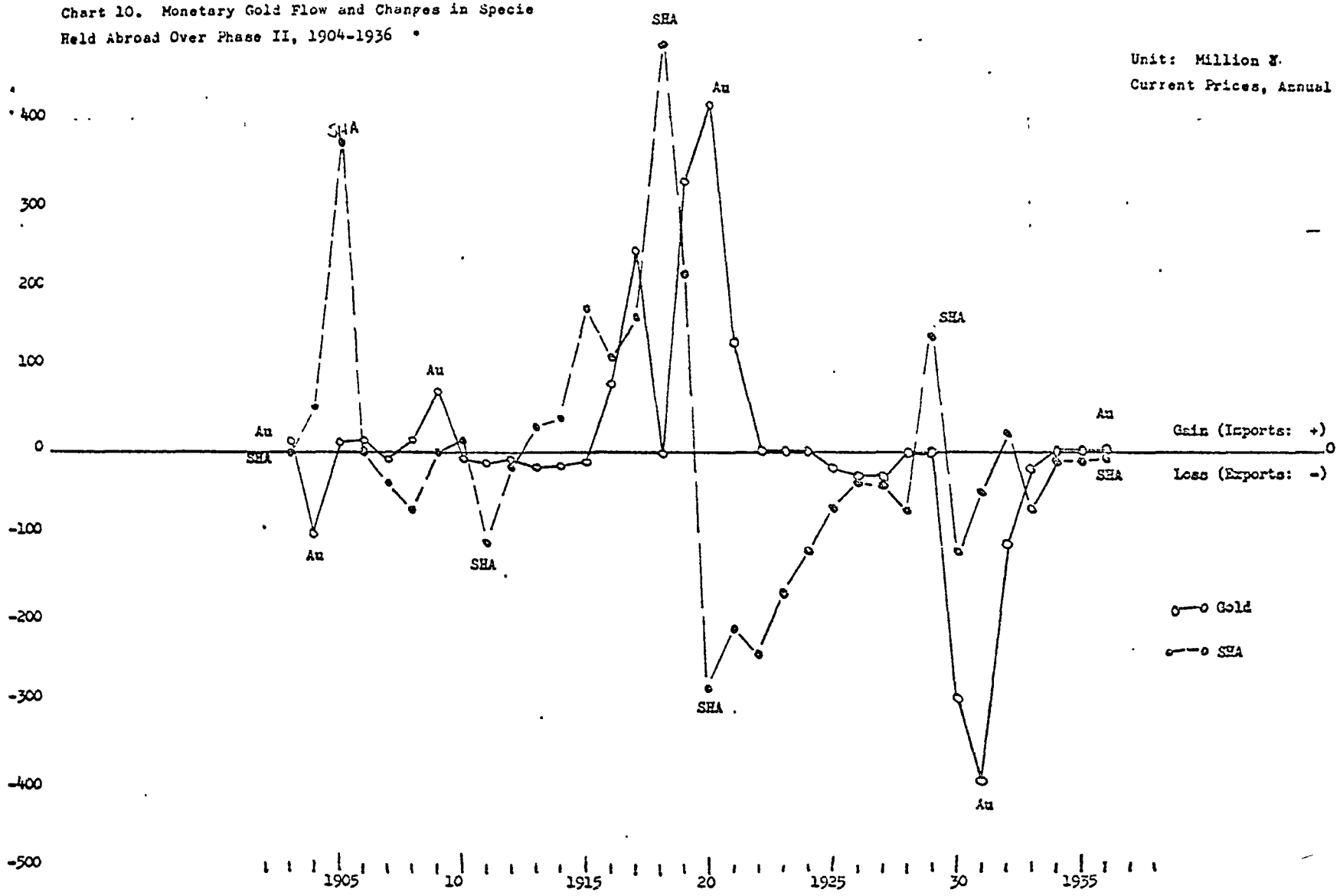
Chart 9. Monetary Gold Flows Over Phase I, 1874-1903. *



* Data for gold flow from Appendix Table II, column 2.

a Plus indicates gain (import) of gold, minus indicates loss (export) of gold.

Chart 10. Monetary Gold Flow and Changes in Specie Held Abroad Over Phase II, 1904-1936 •



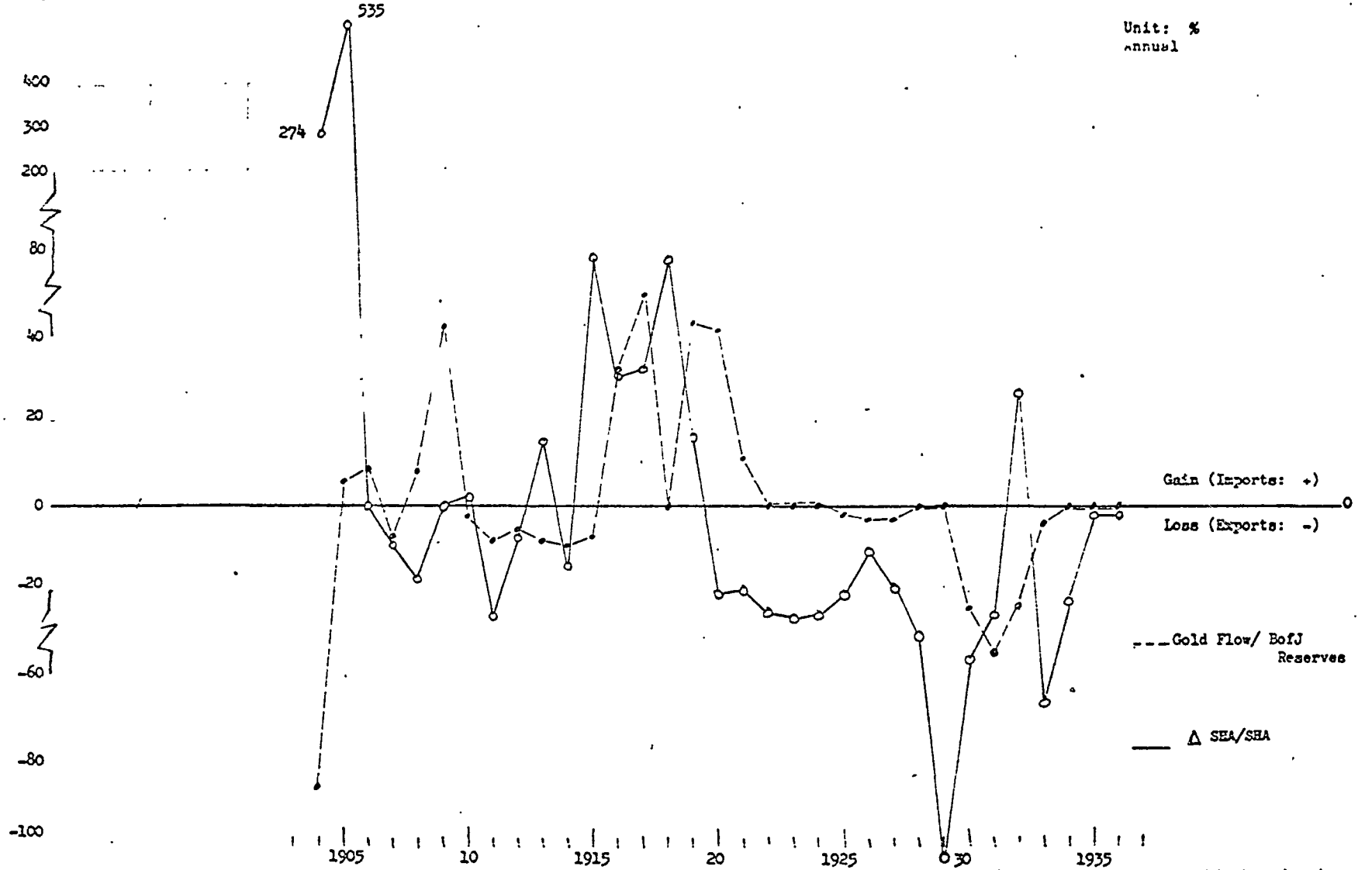
Gold Flow data from Appendix Table II, column 2.

Changes in Specie Held Abroad data from Appendix Table II, column 4.

a Plus indicates gain(import) of gold or specie held abroad; minus indicates loss (export) of gold or specie held abroad.

bSpecie is defined to include gold coins and bullion, foreign exchange and short term claims payable in gold (Bank of Japan, 1966: 169, ft 1).

Chart 11. Relative Importance of Changes in Monetary Gold Flow and Specie Held Abroad Over Phase II, 1904-36 *

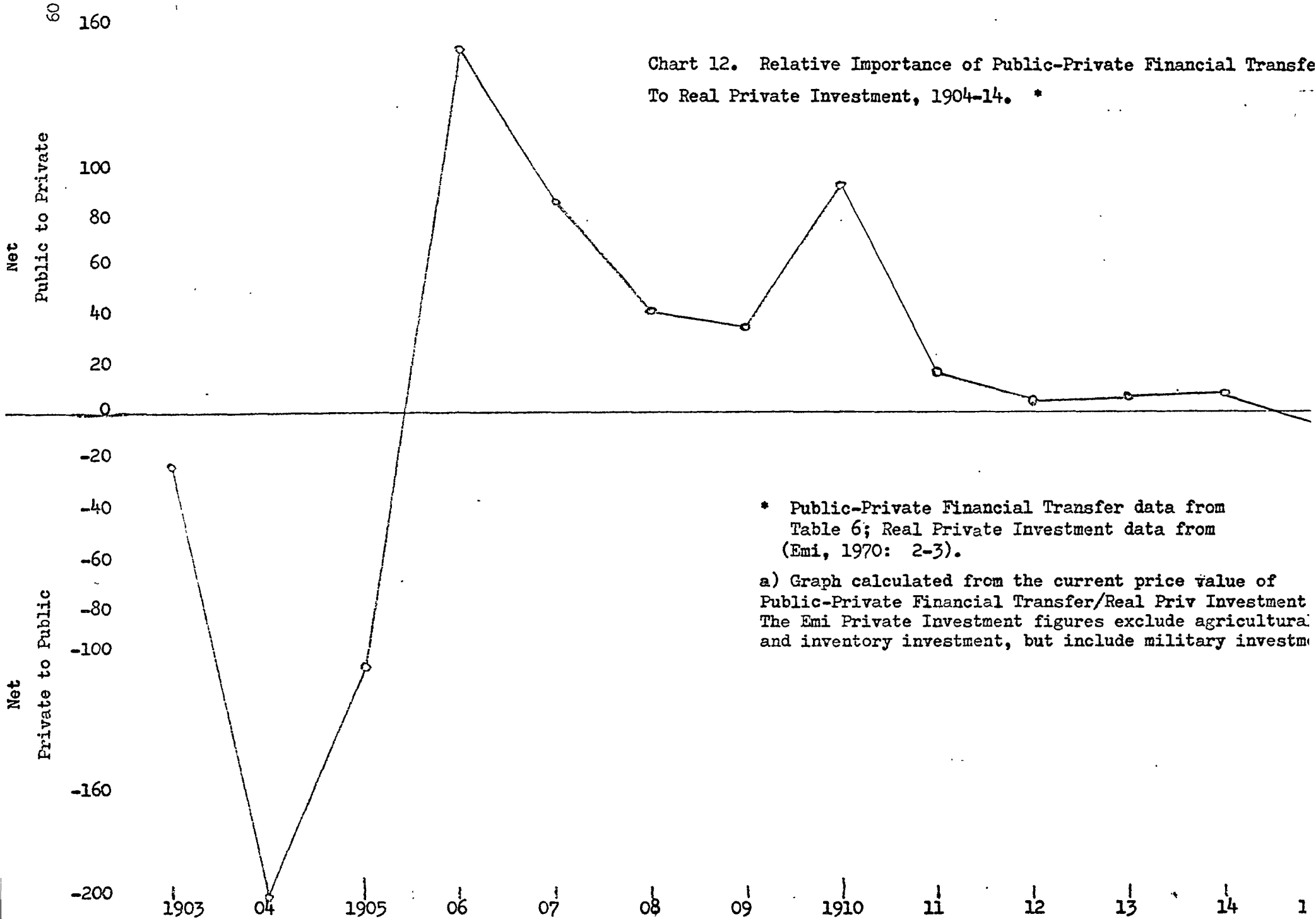


* Gold Flow data from Appendix Table II, column 2; specie held abroad data from Appendix Table II, column 4.
Bank of Japan Reserves data from (Okurasho, 1950: 77-79).

a Plus indicates gain (import) of gold or specie held abroad; minus indicates loss (export) of gold or specie held abroad.

b According to Japanese accounting practices, specie is defined to include gold coins and bullion, foreign exchange and short claims payable in gold (Bank of Japan, 1966: 169, ft 1).

Chart 12. Relative Importance of Public-Private Financial Transfe
To Real Private Investment, 1904-14. *



* Public-Private Financial Transfer data from Table 6; Real Private Investment data from (Emi, 1970: 2-3).

a) Graph calculated from the current price value of Public-Private Financial Transfer/Real Priv Investment The Emi Private Investment figures exclude agricultura and inventory investment, but include military investm

Table 1. Military Related Imports:

Direct and Indirect, 1897-1920

Year	(1) Imports(cif) Million ¥	(2) Directly Related Million ¥	(3) Indirectly Related Million ¥	(4) (2)/(1) %(Avg)	(5) (3)/(1) %(Avg)	(6) Marginal Prop of (2) %	Marginal Prop of (2) + (3) %
1868	12.6	1.3		10.3			
69	24.5	.7		2.9			
1870	40.0	.1		0.2			
71	25.9	.1		0.4			
72	31.0	.2		0.7			
73	34.0	-		-			
74	29.2	.1		0.3			
1875	37.5	3.4		9.1			
76	31.2	1.4		4.5			
77	35.3	1.9		5.4			
78	43.9	1.3		3.0			
79	43.8	1.4		3.2			
1880	48.8	1.2		2.5			
81	41.3	.9		2.2			
82	38.2	1.1		2.9			
83	36.8	4.1		11.1			
84	37.5	4.9		13.1			
1885	37.3	6.3		16.9			
86	41.3	2.6		6.3			
87 (M20)	59.3	3.6	11.8	6.1	20.0		
88	74.4	.4	18.8	0.5	25.3		
89	73.4	.2	18.1	0.3	24.7		
1890	91.4	.1	20.2	0.1	22.1		
91	69.7	.9	15.7	1.3	22.5		
92	78.4	4.6	14.7	5.9	18.6		
93	98.6	1.1	20.4	1.1	20.7		
94	132.6	3.7	29.2	2.8	22.0		
1895	142.2	9.3	36.2	6.5	25.5		
96	197.5	8.3	46.8	4.2	23.7		
97	277.0	41.5	57.4	15.0	20.7	33/80 = 41%	44/80 = 55%
98	339.5	46.5	61.4	13.7	18.1	5/62 = 68%	9/62 = 15%
99	238.3	8.5	53.0	3.6	22.2		
1900	304.8	25.7	86.6	8.4	28.4		
01	269.9	25.5	72.5	9.4	26.9		
02	288.2	18.8	68.4	6.5	23.7		
03	332.1	18.3	72.5	5.5	21.8		
04	412.8	86.1	112.8	20.9	27.3	68/80 = 85%	108/80 = 135%
1905	511.3	165.0	162.9	32.3	31.9	79/99 = 80%	129/99 = 13%
06	441.7	60.1	127.9	13.6	29.0		
07	507.3	15.7	164.6	3.1	32.4		
08	456.7	25.2	151.4	5.5	33.1		
09	407.6	2.7	121.9	0.7	30.0		
1910	487.8	2.7	144.0	0.6	29.5		

Military Related Imports - continued

Year	(1) Imports(cif) Million ¥	(2) Directly Related Million ¥	(3) Indirectly Related Million ¥	(4) (2)/(1) %(Avg)	(5) (3)/(1) %(Avg)
1911	554.7	8.0	174.4	1.4	31.4
12	666.0	16.5	208.7	2.5	31.3
13	779.2	29.7	220.2	3.8	28.3
14	635.6	3.4	170.5	0.5	26.8
1915	563.8	1.7	152.2	0.3	27.0
16	795.8	2.8	266.0	0.3	33.4
17	1,093.6	.8	439.4	0.2	40.2
18	1,749.1	4.8	645.9	0.3	36.9
19	2,337.5	16.2	728.7	0.7	31.2
1920	2,515.2	29.2	879.2	1.2	35.0
21	1,739.3	37.2		2.1	
22	2,023.8	22.8		1.1	
23	2,119.9	16.1		0.8	
24	2,601.7	28.2		1.1	
25	2,734.9	29.9		1.1	
26	2,565.0	23.6		0.9	
27	2,367.5	21.2		0.9	
28	2,375.2	n.a.			
29	2,388.9	"			
1930	1,681.0	"			
31	1,321.7	"			
32	1,524.4	"			
33	2,017.2	"			
34	2,401.0	"			
1935	2,698.3	"			
36	2,935.1	"			

Table 1 - continued

* Data for Imports of column 1 is taken from appendix Table I, Account 1.1 - Merchandise Imports (cif).

Data for directly related military imports (warships, arms, ammunition, and explosives) of column 2 is taken from (Tatemoto, 1966: 5) for 1887-1901 and from (Oriental Economist, 1935: 457) for 1902-20. Revisions, described in note a below, have been made only over 1902-09 based on supplementary information from (Okurasho, 1950: 44-45).

Data for indirectly related military imports of column 3 is calculated according to the Hikikata definition (Hikikata, 1940: 232-33) from the data of (Oriental Economist, 1935: 153-347).

a One of the more mysterious aspects of the directly related military imports data is that the Foreign Trade of Japan Special Imports accounts (Oriental Economist, 1935: 457) show zero entries for these goods during the years of the Russo-Japanese War, 1904-05. In light of the large loans raised abroad during this period and the continuing stress given military in the literature, it would seem unusual that these imports really fell to zero during the War years.

As a first step in checking the Foreign Trade of Japan figures, an alternate source, the Nihon Tokei Nenkan, was checked, and it was found that the Special Imports are not listed here as zero, but as not available. This would imply that, instead of falling to zero, government purchases of military items were not reported under the usual Special Imports category due to reasons of high policy.

The omission of directly related imports from the Special Imports category for 1904-05 in turn raises two possibilities: 1. that these

Table 1 - continued

figures are included nowhere in the official statistics or 2. that they have been hidden under some vague category of the official invisibles statistics. The most likely way to check the latter possibility is to examine the official invisibles statistics for the relevant years to uncover any sudden and large increases during the War years which quickly reverted to prewar levels once the War had ended. Fortunately, we do not have to look far for just such a sharp increase and subsequent decrease occurs in item no. 17 - Embassy Expenditure and Other (Okurasho, 1950: 44-45).

The expenditures of this account appear in Chart 8 where we have plotted the trend line connecting the 1902 and 1909 end points which will serve to represent the projected path of actual embassy expenses. The difference between this projection and the actual account entries is taken as the amount of camouflaged special imports. The adjustments necessary for the Foreign Trade of Japan special import figures over 1902-09 have been calculated as shown in the table which accompanies Chart 8.

b The definition of indirectly related military imports is taken from Hijikata (Hijikata, 1940: 457) and includes the following 22 categories: furs, leather, hides (cow, horse and sheep), other hides, finished leather goods, petroleum (koyu) resin, pharmaceuticals, explosives, wool yarn, wool, coal, coke, iron ore, iron, copper, lead, tin, zinc, nickle, firearms, and machinery. Here we have combined the above items into the following 4 broad categories: Hides/Wool; Metals; Fuel and Machinery.

c While we have followed the Hijikata definition strictly, it is obvious that not 100% of the goods in any category can be ascribed to indirectly related military imports. In fact, an increase in these

Table 1 - concluded

imports (e.g. raw materials and machinery) is often used as an index of industrialization. So we should expect a large degree of overestimation, and, therefore, regard the sum of Direct and Indirect military imports as a kind of ultimate maximum.

d There is one further source of overestimation in the direct and indirect total which should be made explicit. In our revision of the Foreign Trade of Japan's figures, we assumed the amount concealed in the invisibles accounts to be 100% directly related imports for lack of any means to breakdown the account into direct and indirect goods. Certainly a sizeable part of these purchases went for indirectly related military imports which will then appear double counted by adding in the Hijikata estimates for these same items. Thus, our total of direct and indirect military imports shows a peak value of 65% of total imports for 1905 whereas a more reasonable order of magnitude, taking out one-half of the Hijikata estimates to correct for double counting, would be about 50%.

Table 2. Relative Importance of Changes in Monetary Gold Flows and Specie Held Abroad Over Phase II, 1904-36. *

Year	(1) Δ Au Million ¥ Current	(2) BofJ Reserves Million ¥ Current	(3) (1)/(2) %	(4) Δ SHA Million ¥ Current	(5) SHA [a] Million ¥ Current	(6) (4)/(5) %
1904	+100	116	86	-52	19	-274
1905	-5	79	-6	-372	70	-535
06	-14	115	-9	+1	442	0
07	+11	147	+7	+40	441	+9
08	-13	161	-8	+71	401	+17
09	-72	170	-42	0	330	0
1910	+5	218	+2	-8	327	-2
11	+17	223	+8	+106	336	+32
12	+11	229	+5	+17	231	+7
13	+20	247	+8	-31	214	-15
14	+19	224	+9	+34	246	+14
1915	+16	218	+7	-167	213	-79
16	-79	248	-32	-108	379	-29
17	-236	410	-58	-157	486	-32
18	0	650	0	-492	643	-77
19	-324	713	-46	-208	1,135	-16
1920	-407	952	-43	+281	1,343	+21
21	-132	1,247	-11	+207	1,062	+20
22	-1	1,245	0	+239	855	+28
23	0	1,064	0	+170	615	+28
24	0	1,057	0	+118	445	+27
1925	+22	1,059	+2	+68	326	+21
26	+31	1,057	+3	+27	257	+10
27	+36	1,058	+3	+44	230	+19
28	0	1,063	0	+72	186	+39
29	0	1,062	0	+141	114	+123
1930	+287	1,072	+27	+121	255	+47
31	+388	823	+47	+46	134	+34
32	+112	470	+24	-24	88	-27
33	+21	425	+4	+74	111	+67
34	+1	425	0	+9	38	+24
1935	0	466	0	+1	28	+4
36	0	504	0	-1	27	+4

* Data from (Okurasho, 1950: 77-79).

a Specie is defined as the sum of gold coins, gold bullion and short term claims payable in gold (Bank of Japan, 1966: 169 ft 1).

b Plus sign here indicates loss (export) while minus sign indicates gain (import). The reverse usage is employed in Chart 11.

Table 3. Major Financial Flow-of-Funds Accounts for Japanese Central Government, 1903-1915.

(by economic classification)

Unit: Million ¥
Current Prices

		1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
	RECEIPTS													
I	Proceeds of Sale of Govt. Property[a] (including land)	1.0	0.8	1.2	2.9	2.4	2.7	2.2	2.5	3.5	4.6	3.1	6.3	27.5
II	Temporary Loans[b]	2.5	-	-	-	1.0	1.7	0.8	0.8	-	-	-	-	3.0
III	Increase in Govt. Liabilities[c]	29.2	498.9	1,044.9	205.3	257.3	31.0	-	567.9	24	1	137	24	59
A.	Domestic	29.2	284.1	215.0	205.3	32.7	31.0	-	286.4	24	1	31	-	30
B.	Foreign	-	214.8	829.0	-	224.6	-	-	281.5	-	-	108	24	29
	EXPENDITURE													
I	Purchase of Existing Capital Goods[d]	-	9.2	14.7	265.3	205.0	-	-	-	-	-	-	-	-
II	Rewards for Distinguished Services[f]	-	-	-	104.0	-	-	-	-	-	-	-	-	-
III	Decrease in Govt. Liabilities[g]	8.6	0.2	0.2	217.2	225.0	119.6	60.6	523.3	99	33	70	55	105
A.	Domestic	8.6	0.2	0.2	217.2	10.2	119.6	60.6	523.3	89	23	60	31	45
B.	Foreign	-	-	-	-	214.8	-	-	-	10	10	10	24	60

Table 4. Transfer to Private Sector from Purchase of Tobacco Industry and Railways.

Unit: Million ¥
Current Prices

Table 4-a. Nationalization of the Railways. *

Year	Amount a
1906	265.3
1907	205.0

* Data from (Watarai, 1915: 156).

a Paid in 45-Year, 5% Japanese government bonds; includes small amount for land purchase.

Table 4-b. Purchase of Tobacco Industry. *

Year	Payment	Compensation & Purchase Tobacco Leaf	Plant & Equipment	Transfer Fee	Total
	Govt Sec	3.1	.6	2.9	6.6
1904	Cash	.4	2.2	-	2.6
	Total	3.5	2.8	2.9	9.2
	Govt Sec	-	-	5.6	5.6
1905	Cash	8.3	.7	.1	9.1
	Total	8.3	.7	5.7	14.7
	Govt Sec	-	-	-	-
1906	Cash	-	-	-	-
	Total	-	-	-	-
	Govt Sec	3.1	.6	8.5	12.2
	Cash	8.7	2.9	.1	11.7
	Grand Total	11.8	3.5	8.6	23.9

* Data from (Sembaikyoku, 1915: 380).

Table 4-c. Total Transfer. *

Year	Payment	Tobacco	Railways	Total
	Govt Sec	6.6	-	6.6
1904	Cash	2.6	-	2.6
	Total	9.2	-	9.2
	Govt Sec	5.6	-	5.6
1905	Cash	9.1	-	9.1
	Total	14.7	-	14.7
	Govt Sec	-	265.3	265.3
1906	Cash	-	-	-
	Total	-	265.3	265.3
	Govt Sec	-	205.0	205.0
1907	Cash	-	-	-
	Total	-	205.0	205.0
	Govt Sec			482.5
	Cash			11.7
	Grand Total			494.2

* Data from Tables 4-a and 4-b.

Table 4 - continued

* Proceeds of Sale of Government Property from (Department of Finance, 1918: 14-15).

Temporary Loans Data from (Department of Finance, 1918: 14-15).

Increase in Government Liabilities data from (Bank of Japan, 1966: 250-51), but adjusted for 1906, 1908 and 1909 as described in the following notes.

Existing Capital Goods Purchases data from Table 5 a-c.

Rewards for Distinguished services data from (Department of Finance, 1908: 4,46).

Decrease in Government Liabilities data from (Bank of Japan, 1966: 250-51).

a Largely sales of government capital equipment, but including small (approximately 10%) amount of land sales (Department of Finance, 1917: 16-19).

b Closely corresponds to short term bills, usually interest bearing, which are unregistered and must be redeemed within 12 months of issue or within the financial year provided for under the terms of issue (Department of Finance, 1906: 46).

c Included here are long term government bonds whose liability extends beyond one year, issued in open market operations. In order to conform to this Federal Reserve flow-of-funds convention (Federal Bureau, 1956: 1085-1106), it has been necessary to adjust the Bank of Japan series (Bank of Japan, 1966: 250-51) as follows: 1906 - the "Reward Loan Bonds" (Department of Finance, 1906: 4,46) have been removed and appear here under Rewards for distinguished services; 1904-07 and 1909 - the government

Table 4 - concluded

bond-private stock swap used in the nationalization of the Japanese railways and the government monopolization of tobacco, salt and camphor (Chart 5 a-c) is shown here according to the actual year of payment under purchase of Existing Capital Goods and not as it appears in the Bank of Japan Series (Bank of Japan, 1966: 250-51) all lumped under 1909, the date of the terminal payment.

d In the case of the tobacco, salt and camphor government monopolies the purchase price includes a small percentage for inventories and land, amounting to about 1% of the totals presented here (Charts 5 a-c).

f An interest bearing (5%) bond payment over 25 years, but redeemable after 5 years made for distinguished services rendered during the Russo-Japanese War (Department of Finance, 1907: 4,46). Special privileges were granted the recipients of these bonds such as tax exemption on interest received and, more important, the use of these bonds as collateral for securing bank loans. In this latter privilege, these bonds resembled the earlier Hereditary Pension Bonds of 1873 (Department of Finance, 1904: 34).

g Open market redemption of government bonds of liability exceeding one year.

Table 5. Relative Importance of the Public-Private Financial Transfer In Real Private Investment, 1904-14. *

Unit: Million ¥ Current Prices

Year	(1) Purchase of Capital Goods minus Sale of Govt Prop	(2) Rewards minus Temporary Loans	(3) Bonds Bond Redemption minus Domestic Issue	(4) (1)+(2)+(3)= Net Financial Transfer	(5) Real Private I [a]	(6) (4)/(5) = Relative Importance of Financial Transfer %	Average
1903	-1.0	-2.5	-20.6	-24.1	111.2	-20.8	-108%
1904	+8.4	-	-283.7	-275.5	137.2	-200.0	
1905	+13.5	-	-214.0	-200.5	193.1	-104.0	
1906	+262.4	+104.0	-12.9	+293.3	194.0	+151.0	-
1907	+202.6	-1.0	-22.5	+179.1	220.0	+80.8	
1908	-2.7	-1.7	+88.6	+84.2	204.6	+41.2	81%
1909	-2.2	-0.8	+60.6	+57.6	162.8	+35.3	
1910	-2.5	-0.8	+236.9	+233.6	247.9	+95.1	
1911	-3.5	-	+65.0	+61.5	362.9	+17.1	
1912	-4.6	-	+22.0	+17.4	350.0	+5.0	
1913	-3.1	-	+29.0	+25.9	336.0	+7.7	
1914	-6.3	-	+31.0	+24.7	291.2	+8.6	10%
1915	-27.5	-3.0	+15.0	-15.5	356.3	-4.2	

* Data for columns (1), (2), and (3) from Chart 4. Real Private Investment from (Emi, 1970: 2-3).

[a] The Emi Real Investment data excludes agricultural and inventory investment, but includes military investment.

[b] Minus indicates a net private to public transfer; plus indicates a net public to private transfer.

TABLE 6. NATIONALIZATION OF MAJOR PRIVATE RAILWAYS, 1906-07. *

Unit: Million ¥

	Company	Date of Nationalization	Purchase Price [a]	
1.	Nihon Tetsudo (Tokyo-Aomori)	1906 11.11	137.8	
2.	Kyushu Tetsudo	1906 7.11	116.3	
3.	Sanyo Tetsudo	1906 11.11	78.7	
4.	Kwansai Tetsudo	1907 10.11	36.1	
5.	Hokkaido Tanko Kisen	1906 10.11	30.5	
Total:	Big 5 [b]		399.4	
Total:	All Private Railways			470.5

* Data from (Watarai, 1915: 156).

a Purchase price includes small amount (0.003%) for land purchased.

b The Big 5 purchase price was some 64% of the total cost of nationalization.

CHAPTER III

TOWARDS A BROADER PERSPECTIVE: CAPITAL INFLOW AND THE INVESTMENT SPURT

In the absence of reliable, long-term series for capital flow and gross domestic capital formation, those concerned with the role of foreign contributions in Japanese capital formation have, more or less, tended to take either of the following views.

1. The Insignificant View. Now, as in the past, the process of Japan's economic modernization has tended to take on Cinderella proportions. The mentality in this case makes it easy to accept the conclusion that Japan, somehow, was able to do it alone with insignificant help in the form of foreign financing.

Among foreign observers this view has persisted and now rests, perhaps indelibly, in Cairncross' version of foreign capital flow: "Japanese foreign borrowing was insignificant throughout ..." (Cairncross, 1964: 42). It continues to resurface in such pronouncements as that of Berrill: "Foreign capital can be said to have played virtually no part in the take-off of Britain, France, Germany, Finland and Japan." (Berrill, 1963: 291).

Thus the insignificant view is near ubiquitous, and those scholars who care to broach the point at all generally take an 'assuming' hedge. A careful reading of any number of articles will reveal the following: "Assuming no foreign capital borrowing, ...".

2. The Military-Use View. Another means of minimizing the role of foreign capital is to subscribe it to short periods, usually during or

after some military conflict, when borrowing abroad is linked to purchases of military hardware. Thus, following the 'insignificant', there will appear the usual addendum: "... apart from a short burst after 1903 to pay for the war with Russia." (Cairncross, 1964: 43).

In order to test the validity of the above approaches, I have attempted to construct, using the most reliable data available, a long-term series for capital flow which could speak for itself. Relying on that, we must regard the insignificant view as extremely misleading. As indicated in Chapter I, there have been protracted periods of significant foreign capital inflow. Furthermore, as shown by the gold flow-trade balance, long term-short term and trade figure breakdowns presented in Chapters I and II, there is no reason whatsoever to believe that the post Sino-Japanese War period or the Russo-Japanese War period inflows were dominated by military purchases. In fact, the overwhelming portion of the former went to accumulate a foreign gold balance to prepare for the introduction of the gold standard while the lion's share of the latter went to finance non military imports or to accumulate specie balance abroad, used later to finance capital goods purchases for private investment. So there does not seem much to the military view either.

Then where does that leave us? Perhaps better off than previously, but still short of any broader perspective of the role of foreign capital. For that we will have to say something about capital inflow within the framework of domestic capital formation.

We can understand why this issue has continued to be so elusive throughout the 1950's and 1960's when we realize the paucity of long-term economics statistics -- foreign capital data included. It is only recently that the long-term growth and structural pattern for Japan is beginning to

be understood. Now thanks to the work of Ohkawa and Rosovsky, we have now an investment spurt framework for Japan within which to set our capital flow periodization. Comparing the two chronologies, presented here in Table 7, we can suggest the following connection between capital inflow and domestic investment. In this regard we will want to compare our long-term phases of capital flow with their broad time divisions of Transition, Growth, and Differential Structure.[1]

As will be recalled from Chapter I, our capital-flow Phase I is marked by chronic, but declining, inflows of capital. This Phase corresponds almost exactly with the Ohkawa-Rosovsky Transition and Concurrent Growth phases on the real side. More specifically, capital inflow (in relative terms, of course) was highest during the Transition after which it showed a steady decline throughout the Concurrent Growth phase, itself falling into two parts - the first investment spurt and its subsequent long swing downswing. From this association several points of interest emerge.

1. Bearing the brunt of the shock of placing Japan in the international economic arena after some 250 years of isolation, the 20-year Transition Phase was marked by chronic and high levels of capital inflow. This aspect has been almost completely ignored, but, henceforth, concerned scholars would do well to reexamine previously held conclusions concerning this period in light of the sustained, high levels of capital inflow. Upon further reflection, we may well find a substantial underestimation of direct investment in Japan by foreigners during these early years as well as a much greater role played by foreign firms in short term capital lending.

2. Turning from the Transition to the Concurrent Growth Phase, the first investment spurt can be pictured as independent of foreign capital.

Table 7: Periodization via Investment and Capital Flow *

- Investment Spurt -	- Capital Flow -
Transition: 1868-85	Phase I: 1874-1903
(a) Stability: 1868-75.	(1) Data not available.
(b) Inflationary: 1876-80.	(2) Highest Relative Inflow: 1874-80
(c) Deflationary: 1881-85.	(3) High Relative Inflow: 1881-85.
Phase I: 1886-1902	(4) Moderate Inflow: 1886-90.
(d) 1st Investment Spurt: 1886-98.	(5) Small Outflow: 1891-95.
(e) 1st Long Swing Downswing: 1899-1904.	(6) Large Inflow: 1896-98.
	(7) Zero Inflow: 1899-1903.
Phase II: 1903-36	Phase II: 1904-36
(f) 2nd Investment Spurt: 1904-19	(8) Large, Sustained Inflow: 1904-13
First Half - 1904-14	(9) Large Outflow: 1914-19.
Second Half - 1915-19	(10) Moderate Inflow: 1920-29.
(g) 2nd Long Swing Downswing: 1920-29	(11) Small Outflow: 1930-36.
(h) 3rd Investment Spurt: 1930-36.	

* The investment spurt chronology is taken from (Ohkawa/Rosovsky, 1962), (Ohkawa/Rosovsky, 1965) and (Ohkawa/Rosovsky, 1968).

The capital flow chronology is taken from Chart I.

The low, and declining levels of foreign capital inflow would suggest that the land tax revenues raised over this period were sufficient to finance investment, which was strongly government dominated.

3. During the longswing downswing which occurred at the end of the Concurrent Growth Phase, we also note a decline of capital inflow to zero, i.e. near equilibrium levels, ending the long phase of chronic capital inflow as well as the Concurrent Growth Phase and the Transition which have preceeded it.

Perhaps the single most striking aspect of the chronology presented in Table 7 is the coincidence of the beginning of our capital-flow Phase II and the initial investment spurt (i.e. the second investment spurt) of the Ohkawa-Rosovsky Differential Structure phase, delineated from the earlier Concurrent Growth Phase by the emergence of significant differences in the productivities (and wages) between the agricultural and non-agricultural sectors. With the inability of agriculture to continue to finance capital formation in the non-agricultural sector, as it had done earlier, it was no accident that we see such a massive and sustained inflow of foreign capital at this turning point in Japan's modern economic growth. Furthermore, we might suggest that foreign capital served as the link to the second investment spurt, dominated increasingly by private investment. In Chapter II we have attempted to document the government's intermediary role in effecting this shift as well as its impact at the firm level over this crucial period which stands out as the turning point for both the capital-flow and investment-spurt periodizations.

On the basis of the above, I am suggesting that we revise long held notions concerning the amounts, timing and significance of prewar

capital flows to the following. First, capital inflows were significant over two long periods: the 20 some-odd years which followed the Meiji Restoration and the second investment spurt of the interwar (i.e. Russo-Japanese War, World War I) years. Second, it is of particular analytic interest that the period of largest capital inflow occurred during the latter period, the years which mark the major turning point in capital flow from chronic inflow to alternations of inflow/outflow and in investment spurt from Concurrent Growth to Differential Structure. Third, during the second investment spurt the modern sector had ceased to depend on finance from the traditional sector. In the absence of funds from the traditional sector, foreign capital inflow played a crucial role in supporting domestic investment increasingly dominated by the private sector.

FOOTNOTES - CHAPTER III

1. For a development of the Ohkawa-Rosovsky investment spurt periodization see (Ohkawa/Rosovsky, 1962), (Ohkawa/Rosovsky, 1965) and (Ohkawa/Rosovsky, 1968). Herein Ohkawa and Rosovsky have used the investment spurt to demark modern Japanese economic growth of the prewar period as follows: (a) Transition, 1868-85; (b) First Investment Spurt, 1886-98; (c) Second Investment Spurt, 1904-19; and (d) Third Investment Spurt, 1930-36.

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STATISTICAL APPENDIX I

BALANCE OF PAYMENTS OF THE JAPANESE EMPIRE, 1868-1936.

A. SUMMARY OF ESTIMATION PROCEDURES.

B. ESTIMATION PROCEDURE.

C. TABLE I. BALANCE OF PAYMENTS OF THE JAPANESE EMPIRE, 1868-1936.

D. TABLE II. SUMMARY OF BALANCE OF PAYMENTS OF THE JAPANESE EMPIRE, 1868-1936.

A.

SUMMARY OF ESTIMATION PROCEDURE

In the absence of official data or suitable means of directly estimating the capital account, comprehensive estimates of international capital flows can only be obtained from balance of payments data "which take into account the movements in merchandise, bullions and species, services, immigrant remittances and funds and factor incomes, excluding changes in international claims that originate in war reparations and similar sources exogeneous to normal economic intercourse among nations" (Kuznets, 1966: 321).[1] Our estimates which appear in Table I of this appendix represent the first attempt to provide such comprehensive balance of payments data on an annual basis for the whole of the prewar period. Our capital flow estimates were then calculated from this data and appear here in Table II.

The major reason for the previous non-availability of comprchensive series relating to international capital flows for the entire period can be found in the lack of data for the service items. The official statistics released in 1950 presented data for the trade accounts and specie movements from the beginning of the Meiji era, but offered data for the service items only from the year 1902. The recent Tatemoto balance of payments have, by providing data for service items for the period 1868-1901, succeeded in filling the above-mentioned gap in the

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1. This is often referred to more briefly as the indirect method of estimating capital flows: the calculation of the capital items of the balance of payments as the residual of the trade balance, the service balance, including transfers and excluding reparations, and specie movements. For a more detailed discussion of this procedure see (Kuznets, 1961: 118-142).

official statistics.[2] However, mere availability of data does not assure its usability for analytical purposes. This point becomes clear when we realize that these two series were not presented in a homogeneous manner which would enable those interested to have a continuous series for the balances of the merchandise items, the service items or the specie items. Although there are many marked differences in the construction of the accounts of these two series which will be treated in detail in the section on estimating procedures, these may be briefly summarized as follows:

1. The Tatemoto estimates cover the area which falls under Japan Proper while the official statistics cover the area under the Japan Empire.

2. The Tatemoto merchandise trade figures are presented on a FOB basis while the official figures are on a CIF basis.

3. The Tatemoto estimates include figures for the domestic production and consumption of gold while the official statistics do not.

4. The treatment of the service items in the Tatemoto estimates and the official statistics differ with respect to the coverage of transportation expenditures, the treatment of goods and non-goods insurance and freight, the presentation of government spending and the treatment of miscellaneous entries.

Given the above mentioned differences between the two series, the first task which had to be faced was the revision and reorganization of both the Tatemoto and official estimates under a set of accounts which would provide a consistent set of merchandise trade, service items and specie balances for the entire period from which comprehensive capital flow estimates could be calculated. For reasons which will be offered later, I have chosen to adopt a modified form of the IMF convention under which to present the

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2. The Tatemoto estimates (Baba and Tatemoto, 1968) and the official statistics (Okurasho, 1950) may be considered as the basic statistical sources from which our Table I has been derived. For a more detailed explanation concerning the preparation of the Tatemoto estimates the reader is referred to (Tatemoto, 1966) and (Tatemoto, 1967).

continuous series. The results of the revision and reorganization of the two original series can be found in Table I. For those interested, a detailed account of these adjustments will appear in the following section on estimation procedures.

B.

ESTIMATING PROCEDURE

The problems of adjusting the Tatemoto and official series have largely centered about the following: 1. Choosing accounts of similar scope and coverage and 2. providing a homogeneous geographical area of coverage. Concerning the former, the choice of accounts under which to present a linked version of the two series has proved to be an intricate and laborious task due to the fact that the Tatemoto estimates have been presented under a modified version of the IMF convention while the official statistics, for the most part, follow a format different both from the IMF convention as well as the old League of Nations convention. In addition to these major differences of presentation, the linking problem was further complicated by the changing use, over time, of accounts of the official statistics themselves. That is to say, the official statistics themselves are not presented as a continuous series using the same format for the entire period of coverage. Instead, what we find is that the official statistics are presented under a different set of accounts for each of the following periods: 1. 1902-1909, 2. 1910-1913, 3. 1914-1922, 4. 1923-1926 and 5. 1927-1936 (Okurasho, 1950: 44-45). Thus, in the last analysis, we are faced with the task of linking not two, but rather six different series: the Tatemoto estimates plus the five sets of the official statistics.

After considerable reflection and trial and error experimentation, I have felt that this linking could most feasibly and satisfactorily be done under a system of accounts close to the IMF convention (IMF, 1966),

but modified according to the peculiarities of the existing data and the task of linking the Tatemoto estimates with the official statistics. Although these modifications will be made explicit under the individual account headings which follow, it might be appropriate to mention here that in many instances we have chosen to modify the IMF accounts differently than Professor Tatemoto (Baba and Tatemoto, 1968: 183-196). Because the revisions of Table I are presented under the same account headings as the Tatemoto estimates, the two may, at a first glance appear to be identical. However, the reader is cautioned that, in many cases the accounts of Table I differ from those of Tatemoto and considerable revisions have been made in his original estimates.

In contrast to the seeming identity between the accounts of Table I and those of the Tatemoto estimates, little or no such relationship appears to exist between the IMF account headings and those used in the five sets of the official statistics. Thus, the process of adjustment of the official statistics by no means becomes apparent from an examination of the two sets of account headings. I have felt that the simplest and the most explicit way to indicate the procedure followed in adjusting the official accounts to conform with our modified IMF form is first to present the original official accounts in full and then list these same accounts regrouped under the Tatemoto headings. As we have made charts for both the receipts and payments of each of the five official account periods, the reader will find ten such charts from page to . Each chart is in turn divided into two parts: part A indicating the presentation of the original official accounts and part B the IMF accounting headings under which the official accounts are regrouped, prefaced by its

original account number from account A. Wherever the rationale for such regrouping is not obvious, explicit note will appear in the following under the respective account heading. This being the essence of the choice of accounts problem, we turn our attention next to the problem of area of coverage.

The area problem involves a choice between presenting data for Japan proper (Honshu, Shikoku, Kyushu, Hokkaido plus Karafuto), the basis of calculation of Tatemoto estimates, or for the Japan Empire (Japan proper plus colonies), the basis of calculation of the official statistics. That is to say, one of the two series must be adjusted to conform with the other to obtain comparable current transactions figures for the entire prewar period. To present such figures calculated on the basis of Japan proper would be highly desirable in that it would give better comparability with the IITES series also done on the basis of Japan proper.[3] Unfortunately, the lack of any data relating to service items for the colonies makes it extremely difficult to get a series of current account transactions for Japan proper from the official statistics.[4] For this reason, we have had little choice but to settle for adjusting the Tatemoto estimates to conform with the official statistics. It should perhaps be mentioned here that these estimates for Japan Empire which appear in Table I will be used in obtaining indirect estimates for the movement of long and short term capital. If one is more interested in these

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3. We refer here to the thirteen-volume series Estimates of Long-Term Economic Statistics of Japan since 1868 (Choki Keizai Tokei), edited by Professors K. Ohkawa, M. Shinohara and M. Umemura.

4. It should be mentioned here that there are a few authors who claim that the official invisibles estimates used by us have, in fact, been prepared for Japan proper. Both Moulton (Moulton, 1931: 527) and Shibata (Shibata, 1940: 406) subscribe to this view. On the other hand, both Gordon (Gordon, 1940: 909) and the Okurasho (Okurasho, 1950: 43) unequivocally state that the above data for invisibles has been calculated on an empire basis. We will proceed on the assumption that the invisibles estimates of the official statistics have been prepared for Japan Empire.

capital movements as a source, rather than the use of funds, the limitations in working with empire figures should not be great.

The revision of the Tatemoto estimates to an Empire series will involve adjustments only for Taiwan for the years 1896-1901. The other colonies chosen, Karafuto and Nanyo, did not become part of the Japanese Empire until after 1901 and are therefore already accounted for completely by the official statistics. The Tatemoto estimates have been corrected to include Taiwan's merchandise imports and exports from countries other than Japan. A corresponding adjustment has also been made for monetary gold movements in the capital accounts (Department of Finance, 1905: 178-179). However, due to the unavailability of service item data mentioned previously, it has been impossible to adjust any of the Tatemoto service items to include Taiwan. However, for the few years in question this should not introduce any serious error into the estimates, the amounts in all cases being very small.

Before proceeding to the notes to the individual accounts a few general remarks should be made concerning the handling of government transactions in the two series. One of the major differences between the government transactions accounts of the Tatemoto estimates and the official statistics involves the treatment of military imports.[5] Whereas the Tatemoto estimates present these items (with certain exceptions mentioned in the notes to account 1.1) in account 1.a (Baba and Tatemoto, 1968: 186), they are presented in the official statistics together with other government

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5. By military imports we mean four types of finished manufactures used for military purposes: arms, ammunition, explosives and warships. Unfortunately, it was not possible to isolate some items of military investment such as imports for inventory stores and military factories; these remain in account 1.1. It should be noted that no adjustments were required for military exports because these items were negligible in amount during the years covered by the Tatemoto estimates (Oriental Economist, 1935: 455-456).

spending. Due to the lack of any breakdown between military and nonmilitary items in the official accounts for government transactions, it would be impossible to identify and transfer military imports to merchandise account 1.2. Hence we have chosen to insure consistency in the treatment of these items in Table I by placing all imports of these items into account 7. Fortunately, worksheet information made available by Professor Tatemoto provides sufficient information to enable us to transfer the military imports included in Tatemoto accounts 1.1 and 1.2 to Table I, account 7. The explanation for this specific process of transfer can be found in the notes to accounts 1.1 and 1.2. The explanation of the treatment of military imports in the five sets of the official statistics is reserved for the notes to account 7.

1.1 Exports (FOB) and Imports (CIF)

One of our major departures from the IMF convention has been to treat merchandise imports in CIF, not FOB, terms in Table I. Whereas the Tatemoto estimates follow the IMF convention and present FOB imports, the official imports statistics are done in CIF terms. Had it been feasible, we would have also presented imports in FOB terms in Table I, expressing insurance and freight payments separately under their respective categories. Unfortunately, the official statistics do not provide the necessary cost and insurance data, making such an adjustment very difficult. Fortunately, however, the Tatemoto figures for imports can be combined with the data for cost and insurance to get CIF estimates, thus insuring continuity in our series.[6]

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6. For a discussion of the B-T revaluation of imports from gold to silver yen prices the reader is referred to (Baba and Tatemoto, 1968: 183-184) and (Tatemoto, 1967: 90-93).

Concerning exports, the Tatemoto estimates include packing and lighterage fees throughout (Baba and Tatemoto, 1968: 186). The official trade statistics are presented inclusive of packing fees from 1904 and of lighterage fees from 1904 and of lighterage fees from 1913 (Oriental Economist, 1935: 41). Additional information concerning packing is provided in the official invisibles for the period previous to 1904 (see chart 1 a-b). These packing fees have been added to 1.1 for the years concerned to insure consistency in the treatment of this item in Table I. However, no adjustment has been made in the official statistics for the years which include no lighterage fees.

The second adjustment involved the previously mentioned removal of military imports from Tatemoto account 1.1 for the period 1868-1901.[7] Because the data for these military imports included in Tatemoto 1.1 has been taken from The Foreign Trade of Japan (Oriental Economist, 1935: 218-219, 314), further adjustment was required for the years 1874-87 due to the lack of any correction made for price differences between gold and silver yen. Under the assumption that all military imports were from gold standard countries, the figures for military imports given in The Foreign Trade of Japan for the above mentioned years were first corrected to silver yen prices with the help of the Tatemoto conversion ratios (Baba & Tatemoto, 1968: 185) and then subtracted from Tatemoto account 1.1.

The next step, following the removal of military imports from Tatemoto account 1.1, involved the transfer of these items to account 7 of Table I. However, the proper means of transfer was complicated by an instance of the double counting of these items in Tatemoto 1.1 and 1.2 for

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7. This was an adjustment made for arms, ammunition and explosives only; no warship entries were included in the original figures.

the period 1888-1901. The transfer of the military imports included in both Tatemoto 1.1 and 1.2 for the entire period would simply reproduce this double counting in account 7 of Table I. To avoid this, the military imports deducted from Tatemoto 1.1 over the entire period of coverage of the Tatemoto estimates were transferred to account 7 only for the years 1868-1887. During this period the goods included in Tatemoto 1.1 were not double counted in Tatemoto 1.2, thereby making their transfer to 7 necessary. For the period 1888-1901, however, the military imports included in Tatemoto 1.1 were also represented in Tatemoto 1.2. For these years, only the military imports included in Tatemoto 1.2 were transferred to 7 according to the technique described in the notes to account 1.2.

Finally, in conformity with the IMF convention, silver transactions are presented in account 1.1 of Table I except for the years of the bimetallic standard, 1868-96, when they are shown in account 13. Adjustment was made in the Tatemoto estimates to include Taiwan silver transactions in account 13 of Table I for the year 1896 and account 1.1 of Table I for the years 1897-1901. The official merchandise trade statistics include silver throughout and are presented here without revision.

1.2 Other

As mentioned in the notes to account 1.1, most of the military imports for the years 1868-1901 are included in Tatemoto 1.1. We will describe here the process of transfer of these items from Tatemoto 1.2 to account 7 of Table I. What appears in account 1.2 of Table I are largely imports of printed matter and articles for Imperial Household use.

For the years 1868-87 Tatemoto account 1.2 is accounted for

almost completely, but not entirely, by what I have defined as military imports. Although it would have been desirable to remove and transfer only that portion of Tatemoto 1.2 accounted for by military imports, this was not possible due to the difficulty of separating out military imports in the original worksheets from which these accounts were prepared. Instead, I have transferred all of these entries from Tatemoto 1.2 to account 7 of Table I for these years. Although the amounts of nonmilitary imports involved are very small, less than 10% of the total, the amount transferred will be slightly overvalued. As mentioned previously in the notes to account 1.1, certain transfers of military imports were also made from Tatemoto 1.1 to account 7 of Table I.

For the years 1888-1901, the original Tatemoto estimates for military imports are based on the special imports data presented in Nihon Teikoku Tokei Nenkan (Tatemoto, 1966: 5). Here again, most but not all, of the expenditure is for military imports. However, relying on a breakdown of this data given in the Foreign Trade of Japan (Oriental Economist, 1935: 457-460), we are able to make a rough adjustment which will enable us to separate and transfer to account 7 of Table I only the military imports. According to this breakdown, military imports were approximately 98.6% of total special imports over the period 1900-07. For the years 1888-1901, this benchmark percentage of the annual figures for special imports was deducted from Tatemoto account 1.2 and then transferred to account 7. As mentioned in the notes to 1.1, no transfers of military imports were made to account 7 of Table I from Tatemoto 1.1 for the years 1888-1901.

The explanation for the treatment of military imports in the official statistics for the period 1902-1936 is reserved for the notes to account 7.

2. Non-monetary Gold

In accord with the IMF convention, the Tatemoto estimates present under this category figures for the net domestic production and consumption of gold (or any other metal accepted as a standard). The official statistics, on the other hand, do not include this information. Due to the difficulty of locating this information, we have chosen to delete entirely entries in this category. Thus, our current transactions totals will not include any figures for the net production and consumption of gold, and item 2 will therefore appear blank throughout.

3. Foreign Travel

According to the IMF convention, account 3 is normally reserved for the spending, exclusive of travel fare, of tourists, navigators, students and missionaries (IMF, 1966: 82-85). In addition to these items, we have chosen to include in account 3 the travel fare of these groups as well as the expenditure abroad of government offices as the most feasible means of achieving consistency between accounts 3, 4.1 and 4.2 of Table I. The adjustments concerning passenger fares and foreign government spending were made as follows.

According to worksheet information provided by Professor Tatemoto, passenger fare debit entries were included with the foreign spending of the abovementioned groups. Passenger fare credit entries were, however, included in account 4 together with freight receipts. The official statistics likewise presented passenger fare debit entries together with the spending abroad of tourists, navigators, students and missionaries.[8] Passenger fare

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8. Entries for these fares were given separately in the official statistics for the period 1902-09 for both receipts and expenditures. These have been included in account 3 of Table I to insure consistent treatment of these items.

credit items, however, were expressed on the receipts side separately from freight receipts (see charts 1 a-b, 3 a-b, 5 a-b, 7 a-b and 9 a-b). Passenger fare credits were handled as follows in order to insure consistent treatment of this item in Table I.

As the simplest means of insuring a consistent treatment of this item, passenger fares entries will be presented here in account 3. As this was the original form of presentation of the credit items in both series, no further revision was necessary on the expenditure side. Adjustments were necessary, however, to present passenger fare receipts as credit entries in account 3 of Table I. On the basis of unpublished worksheet information provided by Professor Tatemoto, passenger fare receipts were removed from his 4.1 and included in account 3 of Table I. The official accounts were likewise revised to insure a consistent treatment of passenger fare credits in account 3 of Table I.

The final revision made here was to include in account 3 the spending in Japan of foreign governments. According to IMF convention, all government spending, both of the compiling as well as foreign, governments not treated in other accounts is reserved for account 7. However, as explained in greater detail in the notes to that account, Tatemoto account 7 included only spending of the Japanese government while presenting foreign government spending in Japan in account 3.[9] To insure a consistent treatment of this item, the official statistics were likewise revised so as to include foreign government spending in Japan in account 3 of Table I.

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9. It should be mentioned here that the coverage of foreign government spending in the E-T estimates is less complete than that of the official statistics, resulting in an undervaluation of between 10-30% of this account for the years 1868-1901.

4. Transportation

Account 4 is, according to the IMF convention for CIF entries, reserved for transactions involving the transport of goods and gold. In accord with the Tatemoto account headings it is here subdivided into 4.1 (Freight) and 4.2 (Other) with insurance being reserved for account 5. The IMF presentation differs since it includes freight and insurance together in account 3 while presenting other transportation in account 4 (IMF, 1966: 66-77). Except for the treatment of passenger fares, included in Table I in account 3, the abovementioned departures from the IMF convention are only stylistic. Our account 4.1 is the equal of IMF 3.1 while account 4.2 is the equal of IMF 4 (minus passenger fares). Concerning insurance entries our account 5 (insurance) is the equivalent of IMF account 3.2 (see notes to account 5).

4.1 Freight

As mentioned previously, the original Tatemoto estimates followed the IMF convention of presenting merchandise imports in FOB terms. Payments made for freight and insurance are therefore shown separately under Tatemoto 4.1 and 5, respectively. In revising the Tatemoto estimates to CIF terms to insure continuity in Table I, we have transferred the sum of freight and insurance payments to account 1.1. The official statistics have been prepared according to the above convention and are presented here in account 4.1 to insure a consistent treatment of these items. The reader is cautioned that the import CIF entries of Table I will tend to overstate a trade deficit or understate a trade surplus.

4.2 Other

According to the IMF convention, account 4.2 includes such freight related items as charterage, fees for repairs and necessaries, shipping

office expenditures, and port and harbor taxes (IMF, 1966: 78-81). Since the receipts side of Tatemoto 4.2 is presented according to this convention, his original entries are used here without revision. The official statistics have likewise been presented in the 4.2 receipts of Table I to insure consistency in the treatment of these items. Concerning the payments side, however, no estimates are given for these expenditures in Tatemoto account 4.2 while these figures are available in the official statistics. As we have made no attempt to estimate these entries, the expenditures balance in Table I for the years 1868-1901 will be understated by about 3% due to this omission.

5. Insurance

According to the IMF convention (IMF, 1966: 74-77) for insurance on a CIF basis, entries are made in the insurance account in the following manner: 1. Credit items - premiums received plus claims received (with a corresponding adjustment being made in the merchandise trade account) and 2. Debit items - claims paid. Non goods insurance is reserved for account 8 (see notes to account 8).

My revised version of the official statistics are presented in conformity with the IMF convention described above with goods insurance claims payments presented on the receipts side while goods insurance premium payments are included in CIF imports. The sum of receipts of premiums and claims are presented on the receipts side.

The method of recording account entries of the original Tatemoto estimates differs somewhat from that of the IMF convention in that only insurance premiums, calculated as the residual of CIF imports minus cost, minus freight, are presented on the expenditure side of Tatemoto 5. The

insurance receipts data is calculated from the records of Japanese insurance companies and is presented as the net sum of premiums receipts minus claims payments (Tatemoto, 1966: 16). In reality, these claims payments are negligible in all years (Toyokeizai Shimposha, 1929: 245), except for 1900 and 1901. For these two years claims payments have been transferred to the expenditure side of account 5 of Table I to insure a consistent treatment of these items. The other change which has been made in the original Tatemoto 5 has been to transfer the premium expenditures included in his account 5, along with the freight expenditures of his 4.1, to account 1.1 of Table I in order to get CIF estimates for merchandise comparable with those of the official statistics. This will leave only claims payments left on the debt side of our account 5. As mentioned above, these entries begin in 1900.

6. Investment Income

The IMF investment accounts are defined so as to include in account 6.1 the items of branch earnings, dividends and interest which accrue on private direct investment (IMF, 1966: 86-89). Account 6.2 is reserved for that interest (or in some cases dividends) which accrues to public securities. The adjustments made in the Tatemoto estimates and the official statistics to insure the consistent presentation of these items in Table I are described in the notes to 6.1 and 6.2 which follow.

6.1 Direct Investment Income

Tatemoto account 6.1 consists of estimates for branch earnings, but no attempt is made to estimate interest and dividends accruing on

private investment. The official statistics, however, do present this information on interest and dividends. As no attempt has been made here to revise the original Tatemoto estimates to include this information, account 6.1 of Table I will be understated by some 25-33%, for the period 1868-1901.

6.2 Other

Tatemoto account 6.2 has been prepared according to the IMF convention to include interest on public securities (central as well as local government) and is presented here without revision. The accounts of the official statistics are likewise presented in Table I to insure consistency in the treatment of these items.

7. Japanese Government Transactions Not Included Elsewhere

In its treatment of government transactions the Tatemoto estimates differ from the IMF convention in that only the receipts and payments of the government of the compiling country are presented in account 7 (Tatemoto, 1966: 17). The spending of other governments in Japan has, at least partially, been included in Tatemoto account 3. As explained in the notes to account 3, we have revised the official statistics according to the Tatemoto procedure to insure continuity in presentation in Table I. Thus, we will here be treating in account 7 of Table I only Japanese government receipts and payments for such items as embassy maintenance, printing, foreign exhibitions, employment of foreign nationals and military imports. Of these items, further explanation will be only required for the treatment of military imports.

As mentioned in the notes of accounts 1.1 and 1.2, the military

imports previously included in Tatemoto 1.1 and 1.2 appear in Table I in account 7. In revising the five sets of the official statistics to insure a consistent treatment of these items, it is necessary to make certain that military imports are also presented in account 7. In this regard the first question which arises is whether military imports have been included in the original official accounts relating to government transactions. As the government transactions accounts are not consistently broken down by item,[10] one must rely on the opinion of those familiar with the compilation of the official statistics. According to the notes to the official statistics themselves (Okurasho, 1950: 14), as well as the writings of Shibata (Shibata, 1940: 372) and Moulton (Moulton, 1931: 278), Japanese government transactions include military imports. We shall proceed on the assumption that these items are included and that account 7 of Table I consistently includes military imports.[11]

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10. For the period 1914-1932, however, a breakdown of military imports does appear under the government spending accounts of the official statistics (see Chart 6 a-b, account No. 23). It is reassuring that the figures presented here are identical with the corresponding figures of military imports in the Foreign Trade of Japan (Oriental Economist, 1935: 457-459).

11. As a rough check of this assumption we can compare the data on military imports as found in the Foreign Trade of Japan with the entries of government spending found in the five sets of the official statistics. If the total of military imports does not exceed some reasonable fraction, say half, of the government transaction account total, we might not feel uncomfortable in accepting the view of Moulton and Shibata that military imports are included in the government spending accounts. If these proportions are consistently higher than half, we might feel somewhat less comfortable in operating with this assumption. But if, on the other hand, the military imports total in the Foreign Trade of Japan consistently exceeds the total of government transactions account in the official statistics, it would be implausible to operate with this assumption.
The results of our check on the basis of the above test were, with only one real exception, positive. For the entire period of coverage of the official statistics, the proportion of military imports in total government transactions only became uncomfortably high in 1912. In 1913, however, the military imports actually exceeded that of the government transactions account total. Although we cannot at this stage explain this negative result fully, it could well be that for this year a part of the military imports expressed in the Foreign Trade of Japan were included in other accounts, most probably in 1.1.

8. Miscellaneous

Our approach to miscellaneous entries has been to place in account 8 of Table I those items of the official statistics for which no estimates have been made in the Tatemoto estimates. No entries are made in Table I for the years of coverage of the Tatemoto estimates, 1868-1901. For the years of coverage of the official statistics, 1902-36, the entries made in Table I can be accounted for almost entirely by the non goods insurance mentioned in the notes to account 5 and the management fees items which can be seen in Charts 2 a-b, 4 a-b, 6 a-b, 9 a-b, and 10 a-b.[12] These entries are in all cases of small amounts, seldom exceeding 1% of the credit or debit totals.

9.1 Private Donations

The Tatemoto estimates have been prepared in accord with the IMF convention and are presented here without revision (IMF, 1966: 102-104). As shown in Charts 1-10, the entries of the five sets of the official accounts have also been presented here in accord with this convention. In addition to the usual entries for private remittances, the reader should note that the item for earthquake disaster relief of 1924 has been removed from the capital account of the original statistics and placed under transfer account 9.1 to conform with the IMF convention for private transfers.

9.2 Reparations

In accord with the IMF convention, reparations have been included in the current account transactions account 9.2 of the Tatemoto estimates

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12. Non-goods insurance and management fees are also placed in account 8 according to IMF convention (IMF, 1966: 96-100).

and are presented here without revision. As there were no reparations for the years of coverage of the official statistics, account 9.2 will appear blank in Table I after 1902.

9.3 Government

The Tatemoto estimates have been calculated according to the IMF convention and are presented here without revision. As no government donations occurred during the period of coverage of the official statistics, account 9.3 will appear blank in Table I for the years 1902-36.

10. Total

The figures not in parentheses give the current transactions total of accounts 1-9. The figures in parentheses represent the current transactions total excluding the transfer items of reparations (account 9.2) (here this involves the years 1895, 1896 and 1898) which have been excluded from the current transactions account and treated as capital account items for the purposes of our long swing analysis of net capital movements. The current transactions balance total is often the largest item in the indirect measurement of net capital flow. As is clear from the figures, a positive reparations figure tended to cover a negative current transactions balance, thus dampening any long swing in net capital movements that might have appeared. Thus, the figures in parentheses are those we have used for our period balance estimates of net capital movements in TABLES A and B.

11. Long Term Capital

The long term capital figures presented here for the years 1868-1901 are simply a combination of the Tatemoto private and public long term capital (B-T, 1968: 187-192). These long term capital estimates

provide virtually complete coverage for official portfolio movements, but due to lack of data, tend to be rather incomplete in the survey of private portfolio investment as well as all direct investment. In spite of these limitations, we have chosen to present the available long term capital data to provide a rough check of our indirect estimates for net capital movements.

For our long term capital entries for the years 1902-36 we have used the extraordinary invisibles account of the official statistics on the assumption that no short term capital has been included. This assumption can at least be partially checked with the breakdown for extraordinary invisibles given in the Taisho 3 nen Boekigai Seika Shushi Ichiran (Okurasho Rizaikyoku, 1914: 80-81). According to these breakdowns, there appear some short term capital items, such as foreign bank balances, included in the extraordinary invisibles, but these are very small and in only a few cases reach 5% of the total.

The only adjustment made in the long term capital figures of the official statistics has been the transfer mentioned in the notes to 9.1. In our revision the earthquake disaster relief contributions received by Japan in 1924 appear in account 9.1 of Table I.

12. Short Term Capital

Very little attention has been given to estimating short term capital movements in either the Tatemoto estimates or the official statistics. I have therefore chosen to leave the item completely vacant in Table I.[13]

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13. In the forthcoming paper estimates for short term capital figures, including errors and omissions, are presented as the residual of the current transactions balance, minus gold, specie held abroad and long term capital.

13. Monetary Gold

Account 13 of Table I is reserved for the movements of monetary gold except for the years of the bimetallic standard, 1868-96 when silver transactions are also included. The only revision necessary was to add Taiwan gold and silver movements to Tatemoto 13 for the year 1896 and to add Taiwan gold movements to Tatemoto 13 for the years 1897-1901. The official statistics for gold movements were prepared according to the above criteria and are presented here without revision.

It might be useful to add here the following chronology of the gold standard in Japan: 1. 1868-1896 : Bimetallic (gold and silver standard), 2. 1897-1916 : Gold standard, 3. 1918-1929 : Gold embargo, 4. 1930 : Gold standard restored and 5. 1931-World War II : Gold embargo.

CHART 1A. OFFICIAL STATISTICS : 1902 - 1909

Ordinary Invisibles, Receipts

(1) Freight and insurance receipts by domestic carriers and companies

1. Freight on imported goods
2. Freight on exported goods
3. Freight on goods transported among foreign countries
4. Fare of foreign passengers
5. Receipts of Japanese insurance companies for goods insured

(2) Expenditure of foreign vessels and shipping companies in Japan

6. Expenditures for necessaries of foreign ships
7. Expenditures for repairs and docking
8. Expenditures of foreign shipping offices in Japan
9. Tonnage, etc.

(3) Expenditures of foreigners in Japan

10. Expenditures of tourists
11. Expenditures of foreign navigators
12. Expenditures of foreign students
13. Expenditures of missionaries
14. Expenditures of foreign government offices

(4) Income on undertakings abroad

15. Net income on Japanese undertakings abroad
16. Remittances, etc.

(5) Government receipts abroad

17. Government receipts abroad
18. Interest on Chinese national loans

(6) Payments of foreign insurance companies

19. Payments of foreign insurance companies to Japanese residents

(7) Special trade items receipts

20. Packaging and delivery aboard ship of exported goods

21. Profits on finished goods imports

CHART 1B. ADJUSTED SERIES : 1902 - 1909

Ordinary Invisibles, Receipts

1. Merchandise

1.1 Exports fob, Imports cif.

20. Packaging and delivery aboard ship of exported goods

1.2 Other

21. Profits on finished goods imports

2. Nonmonetary gold

3. Foreign travel

10. Expenditures of tourists

11. Expenditures of foreign navigators

12. Expenditures of foreign students

13. Expenditures of missionaries

14. Expenditures of foreign government offices

15. Fare of foreign passengers

4. Transportation

4.1 Freight

1. Freight on imported goods

2. Freight on exported goods

3. Freight on goods transported among foreign countries

4.2 Other

6. Expenditures for necessaries of foreign ships

7. Expenditures for repairs and docking

8. Expenditures of foreign shipping offices in Japan

9. Tonnage, etc.

5. Insurance

5. Receipts of Japanese insurance companies for goods insured

19. Payments of foreign insurance companies to Japanese residents

6. Investment income

6.1 Direct investment

15. Net income on Japanese undertakings abroad

6.2 Interest and Dividends

18. Interest on Chinese national loans

7. Government not included elsewhere

17. Government receipts abroad

8. Miscellaneous services

9. Donations

9.1 Private

16. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 2A. OFFICIAL STATISTICS : 1902 - 1909

Ordinary Invisibles, payments

(1) Freight payments to foreign carriers

1. Fare of Japanese passengers aboard foreign vessels

(2) Expenditures abroad of Japanese vessels and shipping companies

2. Expenditures of branches abroad of Japanese steamship companies

3. Repairing expenses

4. Tonnage, etc.

5. Expenditures for necessaries of Japanese ships abroad

6. Payments to foreign insurance companies for ship insurance

7. Charterage

(3) Expenditures of Japanese abroad

8. Expenditures of tourists abroad

9. Expenditures of Japanese marine navigators

10. Expenditures of Japanese students abroad by private money

11. Expenditures for missionary work

(4) Income on foreign undertaking in Japan

12. Net income on foreign undertakings in Japan

13. Net return on foreign investments in Japan

14. Payments of Japanese fire and life insurance companies

15. Interest on time deposits

16. Remittances

(5) Expenditures abroad of Japanese government and local public establishments

17. Expenditures of Japanese government offices abroad

18. Interest on Japanese national loans

19. Interest on municipal loans

(6) Payments for Japanese undertakings abroad

20. Payments for Japanese undertakings abroad

(7) Special trade item payments

21. Articles for Imperial use

22. Printed matter

CHART 2B. ADJUSTED SERIES : 1902 - 1909

Ordinary Invisibles, Payments

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

21. Articles for Imperial use

22. Printed matter

2. Nonmonetary gold

3. Foreign travel

8. Expenditures of tourists abroad

9. Expenditures of Japanese marine navigators

10. Expenditures of Japanese students abroad by private money

11. Expenditures for missionary work

1. Fare of Japanese passengers aboard foreign vessels

4. Transportation

4.1 Freight

4.2 Other

2. Expenditures of branches abroad of Japanese steamship companies

3. Repairing expenses

4. Tonnage, etc.

5. Expenditures for necessaries of Japanese ships abroad

7. Charterage

5. Insurances

6. Payments to foreign insurance companies for ship insurance

6. Investment income

6.1 Direct investment

12. Net income on foreign undertakings in Japan

13. Net return on foreign investments in Japan

15. Interest on item deposits

6.2 Interest and Dividends

18. Interest on Japanese national loans

19. Interest on municipal loans

7. Government, not included elsewhere

17. Expenditures of Japanese government offices abroad

8. Miscellaneous services

20. Payments on Japanese undertakings abroad

14. Payments of Japanese fire and life insurance companies

9. Donations

9.1 Private

16. Remittances

9.2 Reparations

9.3 Government

CHART 3A. OFFICIAL STATISTICS : 1910 - 1913

Ordinary Invisibles, Receipts

(1) Government receipts abroad

1. Government receipts abroad

(2) Interest receipts on foreign securities

2. Interest on foreign national loans

(3) Freight

3. Freight on imported goods

4. Freight on exported goods

5. Freight on goods transported among foreign countries

6. Fare of foreign passengers

(4) Income related to vessels

7. Expenditures of branches abroad of Japanese shipping companies

8. Expenditures for necessaries of foreign ships

9. Repairing expenses of foreign ships

10. Tonnage dues and pilotage

11. Charterage

(5) Expenditures of foreigners in Japan

12. Expenditures of tourists

13. Expenditures of foreign navigators

14. Expenditures of foreign students

15. Expenditures of missionaries

16. Expenditures of foreign government offices

(6) Income on undertakings abroad

17. Net income on Japanese undertakings abroad

18. Remittances

(7) Income on investments abroad

19. Interest on bank and corporate investments

(8) Insurance

20. Receipts of Japanese marine insurance companies

21. Receipts of Japanese life and fire insurance companies

22. Receipts from foreign insurance companies

(9) Special trade item receipts

23. Private purchases of arms and explosives

24. Invisible exports of ships

CHART 3B. ADJUSTED SERIES : 1910 - 1913

Ordinary Invisibles, Receipts

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

23. Private purchases of arms and explosives

24. Invisible exports of ships

2. Nonmonetary gold

3. Foreign travel

12. Expenditures of tourists

13. Expenditures of foreign navigators

14. Expenditures of foreign students

15. Expenditures of missionaries

16. Expenditures of foreign government offices

6. Fare of foreign passengers

4. Transportation

4.1 Freight

3. Freight on imported goods

4. Freight on exported goods

5. Freight on goods transported among foreign countries

4.2 Other

7. Expenditures of branches abroad of Japanese shipping companies

8. Expenditures for necessaries of foreign ships

9. Repairing expenses of foreign ships

10. Tonnage dues and pilotage

11. Charterage

5. Insurance

20. Receipts of Japanese marine insurance companies

22. Receipts from foreign insurance companies

6. Investment income

6.1 Direct investment

17. Net income on Japanese undertakings abroad

19. Interest on bank and corporate investments

6.2 Interests and Dividends

2. Interest on foreign national loans

7. Government not included elsewhere

1. Government receipts abroad

8. Miscellaneous services

21. Receipts of Japanese life and fire insurance companies

9. Donations

9.1 Private

18. Remittances

9.2 Reparations

9.3 Government

CHART 4A. OFFICIAL STATISTICS : 1910 - 1913

Ordinary Invisibles, Payments

(1) Government payments abroad

1. Government payments abroad

(2) Payments to foreigners of interest on Japanese national loans

2. Interest on Japanese national loans

(3) Freight

3. Freight

(4) Expenditures related to vessels

4. Expenditures of branches abroad of Japanese shipping companies

5. Expenditures for necessaries of Japanese ships abroad

6. Repairing expenses

7. Tonnage dues and landing or loading charges

8. Charterage

(5) Expenditures of Japanese abroad

9. Expenditures of tourists

10. Expenditures of Japanese marine navigators

11. Expenditures of students abroad by private money

12. Expenditures of missionaries

(6) Payments for Japanese undertakings abroad

13. Payments for Japanese undertakings abroad

(7) Income on foreign undertakings in Japan

14. Net income on foreign undertakings in Japan

15. Remittances

(8) Payments to foreigners of interest and dividends on Japanese securities

16. Interest on municipal loans

17. Interest on debentures

18. Interest on other loans

19. Dividends

20. Interest on deposits

(9) Insurance

21. Payments of Japanese marine insurance companies

22. Payments of Japanese life and fire insurance companies

23. Payments to foreign insurance companies

(10) Special trade items payments

24. Arms, ammunitions and explosives

25. Invisible imports of ships

26. Articles for Imperial use

27. Printed matter

CHART 4B. ADJUSTED SERIES : 1910 - 1913

Ordinary Invisibles, Payments

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

24. Arms, ammunitions and explosives

25. Invisible imports of ships

26. Articles for Imperial use

27. Printed matter

2. Nonmonetary gold

3. Foreign travel

9. Expenditures of tourists

10. Expenditures of Japanese marine navigators

11. Expenditures of students abroad by private money

12. Expenditures of missionaries

4. Transportation

4.1 Freight

4.2 Other

4. Expenditures of branches abroad of Japanese shipping companies

5. Expenditures for necessaries of Japanese ships abroad

6. Repairing expenses

7. Tonnage dues and landing or loading charges

8. Charterage

5. Insurance

21. Payments of Japanese marine insurance companies

23. Payments to foreign insurance companies

6. Investment income

6.1 Direct investment

14. Net income on foreign undertakings in Japan

17. Interest on debentures

18. Interest on other loans

19. Dividends

20. Interest on deposits

6.2 Interest and Dividends

2. Interest on Japanese national loans

16. Interest on municipal loans

7. Government, not included elsewhere

1. Government payments abroad

8. Miscellaneous services

13. Payments on Japanese undertakings abroad

22. Payments of Japanese life and fire insurance companies

9. Donations

9.1 Private

15. Remittances

9.2 Reparations

9.3 Government

CHART 5A. OFFICIAL STATISTICS : 1914 - 1922

Ordinary Invisibles, Receipts

(1) Government receipts abroad

1. Government receipts abroad

(2) Interest on foreign securities

2. Interest on foreign national loans

3. Interest on municipal loans and debentures

4. Interest on other foreign shares

(3) Income on undertakings abroad

5. Net income on Japanese undertakings abroad

6. Remittances, etc.

(4) Freight and Charterage

7. Freight on imported goods

8. Freight on exported goods

9. Freight on goods transported among foreign countries

10. Fare of foreign passengers

11. Charterage

(5) Expenditures of foreign vessels in Japan

12. Expenditures for necessaries of foreign ships

13. Repairing expenses of foreign ships

14. Tonnage dues and pilotage

(6) Insurance

15. Receipts of Japanese marine insurance companies

16. Receipts of Japanese life and fire insurance companies

17. Receipts from foreign insurance companies

(7) Expenditures of foreigners in Japan

18. Expenditures of tourists

19. Expenditures of foreign navigators

20. Expenditures of foreign students

21. Expenditures of foreign missionaries

22. Expenditures of foreign government offices

(8) Special trade item receipts

23. Private purchases of arms and explosives

24. Invisible exports of ships

25. Invisible exports of marine products

CHART 5B. ADJUSTED SERIES : 1914 - 1922

Ordinary Invisibles, Receipts

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

23. Private purchases of arms and explosives

24. Invisible exports of ships

25. Invisible exports of marine products

2. Nonmonetary gold

3. Foreign travel

18. Expenditures of tourists

19. Expenditures of foreign navigators

20. Expenditures of foreign students

21. Expenditures of missionaries

22. Expenditures of foreign government offices

10. Fare of foreign passengers

4. Transportation

4.1 Freight

7. Freight on imported goods

8. Freight on exported goods

9. Freight on goods transported among foreign countries

4.2 Other

11. Charterage

12. Expenditures for necessities of foreign ships

13. Repairing expenses of foreign ships

14. Tonnage dues and pilotage

5. Insurance

15. Receipts of Japanese marine insurance companies

17. Receipts from foreign insurance companies

6. Investment income

6.1 Direct investment

5. Net income on Japanese undertakings abroad

4. Interest on other foreign shares

6.2 Interest and Dividends

2. Interest on foreign national loans

3. Interest on municipal loans and debentures

7. Government not included elsewhere

1. Government receipts abroad

8. Miscellaneous services

16. Receipts of Japanese life and fire insurance companies

9. Donations

9.1 Private

6. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 6A. OFFICIAL STATISTICS : 1914 - 1922

Ordinary Invisibles, Payments

(1) Government payments abroad

1. Government payments abroad
2. Interest on Japanese national loans

(2) Payments to foreigners of interests and dividends on Japanese securities

3. Interest on Japanese municipal loans
4. Interest on Japanese debentures
5. Interest on other loans
6. Dividends
7. Interest on deposits

(3) Income on foreign undertakings in Japan

8. Net income of foreign undertakings in Japan
9. Remittances, etc.

(4) Freight, etc.

10. Expenditures of branches abroad of Japanese shipping companies
11. Expenditures for necessaries of Japanese ships abroad
12. Repairing expenses
13. Tonnage dues and landing or loading charges
14. Charterage

(5) Insurance

15. Payments of Japanese marine insurance companies
16. Payments of Japanese life and fire insurance companies
17. Payments to foreign insurance companies
18. Expenditures of branches abroad of Japanese insurance companies

(6) Expenditures of Japanese abroad

19. Expenditures of tourists abroad

20. Expenditures of Japanese marine navigators

21. Expenditures of students abroad by private money

22. Miscellaneous expenditures of Japanese abroad

(7) Special trade item payments

23. Arms, ammunitions and explosives

24. Articles for Imperial use

25. Printed matter

26. Invisible imports of ships

CHART 6B. ADJUSTED SERIES : 1914 - 1922

Ordinary Invisibles, Payments

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

24. Articles for Imperial use

25. Printed matter

26. Invisible imports of ships

2. Nonmonetary gold

3. Foreign travel

19. Expenditures of tourists abroad

20. Expenditures of Japanese navigators

21. Expenditures of students abroad by private money

22. Miscellaneous expenditures of Japanese abroad

4. Transportation

4.1 Freight

4.2 Other

10. Expenditures of branches abroad of Japanese shipping companies

11. Expenditures for necessaries of Japanese ships abroad

12. Repairing expenses

13. Tonnage dues and landing or loading charges

14. Charterage

5. Insurance

15. Payments of Japanese marine insurance companies

17. Payments to foreign insurance companies

6. Investment income

6.1 Direct investment

8. Net income of foreign undertakings in Japan

4. Interest on Japanese debentures

5. Interest on other loans

6. Dividends

7. Interest on deposits

6.2 Interest and Dividends

2. Interest on Japanese national loans

3. Interest on Japanese municipal loans

7. Government, not included elsewhere

1. Government payments abroad

23. Arms, ammunitions and explosives

8. Miscellaneous

16. Payments of Japanese life and fire insurance companies

18. Expenditures of branches abroad of Japanese insurance companies

9. Donations

9.1 Private

9. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 7A. OFFICIAL STATISTICS : 1923 - 1926

Ordinary Invisibles, Receipts

(1) Interest and dividends on foreign securities

1. Interest on foreign national loans
2. Interest on foreign municipal loans and debentures
3. Dividends on foreign shares and interest on deposits

(2) Income on undertakings and services abroad

4. Net incomes on Japanese undertakings abroad
5. Remittances, etc.

(3) Freight, etc.

6. Freight on imported goods
7. Freight on exported goods
8. Freight on goods transported among foreign countries
9. Fare of foreign passengers
10. Charterage
11. Expenditures for necessaries of foreign ships
12. Repairing expenses of foreign ships
13. Tonnage and pilotage

(4) Insurance

14. Receipts of Japanese marine insurance companies
15. Receipts of Japanese life and fire insurance companies
16. Receipts from foreign insurance companies

(5) Expenditures of foreigners in Japan

17. Expenditures of tourists
18. Expenditures of foreign navigators
19. Expenditures of foreign students
20. Expenditures of missionaries

21. Expenditures of foreign government offices

(6) Government receipts abroad

22. Government receipts abroad

(7) Miscellaneous

23. Invisible exports of ships

24. Invisible exports of marine products

CHART 7B. ADJUSTED SERIES : 1923 - 1926

Ordinary Invisibles, Receipts

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

23. Invisible exports of ships

24. Invisible exports of marine products

2. Nonmonetary gold

3. Foreign travel

17. Expenditures of tourists

18. Expenditures of tourists

19. Expenditures of foreign students

20. Expenditures of missionaries

21. Expenditures of foreign government offices

9. Fare of foreign passengers

4. Transportation

4.1 Freight

6. Freight on imported goods

7. Freight on exported goods

8. Freight on goods transported among foreign countries

4.2 Other

10. Charterage

11. Expenditures for necessaries of foreign ships

12. Repairing expenses of foreign ships

13. Tonnage and pilotage

5. Insurance

14. Receipts of Japanese marine insurance companies

16. Receipts from foreign insurance companies

6. Investment income

6.1 Direct investment

3. Dividends on foreign shares and interest on deposits

4. Net income on Japanese undertakings abroad

6.2 Interest and Dividends

1. Interest on foreign national loans

2. Interest on foreign municipal loans and debentures

7. Government not included elsewhere

22. Government receipts abroad

8. Miscellaneous services

15. Receipts of Japanese life and fire insurance companies

9. Donations

9.1 Private

5. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 8A. OFFICIAL SERIES : 1923 - 1926

Ordinary Invisibles, Payments

(1) Payments to foreigners of interest and dividends on Japanese securities

1. Interest on Japanese national loans
2. Interest on Japanese municipal loans
3. Interest on Japanese debentures
4. Interest on other loans
5. Dividends, etc.
6. Interest on deposits

(2) Income on foreign undertakings and services in Japan

7. Net income of foreign undertakings in Japan
8. Remittances, etc.

(3) Freight, etc.

9. Expenditures of branches abroad and services in Japan
10. Charterage
11. Expenditures for necessaries of Japanese ships abroad
12. Repairing expenses
13. Tonnage dues and landing or loading charges

(4) Insurance

14. Payments of Japanese marine insurance companies
15. Payments of Japanese life and fire insurance companies
16. Payments to foreign insurance companies

(5) Expenditures of Japanese abroad

17. Expenditures of tourists abroad
18. Expenditures of Japanese marine navigators
19. Expenditures of students abroad by private money
20. Miscellaneous expenditures of Japanese abroad

(6) Government payments abroad

21. Government payments abroad

(7) Miscellaneous

22. Articles for Imperial use

23. Printed matter

24. Invisible imports of ships

25. Rent on fishing grounds

CHART 8B. ADJUSTED SERIES : 1923 - 1926

Ordinary Invisibles, Payments

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

22. Articles for Imperial use

23. Printed matter

24. Invisible imports of ships

2. Nonmonetary gold

3. Foreign travel

17. Expenditures of tourists abroad

18. Expenditures of Japanese marine navigators

19. Expenditures of students abroad by private money

20. Miscellaneous expenditures of Japanese abroad

4. Transportation

4.1 Freight

4.2 Other

9. Expenditures of branches abroad of Japanese shipping companies

10. Charterage

11. Expenditures for necessaries of Japanese ships abroad

12. Repairing expenses

13. Tonnage dues and landing or loading charges

5. Insurance

14. Payments of Japanese marine insurance companies

16. Payments to foreign insurance companies

6. Investment income

6.1 Direct investment

7. Net income of foreign undertakings in Japan

3. Interest on Japanese debentures

4. Interest on other loans

5. Dividends, etc.

6. Interest on deposits

6.2 Interest and dividends

1. Interest on Japanese national loans

2. Interest on Japanese municipal loans

7. Government, not included elsewhere

21. Government payments abroad

8. Miscellaneous services

25. Rent on fishing grounds

15. Payments of Japanese fire and life insurance companies

9. Donations

9.1 Private

8. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 9A. OFFICIAL STATISTICS : 1927 - 1936

Ordinary Invisibles, Receipts

(1) Interest and dividends on foreign securities

1. Interest on foreign national loans
2. Interest on foreign municipal loans
3. Interest on foreign debentures
4. Dividends on foreign shares
5. Interest on other foreign loans
6. Interest on foreign deposits

(2) Income on undertakings and services abroad

7. Net income on Japanese undertakings abroad
8. Remittances, etc.

(3) Freight, etc.

9. Freight on imported goods
10. Freight on exported goods
11. Freight on goods transported among foreign countries
12. Fare of foreign passengers
13. Charterage
14. Miscellaneous receipts by shipping companies
15. Expenditures for necessaries of foreign ships
16. Repairing expenses of foreign ships
17. Tonnage dues and pilotage

(4) Insurance

18. Receipts of Japanese insurance companies against loss or damage
19. Receipts of Japanese life insurance companies
20. Receipts from foreign insurance companies

(5) Expenditures of foreigners in Japan

21. Expenditures of tourists

22. Expenditures of foreign navigators

23. Expenditures of foreign students

24. Expenditures of missionaries

25. Expenditures of foreign government offices

(6) Government receipts abroad, not included elsewhere

26. Government receipts abroad

(7) Miscellaneous

27. Invisible exports of ships

28. Invisible exports of marine products

29. Patents and licence receipts

30. Real estate sales

31. Miscellaneous

CHART 9B. ADJUSTED SERIES : 1927 - 1936

Ordinary Invisibles, Receipts

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

27. Invisible exports of ships

28. Invisible exports of marine products

2. Nonmonetary gold

3. Foreign travel

21. Expenditures of tourists

22. Expenditures of foreign navigators

23. Expenditures of foreign students

24. Expenditures of missionaries

25. Expenditures of foreign government offices

12. Fare of foreign passengers

4. Transportation

4.1 Freight

9. Freight on imported goods

10. Freight on exported goods

11. Freight on goods transported among foreign countries

4.2 Other

13. Charterage

14. Miscellaneous receipts by shipping companies

15. Expenditures for necessaries of foreign ships

16. Repairing expenses of foreign ships

17. Tonnage dues and pilotage

5. Insurance

18. Receipts of Japanese insurance companies against loss or damage

20. Receipts from foreign insurance companies

6. Investment income

6.1 Direct investment

7. Net income on Japanese undertakings abroad

3. Interest on foreign debentures

4. Dividends on foreign shares

5. Interest on other foreign loans

6. Interest on foreign deposits

6.2 Interest and Dividends

1. Interest on foreign national loans

2. Interest on foreign municipal loans

7. Government, not included elsewhere

26. Government receipts abroad

8. Miscellaneous services

29. Patents and licence receipts

30. Real estate sales

31. Miscellaneous

19. Receipts of Japanese life insurance companies

9. Donations

9.1 Private

8. Remittances, etc.

9.2 Reparations

9.3 Government

CHART 10A. OFFICIAL STATISTICS : 1927 - 1936

Ordinary Invisibles, Payments

(1) Payments to foreigners of interest and dividends on Japanese securities

1. Interest on Japanese national loans
2. Interest on Japanese municipal loans
3. Interest on Japanese debentures
4. Dividends, etc.
5. Interest on other loans
6. Interest on deposits

(2) Income on foreign undertakings and services in Japan

7. Net income of foreign undertakings in Japan
8. Remittances, etc.

(3) Freight, etc.

9. Charterage
10. Expenditures of branches abroad of Japanese shipping companies
11. Expenditures for necessaries of Japanese ships abroad
12. Repairing expenses
13. Tonnage dues and landing or loading charges
14. Miscellaneous expenditures by shipping companies

(4) Insurance

15. Payments of loss or damage of Japanese insurance companies
16. Payments of Japanese life insurance companies
17. Payments to foreign life insurance companies in Japan

(5) Expenditures of Japanese abroad

18. Expenditures of tourists abroad
19. Expenditures of Japanese marine navigators
20. Expenditures of students abroad
21. Miscellaneous expenditures of Japanese abroad

22. Expenditures of Japanese government offices abroad

(6) Government payments abroad, not included elsewhere

23. Government payments abroad

(7) Miscellaneous

24. Invisible imports of ships

25. Rent on fishing grounds

26. Patents and licences payments

27. Real estate purchases

28. Miscellaneous

CHART 10B. ADJUSTED SERIES : 1927 - 1936

Ordinary Invisibles, Payments

1. Merchandise

1.1 Exports fob, Imports cif.

1.2 Other

24. Invisible imports of ships

2. Nonmonetary gold

3. Foreign travel

18. Expenditures of tourists abroad

19. Expenditures of Japanese marine navigators

20. Expenditures of students abroad

21. Miscellaneous expenditures of Japanese abroad

4. Transportation

4.1 Freight

4.2 Other

9. Charterage

10. Expenditures of branches abroad of Japanese shipping companies

11. Expenditures for necessaries of Japanese ships abroad

12. Repairing expenses

13. Tonnage dues and landing or loading charges

14. Miscellaneous expenditures by shipping companies

5. Insurance

15. Payments of loss or damage of Japanese insurance companies

17. Payments to foreign life insurance companies in Japan

6. Investment income

6.1 Direct investment

7. Net income of foreign undertakings in Japan

3. Interest on Japanese debentures

4. Dividends, etc.

5. Interest on other loans

6. Interest on deposits

6.2 Interest and dividends

1. Interest on Japanese national loans

2. Interest on Japanese municipal loans

7. Government, not included elsewhere

22. Expenditure of Japanese government offices abroad

23. Government payments abroad

8. Miscellaneous services

25. Rent on fishing grounds

26. Patents and licences payments

27. Real estate purchases

28. Miscellaneous

16. Payments of Japanese life insurance companies

9. Donations

9.1 Private

8. Remittances

9.2 Reparations

9.3 Government

C.

Table I. BALANCE OF PAYMENTS OF JAPAN EMPIRE, 1868-1936*

(Unit: ¥ 1 million)

	1868		1869		1870		1871	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	15.9	11.3	13.2	23.9	14.8	39.9	18.3	25.8
1.2 Other								
2. Nonmonetary gold								
3. Foreign travel	.4		.3	.1	.4	.2	.5	.6
4. Transportation								
4.1 Freight								
4.2 Other								
5. Insurance								
6. Investment income								
6.1 Direct investment income		.4		.8		1.3		.9
6.2 Other				.1		.3		.4
7. Gov't, not incld elsewhere	.6	1.5	.5	1.2	.6	2.1	.8	1.0
8. Miscellaneous services								
9. Donations								
9.1 Private				.6		.6		.6
9.2 Reparations		.1		.1				
9.3 Government								
10. Total, incld reparations	16.9	13.3	14.0	26.8	15.8	44.4	19.6	29.3
(excld reparations)								
Capital Transaction								
11. Long-term capital	.9	.5		.4	4.9	.9		.2
12. Short-term capital								
13. Monetary gold								
14. Total								

	1872		1873		1874		1875	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	17.4	30.9	22.1	34.0	19.7	29.1	19.0	35.5
1.2 Other								
2. Nonmonetary gold								
3. Foreign travel	.4	1.0	.5	.1	.6	.1	.7	.1
4. Transportation								
4.1 Freight							.1	
4.2 Other								
5. Insurance								
6. Investment income								
6.1 Direct investment income		1.0		1.1		1.0		1.2
6.2 Other		.4		.9		1.2		1.2
7. Gov't, not incld elsewhere	.6	1.6	.8	2.6	.8	8.0	.8	7.7
8. Miscellaneous services								
9. Donations								
9.1 Private		.6		.6		.6		.6
9.2 Reparations						1.5	.8	
9.3 Government								
10. Total, incld reparations	18.4	35.5	23.4	39.3	21.1	41.5	21.4	46.3
(excld reparations)								
Capital Transaction								
11. Long-term capital		3.1	11.7	.6		.5		.7
12. Short-term capital								
13. Monetary gold	4.5	3.7	5.1	3.0	14.0	1.1	15.5	.3
14. Total								

	1876		1877		1878		1879	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	28.3	31.1	23.8	34.8	26.5	43.5	28.8	43.7
1.2 Other								
2. Nonmonetary gold								
3. Foreign travel	.7	.3	.5	.3	.6	.2	.6	.3
4. Transportation								
4.1 Freight	.1		.2		.2		.3	
4.2 Other								
5. Insurance								
6. Investment income								
6.1 Direct investment income		1.0		1.2		1.4		1.7
6.2 Other		1.1		1.1		1.1		1.1
7. Gov't, not incld elsewhere	.9	3.9	.9	3.9	.9	3.1	1.0	2.7
8. Miscellaneous services								
9. Donations								
9.1 Private		.6		.5		.6		.7
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	30.0	38.0	25.4	41.8	28.2	50.0	30.7	50.2
(excld reparations)								
Capital Transaction								
11. Long-term capital		.7		.8		.8		.9
12. Short-term capital								
13. Monetary gold	11.6	8.4	10.2	2.2	9.1	2.2	13.7	3.3
14. Total								

	1880		1881		1882		1883	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	29.0	48.6	31.7	41.2	38.5	38.1	37.0	36.7
1.2 Other								
2. Nonmonetary gold								
3. Foreign travel	.9	.3	1.0	.3	1.1	.3	.9	.3
4. Transportation								
4.1 Freight	.4		.5		.6		.7	
4.2 Other								
5. Insurance	.1		.1		.1		.1	
6. Investment income								
6.1 Direct investment income	.1	2.0	.2	2.6	.2	2.4	.2	2.2
6.2 Other		1.0		1.2		.8		.7
7. Gov't, not incld elsewhere	1.0	2.3	1.1	2.5	1.4	2.2	1.4	3.7
8. Miscellaneous services								
9. Donations								
9.1 Private	.8	.9	1.1	1.1	1.8	1.0	1.0	.9
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	32.3	56.1	35.7	48.9	43.7	44.8	42.2	44.5
(excld reparations)								
Capital Transaction								
11. Long-term capital		1.0		1.3		1.0		.5
12. Short-term capital								
13. Monetary gold	14.4	3.6	7.9	1.9	4.7	6.2	3.4	5.5
14. Total								

	1884		1885		1886		1887	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	34.6	37.2	37.9	37.0	50.0	41.0	53.5	58.7
1.2 Other								
2. Nonmonetary gold								
3. Foreign travel	1.1	.7	1.3	.6	1.9	.6	2.0	.7
4. Transportation								
4.1 Freight	.6		.8		.9		1.3	
4.2 Other								
5. Insurance	.1		.1		.1		.1	
6. Investment income								
6.1 Direct investment income	.3	1.6	.7	1.6	.5	1.5	.6	1.6
6.2 Other		.7		.7		.7		.7
7. Gov't, not incld elsewhere	1.3	5.9	1.4	5.5	1.1	5.0	1.6	5.4
8. Miscellaneous services								
9. Donations								
9.1 Private	.9	.7	1.2	.7	1.3	.6	1.7	.7
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	38.9	46.8	43.4	46.2	55.8	49.4	60.8	67.8
(excld reparations)								
Capital Transaction								
11. Long-term capital		.5		.5		.6		.7
12. Short-term capital								
13. Monetary gold	5.3	5.7	4.4	7.7	9.7	9.5	11.0	9.2
14. Total								

	1888		1889		1890		1891	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	67.1	74.0	71.5	73.0	57.8	91.1	81.2	69.4
1.2 Other		.1						
2. Nonmonetary gold								
3. Foreign travel	2.4	.8	2.4	.8	2.9	.7	2.8	.9
4. Transportation								
4.1 Freight	1.2		1.4		1.2		1.6	
4.2 Other	.1		.1		.1		.1	
5. Insurance	.1		.1		.1		.4	
6. Investment income								
6.1 Direct investment income	.7	1.9	.5	2.1	.4	2.7	.5	2.4
6.2 Other		.7		.6		.5		.5
7. Gov't, not incld elsewhere	2.1	1.9	1.9	1.8	1.6	1.7	2.3	2.5
8. Miscellaneous services								
9. Donations								
9.1 Private	2.3	.8	2.1	.9	3.2	1.1	4.1	1.0
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	76.0	80.2	80.2	79.2	67.9	97.8	93.0	76.8
(excld reparations)								
Capital Transaction								
11. Long-term capital		.7		.8		.8		.8
12. Short-term capital								
13. Monetary gold	7.8	8.7	5.2	14.2	13.8	1.2	1.5	13.9
14. Total								

	1892		1893		1894		1895	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	93.0	78.1	91.6	98.3	115.6	131.6	138.9	141.7
1.2 Other		.1				.1		.2
2. Nonmonetary gold								
3. Foreign travel	3.1	.8	3.7	.9	4.6	.9	5.6	1.3
4. Transportation								
4.1 Freight	1.8		1.4		1.2		.6	
4.2 Other	.1		.7		.5		1.4	
5. Insurance	.7		.5		.2		.2	
6. Investment income								
6.1 Direct investment income	.7	2.6	.5	2.4	.6	1.5	.6	2.3
6.2 Other		.4		.4		.4		.3
7. Gov't, not incld elsewhere	2.3	5.8	1.9	2.2	2.4	5.7	2.4	10.7
8. Miscellaneous services								
9. Donations								
9.1 Private	5.2	1.1	5.1	1.0	5.4	.6	6.5	1.0
9.2 Reparations							119.0	
9.3 Government								
10. Total, incld reparations	106.9	88.9	105.4	105.2	130.5	141.0	275.2	157.6
(excld reparations)							(156.2)	
Capital Transaction								
11. Long-term capital		1.0		1.2		1.6		1.9
12. Short-term capital								
13. Monetary gold	9.7	22.9	12.3	11.2	34.4	26.8	27.3	5.9
14. Total								

	1896		1897		1898		1899	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	131.9	197.3	190.5	266.6	225.1	339.4	235.6	238.3
1.2 Other		.2		.8		.9		.2
2. Nonmonetary gold								
3. Foreign travel	6.9	1.6	7.8	1.8	7.2	2.5	7.1	3.8
4. Transportation								
4.1 Freight	2.7		5.5		10.3		12.7	
4.2 Other	1.9		2.0		2.5		3.4	
5. Insurance	.2		.6		.3		.4	
6. Investment income								
6.1 Direct investment income	.8	2.8	2.1	3.5	1.6	4.1	3.1	4.1
6.2 Other	.1	.2	.5		2.8		.9	2.0
7. Gov't, not incld elsewhere	2.0	9.9	2.8	43.4	2.4	48.3	1.2	10.6
8. Miscellaneous services								
9. Donations								
9.1 Private	8.4	1.2	10.0	1.5	13.0	1.7	18.3	1.8
9.2 Reparations	84.5		35.0		119.1			
9.3 Government								
10. Total, incld reparations	239.4	213.1	256.8	327.6	384.3	396.9	282.7	260.8
(excld reparations)	(154.9)		(221.8)		(265.2)			
Capital Transaction								
11. Long-term capital		1.8	43.0	.5			97.9	
12. Short-term capital								
13. Monetary gold	11.8	44.5	8.9	64.3	46.3	37.0	8.8	20.1
14. Total								

	1900		1901		1902		1903	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	227.1	304.8	270.0	269.9	279.8	288.2	309.7	332.1
1.2 Other		.5		.5	.1	.3	.3	.1
2. Nonmonetary gold								
3. Foreign travel	18.7	3.5	20.4	2.9	26.5	5.9	30.0	9.0
4. Transportation								
4.1 Freight	15.9		14.6		15.1		14.7	
4.2 Other	5.1		5.4		11.7	9.0	12.8	8.3
5. Insurance	3.5	3.4	2.1	1.3	1.0	1.0	1.1	.8
6. Investment income								
6.1 Direct investment income	1.5	4.8	1.9	4.9	3.8	3.0	3.9	3.2
6.2 Other	.7	3.9	.5	3.9		6.7		7.9
7. Gov't, not incld elsewhere	.3	28.2		28.3	.6	10.4	.6	27.6
8. Miscellaneous services						.6		.6
9. Donations								
9.1 Private	24.6	2.0	12.2	2.1	12.0	2.1	10.4	2.2
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	297.4	351.1	327.1	313.8	350.7	326.9	383.5	391.6
(excld reparations)								
Capital Transaction								
11. Long-term capital					15.2		33.5	
12. Short-term capital								
13. Monetary gold	11.5	9.0	11.5	10.7	.5	30.2	16.7	25.4
14. Total								

	1904		1905		1906		1907	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	334.6	412.8	335.0	511.3	438.5	441.7	442.5	507.3
1.2 Other	.4	.4	.2	.1	1.7	.1		.2
2. Nonmonetary gold								
3. Foreign travel	24.9	8.5	29.4	5.8	46.1	5.9	48.4	10.6
4. Transportation								
4.1 Freight	8.6		8.6		10.8		20.4	
4.2 Other	11.2	10.6	12.4	8.8	21.6	7.5	18.3	12.8
5. Insurance	1.8	0.7	2.0	.7	2.5	.7	2.9	.8
6. Investment income								
6.1 Direct investment income	6.0	3.6	11.6	4.1	9.8	6.5	15.1	7.1
6.2 Other		15.3		33.3		71.9		58.5
7. Gov't, not incld elsewhere	.7	100.2	1.8	179.9	8.1	42.3	59.4	26.1
8. Miscellaneous services		2.4		2.8		3.1		5.8
9. Donations								
9.1 Private	12.0	2.1	12.7	2.4	13.4	2.6	23.2	2.9
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	400.2	556.6	413.8	749.2	552.5	582.4	630.2	631.1
(excld reparations)								
Capital Transaction								
11. Long-term capital	104.9	3.0	592.1		267.1	135.9	177.6	152.3
12. Short-term capital								
13. Monetary gold	106.0	5.6	14.8	20.2	23.0	37.0	18.7	7.0
14. Total								

	1908		1909		1910		1911	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	387.7	456.7	425.1	407.6	474.6	487.8	468.8	554.7
1.2 Other		.1		.1		.2		.2
2. Nonmonetary gold								
3. Foreign travel	41.9	11.8	37.7	8.8	19.6	8.9	18.7	6.3
4. Transportation								
4.1 Freight	21.5		21.1		20.1		22.2	
4.2 Other	18.0	12.8	13.6	12.8	14.6	12.7	14.7	12.9
5. Insurance	2.6	0.7	2.4	0.8	3.4	6.1	3.2	6.4
6. Investment income								
6.1 Direct investment income	13.7	9.8	19.9	11.3	19.1	12.1	18.9	14.0
6.2 Other		61.3		63.7		67.8		70.4
7. Gov't, not incld elsewhere	9.0	21.0	7.0	18.7	7.6	18.3	17.5	16.2
8. Miscellaneous services		15.4		8.8		9.7		10.5
9. Donations								
9.1 Private	27.8	3.0	23.7	2.8	24.4	3.1	23.8	2.7
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	522.2	592.6	550.5	535.4	583.4	626.7	587.8	694.3
(excld reparations)								
Capital Transaction								
11. Long-term capital	72.3	5.0	149.7	17.0	223.9	106.4	74.6	63.0
12. Short-term capital								
13. Monetary gold	3.7	16.9	6.4	78.8	22.6	17.5	21.8	4.9
14. Total								

	1912		1913		1914		1915	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	554.7	666.0	657.7	779.2	614.2	635.6	737.2	563.8
1.2 Other		.2		.2				
2. Nonmonetary gold								
3. Foreign travel	22.3	7.0	23.4	8.8	21.8	14.9	26.8	11.1
4. Transportation								
4.1 Freight	27.4		35.7		37.5		54.0	
4.2 Other	15.1	13.7	17.0	17.9	11.8	16.1	8.0	20.3
5. Insurance	3.8	5.9	5.7	6.9	6.3	7.2	14.1	14.2
6. Investment income								
6.1 Direct investment income	22.1	13.3	24.7	15.4	23.1	82.4	26.4	82.2
6.2 Other		74.4	1.0	77.1	.4	8.9	.8	8.9
7. Gov't, not incld elsewhere	14.3	19.0	12.1	22.2	18.7	15.4	71.5	15.3
8. Miscellaneous services		19.8		7.7				
9. Donations								
9.1 Private	26.4	3.0	29.0	3.4	24.6	5.7	22.3	2.7
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	686.1	822.3	806.5	938.8	758.4	786.4	961.1	718.7
(excld reparations)								
Capital Transaction								
11. Long-term capital	105.6	28.7	147.9	29.4	43.3	48.0	30.8	95.2
12. Short-term capital								
13. Monetary gold	21.2	10.4	20.7	1.0	26.0	7.1	40.7	24.3
14. Total								

	1916		1917		1918		1919	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	1180.7	795.8	1666.6	1093.6	2014.2	1749.1	2160.2	2337.5
1.2 Other	18.4	5.7	40.4	0.2	17.8	0.4	65.1	.6
2. Nonmonetary gold								
3. Foreign travel	34.9	10.5	45.1	16.2	48.8	22.8	65.1	35.5
4. Transportation								
4.1 Freight	168.5		285.6		483.6		423.5	
4.2 Other	9.5	27.4	12.6	33.8	10.8	50.8	18.5	74.7
5. Insurance	19.1	17.7	39.8	57.0	102.0	88.8	88.5	74.2
6. Investment income								
6.1 Direct investment income	34.4	71.5	53.8	75.3	70.1	75.4	78.8	83.7
6.2 Other	15.0	8.6	32.4	8.6	38.8	7.5	48.4	5.6
7. Gov't, not incld elsewhere	101.6	18.2	80.5	22.2	63.6	57.2	52.2	117.3
8. Miscellaneous services	2.0	2.0	4.2	4.4	8.1	10.2	12.7	16.6
9. Donations								
9.1 Private	37.6	2.2	40.4	1.7	51.7	2.2	64.4	2.4
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	1621.7	959.6	2301.4	1312.9	2909.5	2066.4	3075.4	2748.1
(excld reparations)								
Capital Transaction								
11. Long-term capital	12.4	450.3	50.5	395.2	58.1	578.7	297.0	334.6
12. Short-term capital								
13. Monetary gold	22.4	101.0	150.7	387.0	0.9	0.9	1.5	325.8
14. Total								

	1920		1921		1922		1923	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	2015.1	2515.2	1297.3	1739.3	1687.7	2023.8	1502.5	2119.9
1.2 Other	66.7	.6		.7	5.1	.8	12.6	.7
2. Nonmonetary gold								
3. Foreign travel	74.3	28.7	53.1	26.9	54.5	28.3	49.0	27.1
4. Transportation								
4.1 Freight	318.9		185.5		133.3		124.4	
4.2 Other	29.9	100.5	16.2	76.8	23.6	61.9	27.2	60.1
5. Insurance	87.3	74.8	55.5	53.4	48.6	40.5	47.9	39.0
6. Investment income								
6.1 Direct investment income	71.2	84.8	54.0	80.0	68.1	62.5	72.8	11.9
6.2 Other	35.6	4.6	35.5	4.4	16.1	5.0	15.0	57.2
7. Gov't, not incld elsewhere	65.0	93.0	68.6	94.7	51.7	91.8	31.9	62.4
8. Miscellaneous services	18.5	26.2	26.7	25.5	28.0	31.4	27.7	29.6
9. Donations								
9.1 Private	69.7	3.2	67.2	4.4	50.8	3.1	52.3	3.1
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	2852.2	2931.6	1859.6	2105.8	2167.5	2349.1	2963.3	2411.0
(excld reparations)								
Capital Transaction								
11. Long-term capital	526.4	752.7	675.7	748.0	291.6	419.8	493.1	278.4
12. Short-term capital								
13. Monetary gold		407.5		132.5		1.1	.3	.1
14. Total								

	1924		1925		1926		1927	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	1872.0	2601.7	2378.1	2734.9	2122.6	2565.0	2078.6	2367.5
1.2 Other	15.4	1.1	17.2	3.7	17.6	5.4	16.4	1.8
2. Nonmonetary gold								
3. Foreign travel	59.8	28.8	60.5	27.3	61.9	25.2	64.7	33.1
4. Transportation								
4.1 Freight	155.4		167.8		160.8		170.7	
4.2 Other	18.2	67.7	14.5	66.9	17.5	67.2	14.3	67.0
5. Insurance	67.1	49.3	79.4	54.9	52.0	48.4	56.6	55.0
6. Investment income								
6.1 Direct investment income	63.5	19.4	86.0	34.0	81.2	36.4	86.5	32.3
6.2 Other	14.6	66.2	13.0	75.5	10.3	72.6	13.1	70.4
7. Gov't, not incld elsewhere	24.4	80.8	20.6	87.0	24.0	66.9	11.8	64.3
8. Miscellaneous services	37.2	39.7	37.9	42.1	40.2	43.3	40.4	43.9
9. Donations								
9.1 Private	83.1	3.6	53.1	3.5	43.8	3.9	44.5	3.3
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	2410.7	2958.3	2928.1	3129.8	2631.9	2934.3	2597.6	2738.6
(excld reparations)								
Capital Transaction								
11. Long-term capital	669.9	432.1	253.3	189.7	264.3	227.4	200.4	286.8
12. Short-term capital								
13. Monetary gold			22.1	.1	32.1	.3	36.1	.1
14. Total								

	1928		1929		1930		1931	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	2041.4	2375.2	2221.2	2388.9	1520.9	1681.0	1180.8	1321.7
1.2 Other	25.3	1.8	16.5	1.2	16.5		11.0	
2. Nonmonetary gold								
3. Foreign travel	66.9	37.8	73.0	42.7	67.5	40.3	57.1	35.0
4. Transportation								
4.1 Freight	187.5		205.3		161.1		140.2	
4.2 Other	15.7	78.7	18.2	79.4	16.5	69.1	12.8	66.3
5. Insurance	61.4	60.1	70.1	65.7	67.0	67.0	59.4	60.8
6. Investment income								
6.1 Direct investment income	72.2	39.1	90.3	56.5	79.9	51.7	66.6	44.8
6.2 Other	11.8	68.9	12.0	65.7	10.8	64.2	9.7	55.1
7. Gov't, not incld elsewhere	8.7	47.1	13.2	48.7	15.8	39.8	7.6	47.8
8. Miscellaneous services	50.8	52.8	57.4	57.7	51.6	56.9	50.7	51.0
9. Donations								
9.1 Private	50.3	3.1	52.6	4.0	38.0	2.9	31.7	2.4
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	2592.0	2764.6	2829.7	2810.5	2045.6	2072.9	1627.6	1684.9
(excld reparations)								
Capital Transaction								
11. Long-term capital	342.9	317.9	367.6	460.1	430.8	578.7	439.6	672.2
12. Short-term capital								
13. Monetary gold		.4		.5	308.6	21.9	419.9	31.7
14. Total								

	1932		1933		1934		1935	
	Cr.	Db.	Cr.	Db.	Cr.	Db.	Cr.	Db.
Current Transaction								
1. Merchandise								
1.1 Exports fob, imports cif	1466.0	1524.4	1939.2	2017.2	2270.1	2401.0	2827.9	2698.3
1.2 Other	17.5		15.9		24.5		16.2	
2. Nonmonetary gold								
3. Foreign travel	69.9	41.7	84.9	57.8	106.2	55.4	121.6	56.0
4. Transportation								
4.1 Freight	154.5		193.5		213.7		247.8	
4.2 Other	14.6	82.1	22.9	105.7	20.8	106.9	29.1	125.5
5. Insurance	63.0	61.0	63.7	58.0	132.3	112.0	120.6	113.8
6. Investment income								
6.1 Direct investment income	79.4	68.9	80.6	73.0	93.6	58.7	114.8	63.8
6.2 Other	9.9	57.9	12.0	72.6	11.2	72.5	14.0	78.8
7. Gov't, not incld elsewhere	5.0	102.4	7.2	138.6	5.8	152.1	18.3	172.9
8. Miscellaneous services	78.1	61.9	113.7	72.5	27.6	35.4	27.0	28.0
9. Donations								
9.1 Private	89.4	3.2	98.6	4.8	104.6	3.1	111.2	3.5
9.2 Reparations								
9.3 Government								
10. Total, incld reparations	2047.3	2003.5	2632.2	2600.2	3010.4	2997.1	3648.5	3340.6
(excld reparations)								
Capital Transaction								
11. Long-term capital	190.5	290.6	293.8	314.8	314.3	497.8	385.1	756.7
12. Short-term capital								
13. Monetary gold	112.7	.6	20.9		.6			.1
14. Total								

	1936 Cr.	Db.
Current Transaction		
1. Merchandise		
1.1 Exports fob, imports cif	2835.5	2935.1
1.2 Other	19.6	
2. Nonmonetary gold		
3. Foreign travel	134.4	59.1
4. Transportation		
4.1 Freight	278.9	
4.2 Other	29.0	140.8
5. Insurance	125.5	116.7
6. Investment income		
6.1 Direct investment income	139.6	58.6
6.2 Other	16.1	72.4
7. Gov't, not incld elsewhere	34.9	176.0
8. Miscellaneous services	19.1	26.4
9. Donations		
9.1 Private	91.0	5.4
9.2 Reparations		
9.3 Government		
10. Total, incld reparations	3723.6	3590.5
(excld reparations)		
Capital Transaction		
11. Long-term capital	677.9	947.2
12. Short-term capital		
13. Monetary gold		
14. Total		

* Data for 1868-1901 adapted from (B-T, 1968).
Data for 1902-1936 adapted from (Okurasho, 1950).

TABLE II. SUMMARY OF BALANCE OF PAYMENTS OF JAPAN EMPIRE : 1868 - 1936*

(Net Items Annually in Millions of Yen)

Year	(1) [a] Current Account Balance	(2) [b] Monetary Gold	(3)=(1)+(2) Net Cap. Flow	(4) [c] Specie Held Abroad	(5)[d]=(3)+(4) Net Cap. Flow	(6) [e] Long Term Capital	(7)[f]=(5)-(6) Short Term Capital
1868	3.5 (3.6)		3.4 (3.6)		0.4	-0.4	+3.8
1869	-12.7 (-12.6)		-12.7 (-12.6)		-0.4	+0.5	-13.2
1870	-28.5		-28.5		4.0	-4.0	-24.5
1871	-9.7		-9.7		-0.2	+0.2	-9.9
1872	-17.2 (-17.1)	0.8	-16.4 (-16.3)			+3.1	-19.5
1873	-15.9 (-15.8)	2.0	-13.8 (-13.7)			-11.1	-2.7
1874	-20.4 (-18.9)	12.9	-7.5 (-5.9)			+0.5	-8.0
1875	-24.9 (-25.7)	15.2	-9.7 (-10.5)			+0.7	-10.4
1876	-8.0	3.2	-4.8			+0.7	-5.5
1877	-16.3	-8.0	-8.3			+0.8	-9.1
1878	-21.8	6.9	-14.8			+0.8	-15.6
1879	-19.5	10.4	-9.0			+0.9	-9.9
1880	-23.9	10.7	-13.2			+1.0	-14.2
1881	-13.2	6.1	-7.2			+1.3	-8.5

Year	(1) Current Account Balance	(2) Monetary Gold	(3)=(1)+(2) Net Cap. Flow	(4) Specie Held Abroad	(5)=(3)+(4) Net Cap. Flow	(6) Long Term Capital	(7)=(5)-(6) Short Term Capital
1882	-1.1	-1.5	-2.6			+1.0	-3.6
1883	-2.4	-2.1	-4.5 (-55.4)			+0.5	-5.0
1884	-8.0	-0.4	-8.4			+0.5	-8.9
1885	-2.7	-3.3	-6.0			+0.5	-6.5
1886	+6.7	+0.3	6.9			+0.6	+6.3
1887	-6.9	+1.9	-5.1			+0.7	-5.8
1888	-4.2	-0.9	-5.1			+0.7	-5.8
1889	0.8	-9.0	-8.2			+0.8	-9.0
1890	-29.9	+12.6	-17.4			+0.8	-18.2
1891	16.5	-12.5	4.1			+0.8	3.3
1892	18.0	-13.2	4.9			+1.0	3.9
1893	0.3	+1.1	1.4			+1.2	0.2
1894	-10.8	7.6	-3.2			+1.6	-4.8
1895	117.7 (-1.4)	21.4	139.1 (20.0)			+1.9	-137.2 (+18.2)
1896	26.4 (-58.2)	-32.7	-6.4 (-90.9)			+1.8	-8.2 (-92.7)
1897	-70.8 (-105.8)	-55.5	-126.2 (-161.2)			-42.5	-83.7 (-118.6)
1898	-12.6 (-131.8)	9.2	-3.4 (-122.5)			--	-3.4 (-112.4)
1899	22.3	-11.3	10.9			-97.9	+108.8

Year	(1) Current Account Balance	(2) Monetary Gold	(3)=(1)+(2) Net Cap. Flow	(4) Specie Held Abroad	(5)[d]=(3)+(4) Net Cap. Flow	(6) Long Term Capital	(7)[f]=(5)-(6) Short Term Capital
1900	-53.6	42.8	-10.8			--	-10.8
1901	13.4	0.8	14.1			--	14.1
1902	23.5	29.7	-6.2			-15.2	9.6
1903	-8.4	-8.7	-17.0			-33.5	16.5
1904	-156.4	100.4	-56.0	-51.7	-107.7	-101.9	-5.8
1905	-335.5	-5.4	-340.9	-371.9	-712.8	-592.1	-120.7
1906	-30.0	-14.0	-44.0	1.5	-42.5	-131.2	88.7
1907	-1.0	11.7	10.7	40.3	51.0	-25.2	76.2
1908	-70.4	-13.2	-83.6	70.9	-12.7	-67.3	55.6
1909	+15.1	-72.3	-57.2	0.5	-56.7	-132.8	76.1
1910	-43.3	5.1	-38.2	-7.6	-45.8	-117.5	71.7
1911	-106.5	16.9	-89.6	105.6	16.0	-11.6	27.6
1912	-136.1	10.8	-125.3	16.5	-108.9	-76.9	-32.0
1913	-132.3	19.7	-112.6	-31.5	-144.1	-118.5	-25.6
1914	-28.1	18.9	-9.2	33.6	24.4	+4.7	19.7
1915	242.4	16.4	258.8	-166.7	92.1	+64.4	27.7
1916	662.1	-78.6	583.5	-107.6	475.9	+437.8	38.1
1917	988.4	-236.3	752.1	-156.6	595.5	+344.6	250.9
1918	843.1	0.1	843.2	-491.6	351.6	+520.6	-169.1
1919	327.3	-324.3	3.0	-1208.0	-1205.0	+37.6	-242.6

Year	(1) Current Account Balance	(2) Monetary Gold	(3)=(1)+(2) Net Cap. Flow Abroad	(4) Specie Hold	(5)[d]=(3)+(4) Net Cap. Flow	(6) Long Term Capital	(7)[f]=(5)-(6) Short Term Capital
1920	-79.4	-407.5	-486.9	280.8	-206.1	+226.3	-432.4
1921	-246.2	-132.5	-378.7	207.2	-171.5	+72.3	-243.8
1922	-181.6	-1.1	-182.7	239.6	56.9	+128.1	-71.2
1923	-447.7	0.1	-447.6	171.0	-276.6	-214.7	-61.9
1924	-547.6	--	-547.6	118.8	-428.8	-237.8	-191.0
1925	-201.7	22.0	-179.7	68.4	-111.3	-63.6	-47.7
1926	-302.4	31.8	-270.6	26.9	-243.7	-36.9	-206.8
1927	-141.0	36.0	-105.0	44.2	-60.8	+86.4	-147.2
1928	-172.5	-0.4	-172.9	71.8	-101.1	-25.0	-76.1
1929	19.2	-0.5	18.7	-140.7	-122.0	+92.4	-214.4
1930	-27.3	286.7	259.5	121.3	380.8	+147.9	-232.9
1931	-57.3	388.2	330.9	45.9	376.8	+232.6	144.2
1932	43.7	112.1	155.8	-24.0	131.8	+100.1	31.7
1933	32.0	20.9	52.9	74.1	127.0	+21.0	106.0
1934	13.3	0.6	313.9	9.1	323.0	+183.4	-160.4
1935	307.8	-0.1	307.7	1.1	308.8	+371.5	-62.7
1936	133.1	--	133.1	-1.1	132.0	+269.2	-137.3

* Data for Current Account Balance, Monetary Gold and Long Term Capital for 1868 - 1936 from Working Paper, Appendix.

Data for Changes in Specie Held Abroad for 1868 - 1936 from Okurasho, "Kokusai Shushi Tokushu", in Zaisei Kinyu Tokei Geppo, No. 5, Feb. 1950, pp.79.

a For a detailed treatment of Current Account Balance, see Working Paper, Appendix. All figures in parantheses represent balances excluding reparations.

b Any inflow of Monetary Gold is represented by - and conversely any outflow is represented by +.

c An increase in the quantum of Specie Held Abroad is represented by - while a fall in the same is represented by +.

d According to our method of indirect estimation the proxy of net Long Term and Short Term Capital is the Current Account Balance minus Inflow of Monetary Gold minus increases in Specie Held Abroad. We have thus chosen not to treat Specie Held Abroad as short term capital but rather as an asset closely resembling Monetary Gold.

e An inflow is represented by - while an outflow is represented by +.

f This column represents net Short Term Capital movements calculated as the residual of columns 5 and 6.

STATISTICAL APPENDIX II

PREVIOUS BALANCE OF PAYMENTS ESTIMATES

Until now, foreign specialists have depended heavily on two sources for prewar Japanese Balance of Payments data: 1. Moulton (Moulton, 1931) for data relating to the period 1868-1903 and 2. Gordon (Gordon, 1940) for data relating to the period 1904-36.[1] In light of the new data made recently available, one will want to proceed with caution when relying on the estimates of these works for reasons which will be dealt with at some length in the following. We will first, however, want to get an idea of the magnitude of these differences by comparing these two estimates of capital flow with our own.

In order to facilitate this comparison we have also presented Moulton's and Gordon's figures in terms of the period balances. Comparing their capital flow estimates, Table B row 7, with our own Table A, row 7, the following can be said.

1. From period 5 there are no differences between the net capital flow estimates of Table A and Table B.

2. The differences relating to period 4 are moderate, on the order of about 10%, and reflect the tendency of the earlier estimates to overstate a negative service item balance or understate a positive service item balance.

3. The differences for the first three periods are considerable, reflecting the inability of Moulton to arrive at satisfactory estimates for the service items or to deal successfully with the problem of consistent import valuation in terms of current yen.

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1. We have chosen not to include Reubens' article (Reubens, 1955) because his work is based entirely on the data presented in Moulton and Gordon (B-T, 1968: 184).

TABLE A*

Summary of Balance of Payments of Japan for Selected Period: Revised Estimates. *

(Unit: Million Yen)	1.1868-84	2.1885-98	3.1899-1903	4.1904-14	5.1915-19	6.1920-30	7.1931-36
1. Merchandise Trade Balance	-97.3	-187.8	-132.8	-728.1	+1,219.1	-4,376.7	-164.7
2. Service Item Balance (excld. reparations)	-142.5	-140.3	+132.7	-259.1	+1,844.0	+2,029.5	+898.9
3. Current Transactions Balance (3=1+2)	-239.8	-328.1	-0.1	-987.2	+3,063.1	-2,347.2	+374.2
4. Monetary Gold Balance	+72.2	-39.4	+0.4	+78.6	-622.7	-165.4	+521.1
5. 5=4+3	-167.6	-367.5	+0.3	-908.6	+2,440.4	-2,512.6	+1,255.3
6. Specie Held Abroad	...	...	...	-203.0	-1,121.3	+1,209.3	+105.1
7. Net Capital Movement (7=6+5)	-167.6	-367.5	+0.3	-1,111.6	+1,319.1	-1,303.3	+1,360.4
8. Net Capital Movement/GDCF (%) a. Annual Average		-10.4%	-0.4%	-22.5%	+32.0%	-3.8%	+6.8%
b. Sustained Peak		-16.5%	0.0%	-31.0%	+20.0%	-6.0%	+5.5%

* Data for Balance of Payments adapted from Table I. Minus sign indicates net capital inflow while plus sign indicates net capital outflow. GDCF data from (Ohkawa & Rosovsky, 1962: 32).

a Merchandise trade figures for 1868-84 and 1885-98 are done on an FOB basis for Japan Proper and exclude packing and silver (until 1896) to enable comparison with the corresponding periods of Table B.

b Merchandise trade figures for 1899-1903 are for Japan Proper and exclude silver; exports include no packing fees while imports are done on a CIF basis inclusive of packing. These adaptions have been made to enable comparison with the corresponding period of Table B.

c Merchandise trade figures for 1904-14, 1915-19, 1920-30 and 1931-36 are for Japan Empire and include silver. Imports are presented in CIF terms inclusive of packing; exports include packing throughout and delivery aboard ship after 1912. These adaptions have been made to enable comparison with the corresponding periods of Table B.

d For periods when packing and silver are not included in the merchandise trade account they are presented in the service item balance and the monetary gold balance, respectively.

e The service balance presented here includes private transfers while excluding reparations and government transfers. The 1924 contributions for earthquake disaster relief have been omitted from the service balance here to enable comparison with Table B.

f Monetary gold figures for 1868-84, 1885-96 include gold as well as silver to enable comparison with the corresponding periods of Table B. Monetary gold figures for all other years include gold only as do those of the corresponding periods of Table B.

g The GDCF figures used here are for Japan Proper in current prices and include agricultural and military investment.

h Sustained here will refer to a period of at least 5 years duration.

TABLE B*

Summary of Balance of Payments of Japan for Selected Periods: Moulton-Gordon Estimates. *

(Unit: Million Yen)	1,1868-84	2.1885-98	3.1899-1903	4.1904-14	5.1915-19	6.1920-30	7.1931-36
1. Merchandise Trade Balance	-57.4	-169.6	-132.6	-728.1	+1,219.1	-4,376.7	-164.7
2. Service Item Balance (excld. reparations)	n.e.	n.e.	+58.5	-442.4	+1,844.0	+2,029.5	+898.9
3. Current Transactions Balance (3=1+2)	-57.4	-169.6	-74.3	-1,170.5	+3,063.1	-2,347.2	+734.3
4. Monetary Gold Balance	+66.1	-38.7	+.4	+78.6	-622.7	-165.4	+521.1
5. 5=4+3	+8.7	-208.3	-73.9	-1,091.9	+2,440.4	-2,512.6	+1,255.3
6. Specie Held Abroad	...	...	...	-230.0	-1,121.3	+1,209.3	+105.1
7. Net Capital Movement (7=6+5)	+8.7	-208.3	-73.9	-1,294.9	+1,319.1	-1,303.3	+1,360.4

Minus sign indicates net capital inflow while plus sign indicates net capital outflow.

* Data for 1868-84, 1885-98 and 1899-03 adapted from Moulton (Moulton, 1931). Data for 1904-14, 1915-19, 1920-30 and 1931-36 adapted from Gordon (Gordon, 1940).

a Merchandise trade figures for 1868-84 and 1885-98 are done on an FOB basis for Japan Proper and exclude packing and silver (until 1896).

b Merchandise trade figures for 1899-1903 are for Japan Proper and exclude silver; exports include no packing fees while imports are done on a CIF basis inclusive of packing.

c Merchandise trade figures for 1904-14, 1915-19, 1920-30 and 1931-36 are for Japan Empire and include silver. Imports are presented in CIF terms inclusive of packing; exports include packing throughout and delivery aboard ship after 1912.

d The service balance presented here includes private transfers while excluding reparations and government transfers. The 1924 contributions for earthquake disaster relief are omitted from the service balance here.

e Monetary gold figures for 1868-84 and 1885-96 include gold as well as silver. Monetary gold figures for all other years include gold only.

f The error in the 1934 service item, miscellaneous, of the English language version of the Economic and Financial Annual of the Ministry of Finance, also pointed out by Mrs. Gordon (Gordon, 1940: Notes Table 1A, Tabulation A), has been corrected here to enable comparison with the corresponding period of Table A.

As implied in the above, the differences between my figures of Table I and the earlier estimates can be traced to differences in the individual balance of payments components from which the estimates of capital flow are calculated. In what follows, we will attempt to present these differences in some detail so that those interested in Japan's international transactions of the prewar period may avoid the pitfalls inherent in relying on the earlier estimates. Our discussion will center about the differences relating to the treatment of merchandise trade, service items and gold flows.

Merchandise Trade

Both Moulton and Gordon either directly or indirectly derive their merchandise trade statistics from the official monthly returns issued by the Ministry of Finance.[2] The major difference between TABLE I and these official trade statistics used by Moulton and Gordon concerns the adjustment made for imports from gold standard countries for the period 1874-1887. As described in the notes to the Tatemoto estimates (Baba and Tatemoto, 1968: 183-186), merchandise imports from gold standard countries have been converted into silver yen, thereby increasing the value of merchandise imports for the years in question. This major revision causes our figures to show a considerably more passive trade and current transactions balance for the period 1874-1887 than that estimated by Moulton. As these differences are large, those interested in Meiji Japanese trade statistics will hereafter want to rely exclusively on the Tatemoto revisions for these years instead of any work which draws from the official statistics. For all the other periods, however, one can still make use of the figures provided by Moulton or Gordon if care is taken to observe the following differences in presentation.

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2. Moulton relies directly on these figures. In that Gordon's data is taken from the Foreign Trade of Japan (Oriental Economist, 1935), it is indirectly based on the same source.

Gordon's merchandise figures differ from those of Moulton in that they are prepared on an Empire basis and include silver imports and exports for the years when silver was not part of the monetary standard. On the other hand, the trade figures of Moulton are for Japan Proper and exclude silver imports and exports throughout. Finally, it should be noted that Moulton erroneously claims that his merchandise import figures have been calculated for the entire period on a CIF basis (Moulton, 1931: 496). This is not the case, for these figures in fact appear on a CIF basis only after 1898 (Oriental Economist, 1935: 43).

Service Items

Reflecting on the preceding section, it seems fair to say, that except for the period 1874-1887, the presentation of merchandise trade statistics differs very little between my series and those done before the war. This is unfortunately by no means the case with respect to the service items. In order to be able to understand the far greater differences in the treatment of the service items, one need first understand the paucity of official data relating to these items. Whereas the official trade data was available annually from the early years of Meiji, such official data for service items was not published annually prior to 1923. Thus for the pre-1923 period Moulton and Gordon were forced to rely on either the semi-official estimates of those in positions of high authority, the unofficial estimates of others or their own estimates for service item data. Before treating the very complex questions of which of these were resorted to by whom and for what years, we will first want to note the following differences, touched on briefly in the comparison of TABLES A and B, between my estimates and these of Gordon and Moulton.

Of the two Gordon's differ the least from our own. This should not be surprising as her work was published last, enabling her to make use of the most accurate information. Comparing mine with hers, we find no differences after 1914. Compared to Moulton we find differences persisting until 1923 after which time the entries become identical. As neither offers annual service item figures for the years prior to 1904, no comparison can be made for the period 1868-1903. The upshot of all this is that those interested in service item data should avoid using any of the prewar estimates for the years prior to 1914, for 1914-36 Gordon's estimates are fully acceptable. One would be reluctant to use Moulton's service item figures for the years prior to 1923.

In order to be able to understand what underlies the differences described above we will have to concern ourselves with two very intricate questions: 1. What unofficial, semi-official or official information of service items were available before WWII and 2. Which of these were used by Moulton or Gordon and for what years. Turning our attention to the former, we find that altogether the following five different sets of estimates were available and are presented below according to period of coverage and author.

1. 1889-1912, Moulton, unofficial. Moulton does not attempt to give annual estimates for this period, but rather aims at a period estimate of the service items balance calculated from 1913 benchmark data (Moulton, 1931: 506-507).

2. 1904-1912, Oriental Economist, unofficial. The Oriental Economist presents annual estimates for the service items for these years based on sources which vary according to the following chronological breakdown: a. 1904-1911, Okurasho Rizaikyoku, Meiji 44 nenju Boekigai Shushi Ichiranhyo and b. 1912, Nichigin Rinji Iinkai, Oshu Senso to

Honpo Kinyukai (Oriental Economist, 1935: 689-695).

3. 1914-1923, Inouye (1), semi official. Inouye presented what we may call his first semi-official annual estimates for service items in (Inouye, 1925: Appendix Table 2).

4. 1913-1924, Inouye (2), semi-official. The following year Inouye presented a revised and enlarged second set of annual semi-official estimates for service items in (Inouye, 1926: Appendix Table 7). These were the estimates which appeared later in the English translation of his work (Inouye, 1931: 234-235).

5. 1923-1936, Ministry of Finance, official. From 1923 statistics for service items were issued annually by the Ministry of Finance.

We will now turn our attention to the second question, namely, which of the above estimates were used by the two works mentioned above and for what period. At the time at which he was working, Moulton did not have access to any annual statistics dealing with the merchandise service item accounts prior to 1913. Thus he was forced to rely on his own period balance estimates for the period 1899-1912. For the years 1913-1923 he used the second set of Inouye's semi-official estimates. For the period 1924-1929 he used the official statistics. It should be cautioned that Moulton uses these latter two as if they were for Japan Proper whereas they are in fact for Japan Empire (Inouye 1926: Appended).

Gordon, offering no service item estimates of her own (annual or period balance), used the Oriental Economist figures for 1904-1912, Inouye's second set of semi-official estimates for 1913-1922 and the official statistics for the years following 1923.

We have now discussed which estimates were available and when these were employed by Moulton and Gordon. We will now turn to point out

the differences between my estimates and the available prewar estimates mentioned above. For the period 1902-1936 covered by the official statistics (Okurasho, 1950) we find that these service item figures are identical with those found in the prewar official statistics covering the period 1923-1936 and Inouye's second set of semi-official estimates for 1913-1924. All of the other service item estimates differ from the postwar official statistics for the corresponding years. Thus, my service item figures are identical with those of Gordon from 1914 onwards because the estimates she used for these years correspond to those of the postwar official statistics. Likewise, our service item figures match those of Moulton from 1923 because the prewar and postwar service item data are identical for these years. Of course no comparison can be made for 1868-1901 as the only annual estimates available for service items are those of Professor Tatemoto.

Monetary Gold

The major difference between my series and the monetary gold statistics used by Moulton and Gordon concerns the adjustment made in the price of gold imports for the period 1874-87. As with merchandise imports, the price of gold imports for these years has been revalued in terms of silver yen thereby increasing the negative balance for the years in question. This revaluation of gold imports thus causes the gold balance figures of Table I to be more passive for the years concerned than that of Moulton.

This being the essence of the differences with Moulton's and Gordon's work, we will now turn our attention to the derivation of the estimates which appear in Table I.