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Finland's Balance of Payments, 1890—1913

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Author's Preface

When I completed my study of Finland's balance of payments for the period 1890–1913 in the mid-1960's, I was not satisfied with the result. Although the material was compiled and processed with the greatest care, the statistical basis was very scant; there seemed to be too many estimations and assumptions.

For example, in the case of key trade statistics, import values for the whole period were calculated using unit prices estimated by experts in various branches for three-year periods ahead. As statistics on shipping income were not available, I had to construct data on the basis of the tonnage of ships and the corresponding series available for Swedish ships, taking into account the difference in profitability between the two countries' commercial fleets in later years for which figures are available. Data on economic relations between Finland – then a Grand Duchy under Russia – and Russia are available to a certain extent, but there may have been sporadic payments, such as in connection with fortifications and other military undertakings, that are not easy to trace.

In addition, a number of minor items have been estimated rather freely, but they are believed to be of little significance for the overall balance of payments. They will be discussed in more detail in the text.

Some foreign capital movements are well documented, as regular banking reports provide information on short-term accounts and detailed statistics on bond issues were compiled earlier. These series should be considered reliable as far as the balance of payments is concerned. On the other hand, only random data are available on private investments in either direction, and this is an obvious source of error.

The extensive use of estimates in this study was rendered possible by the simple structure of the economy during the period covered, as well as by the fact that conditions changed very slowly from year to year.

There are nevertheless some reasons justifying the publication of this study in spite of all the reservations about its reliability. Though the final sums for annual current transactions do not tally with capital movements in the same year, as they should in theory, the discrepancies are for the most part fairly small in comparison with the gross amounts involved. There are a few exceptions, but if the figures are treated with caution, looking at trends rather than details, it should serve its purpose.

Information seems to be lacking on Finland's economic relations with other countries before World War I; for example, there were no comprehensive studies on developments in economic and financial conditions in Finland at the time of this study. Neither has any specialized study on this subject apparently been published during the 25 odd years I, for critical reasons, have withheld this study from publication. It therefore seems appropriate to publish it now.

Finally, I would like to point out that the choice of the period of 1890–1913 for the study was determined by the lack of relevant statistics further back in time. It ends with the outbreak of World War I, which for a long time prevented regular international relations.

December 1992
Ragni Bärlund

Editor's Preface

Ragni Bärlund worked in the Bank of Finland Institute for Economic Research (till 1944 The Statistical Department) from 1938 to 1963. During those years one of her main interests was to collect Finland's balance of payments. Ragni Bärlund's calculations for the interwar period were published in the Bank of Finland Monthly Bulletin and in the Yearbook of the League of Nations. After she had retired in 1963, Ragni Bärlund continued collecting balance of payments data concerning the years 1890–1913. Because of some uncertainty and missing data, Bärlund hesitated to publish her manuscript after finishing the study in the mid-1960s.

Now, after twentyfive years there are still no better calculations of the balance of payments statistics for the end of the autonomous time. In addition, recent studies seem to prove that Bärlund's figures are reliable both from a historical and a macroeconomic point of view. Of course, there are always some parts of the balance of payments that cannot be calculated exactly. The worst problems are in regard to trade of services. Anyhow, Bärlund's figures do not contradict other historians' more descriptive calculations.

The footnotes in the following article are mostly Bärlund's own comments considering sources and calculating methods. The editor's footnotes include mostly comparisons to other studies published after the 1960s. Besides, all figures are in current prices and in millions of "old marks" (100 mark 1962 = 1 mark of 1963).

– = nil

.. = data not available

0 = less than 0.5 unit

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1. Introduction

There are few figures available on the economic conditions prevailing in the decades preceding the World War I. Interest in statistics did not grow until later. Nevertheless, it seems possible to gather together enough facts to be able to give a general picture of Finland's foreign payments position in that period.

The choice of the year to start this survey is more or less arbitrary. In one of the few early analyses of the fluctuations in Finnish economic activity, W.A. Lavonius begins his study at the bottom of the depression in 1893.¹ This gives him three clearly discernible peaks, three intervening recessions and the beginning of a fourth by 1913. In view of the lack of data, it does not pay to start the present study very much earlier. The further back one goes in time the less data there are and the more difficult it becomes to assess their reliability. This study therefore starts at about the same time as that of Lavonius, in 1890.²

Great changes have taken place in the position of Finland since the early 1890s, both politically and in terms of social and economic structure and values. Politically, she gained her independence in 1917 after over one hundred years as a Grand Duchy under the Russian Tsar. This is not the place to comment on the strong impetus to the national life of the country which independence provided, but the event was such a milestone in the development of the country that it should not remain without mention even in this narrow context. Finland's political dependence on her mighty neighbour gave rise to economic and financial relations that existed up to the political separation at the time of the introduction of the new rule in Russia.

The country's population grew steadily as industrialisation advanced. From 2 380 000 in 1890 it had risen to 3 230 000 by 1913, an increase of 36 per cent. At the same time, the structure of the population changed. In 1890, 75 per cent of all inhabitants were engaged in agriculture and forestry. By 1910, their number had declined to 68 per cent. The shift from agriculture to other trades was accompanied by a migration of the population from rural to urban districts. The following figures may serve as a measure of the scale of the change involved: in 1890 industry employed 59 000 workers, in 1913 their number had risen to 109 000. Total foreign trade amounted to 233 million marks in 1890, or 99 marks per capita on an average, while in 1913 it was 900 million marks, or 280 marks per capita. Though the rise may not be spectacular, it certainly was substantial even considering the length of time involved, and it may serve to indicate the standard of living enjoyed by the population.³

¹ W.A. Lavonius, *Hyvät ja huonot ajat, Yhteiskuntataloudellinen Aikakauskirja*, 1928 IV, pp. 317–354.

² Nowadays, there is reliable data on trade in goods since 1860. Cf. Hjerpe 1988.

³ Statistics according to the *Annuaire statistique de Finlande*.

In the decades preceding World War I the Finnish mark was on the gold standard. With some minor fluctuations, prices rose slowly, by 27 per cent from 1893 to 1913.⁴

As for the balance of payments, as distinct from the balance of trade, only two attempts at surveying it are known before World War I. In 1900 the Governor of the Bank of Finland, Th. Wegelius, delivered a lecture on the balance of payments in 1897, 1898 and 1899 that contains some useful information. In contrast to most of his contemporaries he had a comprehensive view of all the foreign payments and their interdependence.⁵ Not until 1913 did anyone apparently try to study the question again. Then K.W. Hoppu collected information on foreign receipts and payments in the previous year.⁶ His figures are also of interest today.

It is, of course, impossible to construct the complete balance of payments that far back in time, but some of the most important items are known in a fashion at least. Trade statistics were published at the time, and trade most certainly dominated current transactions, then as later. Certain other items can also be traced with a fair degree of accuracy. There is, however, an important group of receipts that adds an aspect of uncertainty to the calculations. These are the Russian outlays on travel and, still more, the official costs of maintenance of troops in Finland and of fortifications.⁷ Long-term borrowing was limited to a few bond issues at first, and for the latter part of the period a valuable basis is provided by an official report and some surveys carried out at that time. The short-term foreign payments position of the banks is also known. This limits the unknown transactions mainly to the sphere of private capital movements. The reliability and completeness or deficiencies of the material employed will be discussed more fully below. Indeed, the material is far from complete, but it may at least provide a background against which to consider the situation of later times. It may also be worth looking for any persistent features in the pattern of foreign payments in the period.

2 Goods and Services

Merchandise. Foreign trade is the fundamental component of the Finnish balance of payments. Fortunately, trade statistics were already computed for the period dealt with here, even though they were far from perfect. They were

⁴ According to the index calculated by Heimer Björkqvist in *Prisrörelser och penningvärde i Finland under guldmyntfötsperioden 1878–1913. En struktur- och konjunkturanalys*, Helsingfors 1958, p. 259.

⁵ Th. Wegelius, *Angående landets betalningsbilans gentemot utlandet under de senaste åren*, *Ekonomiska Samfundets Tidskrift* (1900), II:3, pp. 67–88.

⁶ K.W. Hoppu, *Suomen maksubilanssi, Yhteiskuntataloudellinen Aikakauskirja*, 1920, pp. 7–21.

⁷ These are also the main problems according to Erkki Pihkala (1970). In his article he describes the theoretical discussion of "invisible trade" at the end of the 19th century. Contemporary economists argued about the magnitude of this "magical share" of the balance of payments in different countries.

approximations only, and the value of imports and exports as reported reacted slowly to changes in the prices of the goods actually bought and sold. Moreover, they were not complete, but in spite of their defects they constitute a useful source of information.

With a very few exceptions, up to 1918 the value of goods in foreign trade was not based on a declaration by the importer or exporter. Rather, it was estimated by the Trade Statistics Office on the basis of unit prices, which were, in turn, established according to information supplied by experts. The unit prices were fixed for three years at a time in the years when the Diet assembled and experts in various fields gathered in the capital. For these years the prices were said to be satisfactory, but in the intervening period they were likely to differ more from the actual prices although adjustments were made. In no case did the trade statistics evidently pay any attention to short-time fluctuations in prices, although these were considerable at times. Strangely enough, it was considered more reliable to use estimated values than declaration values in computing trade statistics and the method was used by many other countries as well. It was even considered unfair to trouble traders with a demand for declarations of the value of the goods in foreign trade.⁸

The trade statistics relate to special trade for the whole period. Finland was not an intermediary of any importance. Transit traffic was also negligible and, in principle it was excluded from trade statistics, though actually only transit by rail was known separately. The value of trade was estimated at the border, which for imports means that transportation, insurance and brokerage costs etc. were added to the purchase price and for exports that transportation to the border, export duties and brokerage paid within the country were added to the price payable at the place of production. In other words, the values were reported c.i.f. and f.o.b. respectively. This means that in both cases the cost of freight and insurance of goods in foreign trade are recorded as carried by the consumer. When the goods are imported by a domestic ship, the freight receipts of the ship cancel out the consumer's payment by the same amount. The freight for export goods enters the balance of payments of the exporting country as an income item only if shipped by a domestic carrier.

It seems that the coverage of trade statistics was uncertain especially in regard to the goods imported free of duty, and more so if they were Russian goods. In this respect the reports were incomplete both as to kind and quantity. Exports which were free of duty were also incompletely recorded and this applied particularly to exports by rail to Russia, for which there was no compulsory detailed specification of the goods. Evaluation thus encountered difficulties as the groups of "other goods" swelled. The Trade Statistics Office tried to check and supplement the primary material, but the adjustments could not go beyond a certain limit. On the whole, the accuracy of the primary

⁸ M. Molander, Om de principer, som följas vid det handelsstatistiska materialets bearbetning, och möjligheten att ur Finlands import- och exportvärden sluta till dess handelsbalans med utlandet, Ekonomiska Samfundets Tidskrift I:1, [1894], pp. 19-44.

records may have been greater in regard to imports than exports, prompted by fiscal interest.⁹

There were certain other kinds of merchandise transactions that were not covered by the official records. The local population living near the south-eastern border transported agricultural produce and fish by horse or boat to nearby St. Petersburg outside customs control. On the return journey they brought other goods, such as sugar. Actually, there is no way of estimating the extent of this traffic nor of smuggling.¹⁰ As it occurred in both directions the transactions are considered to cancel each other out.¹¹

In the next section on non-monetary gold it will be shown that, in the period under review, gold imports of any importance occurred only in 1904 and 1910, 1911 and 1912. This was monetary gold which should be subtracted from merchandise and included under capital movements. Exports did not include any gold.

The wood-processing and textile industries regularly held some stocks of goods abroad,¹² but they were not large and as a rule their value did not change so much as to influence the balance of trade. In certain important firms surveyed, the change was at most some few million marks a year in the period concerned. An increase in stocks, of course, implied a debit item in the balance, and vice versa. The information on stocks is obtainable from unpublished material collected by the Bank of Finland Institute for Economic Research for a study of the financing of industry.¹³ It is based on the balance sheets of a number of industrial firms and additional data obtained from their archives.

The following table shows imports and exports and the trade balance from 1892 to 1913.¹⁴ The official figures have been adjusted for gold transactions and stocks held abroad, whereas other corrections could not be made for lack of information.

⁹ FOS 1 A, Finlands handel på utrikes orter samt uppbörden vid tullverket, especially No. 38, 1918, text, p.1. – M. Molander, Om de principer, som följas vid det handelsstatistiska materialets bearbetning, *Ekonomiska Samfundets Tidskrift* 1:1, [1894], pp. 19–44. – G. Leinberg, Om handelsstatistiken, *Ekonomiska Samfundets Tidskrift* II:4, 1901, pp. 122–128. – Gösta Tallqvist, Finlands handelsbalans gentemot utlandet, *Ekonomiska Samfundets Tidskrift* VII:12, 1910.

¹⁰ Erkki Pihkala agrees that it is impossible to obtain any exact figures on the border trade. However, he estimates that at the beginning of the 20th century, taking into account all components of trade including border trade and smuggling, the trade balance was negative for Finland. Pihkala 1970.

¹¹ K.W. Hoppu, Suomen maksubilanssi, 1920, p. 12. – Tor v. Wright, Handelsrelationerna mellan Finland och Ryssland under perioden 1897–1913, *Ekonomiska Samfundets Tidskrift* 1916, p. 268.

¹² Oscar Nikula, Rosenlew – koncernen, en hundraårig utveckling från handelshus till storindustri 1853–1953. Helsingfors 1953, p. 44–45.

¹³ This is the so-called "Alhon aineisto". It is still held in Bank of Finland's archives and contains financial information on nearly 40 firms from the 1870's to 1939.

¹⁴ Hjerpe's research in 1988 verifies that Bärlund's calculations are mostly correct. Hjerpe used partly the same material as Bärlund, supplemented with some specialised studies.

Table 1.

Merchandise transactions in 1892-1913, mill. mk.

	Imports in trade statistics, cif	Of which gold imports	Imports less gold	Exports in trade statistics, fob	Change in stocks of goods held abroad	Exports less changes in stock	Trade balance
1892	146	-	146	94	..	94	-52
1893	126	-	126	115	..	115	-11
1894	139	-	139	136	-0	136	-3
1895	150	-	150	143	-0	143	-7
1896	173	-	173	159	-0	159	-14
1897	203	-	203	169	0	169	-34
1898	237	-	237	180	1	180	-57
1899	251	-	251	185	1	184	-67
1900	271	-	271	198	0	198	-73
1901	216	-	216	187	1	186	-30
1902	234	-	234	203	-0	203	-31
1903	267	-	267	213	0	213	-54
1904	267	2	265	215	0	215	-50
1905	268	-	268	248	1	247	-21
1906	314	-	314	281	1	280	-34
1907	379	-	379	267	1	266	-113
1908	364	-	364	245	-2	247	-116
1909	367	-	367	257	-2	259	-108
1910	384	4	380	290	3	287	-93
1911	445	11	434	320	1	319	-115
1912	470	11	459	340	-0	340	-119
1913	496	-	496	405	2	403	-93

Non-monetary gold. Finland produced hardly any gold in the period under review. The brooks of Lapland were the only source of gold, and the quantities washed there were very small. From 18 000 grammes in 1890 it dropped to some 1 000 grammes in 1913. Even the amount produced in 1890 had a value of only 57 000 marks.¹⁵

Gold needed for monetary and industrial purposes had to be imported from abroad. The trade statistics do not show imports and exports of coin and bullion separately until 1898, but even all the gold and articles made of gold imported and all the crude metals exported, including coin and bullion, were so small in value in the earlier years of the period as to be negligible in the present context. From 1898 to 1913, the trade statistics had a sub-heading "valid money", but no trade was reported except for very small imports in 1900 and equally insignificant exports in 1901. It is probable that the shipments of at least Russian gold coin were not included in the trade figures, because the Bank of Finland reported purchases of gold in Russia and holdings of Russian and foreign gold coin which changed from year to year. On the other hand, in the

¹⁵ J.J. Sederholm, Om guldindustrin i in- och utlandet, dess betingelser och utvecklingsmöjligheter, Ekonomiska Samfundets Tidskrift, 1902, III:2. Quantity and unit value of 3 196 marks per kg from Annuaire statistique de Finlande 1915.

years when the Bank of Finland purchased gold from countries other than Russia there are imports of nearly if not exactly the same quantity and value.

	Imports ¹⁶		Purchased by the Bank of Finland from countries other than Russia ¹⁷	
	Mill. mk	Kg	Mill. mk	Kg
1904	1,8	581	2,6	754
1907	0,2	56	0,2	
1909	0,3	104	0,3	101
1910-1912	25,5	8338	27,9	8098

These were the only years in which gold exceeding a mere trifle was imported and at the same time the only years in which gold purchases of any consequence outside of Russia were reported by the Bank of Finland. In the remaining years there were no imports of gold, or the value of the gold imported was so small that it did not affect the balance of payments.

Exports of gold bullion are not known, but the main metal group in which gold would have been included is too small to be considered even if all of it had been gold.

Since, then, non-monetary gold imports and exports are very small, no correction of the trade figures is required on their account, but the imports which evidently relate to monetary gold have been subtracted from total imports. In the capital movements, monetary gold is recorded according to the gold holdings of the banks, not according to trade figures.

Foreign travel. Before World War I foreign travel was not the privilege of everyone as it is today. Finns' normal travelling costs could not therefore have required very large amounts. How much was spent abroad in this way or even how many actually travelled abroad cannot be ascertained. Regular statistics on foreign travel were not collected until the 1920's, and the passports issued were valid for long periods of time and for many trips, so that their number does not give any clue to the extent of this traffic. Apart from certain train passengers, the only group of travellers the number of which is known is emigrants, and they did not take large amounts of money with them and even their tickets were often paid by someone abroad. The numbers involved will be discussed further below under emigrants' remittances.

One of the early commentators on the balance of payments, Th. Wegelius, governor of the central bank and apparently well acquainted with various economic occurrences, calculated an average debit item of 400 marks per emigrant from 1898 to 1900.¹⁸ If this average is applied to the number of emigrants buying their own tickets in Finland, their total foreign payments

¹⁶ FOS I, Handel och sjöfart 1890-1902; FOS I A, Handel 1903-1913.

¹⁷ Bankfullmäktiges berättelser. - In 1901, addition to gold in vault journal.

¹⁸ Th. Wegelius, Angående landets betalningsbilans, Ekonomiska Samfundets Tidskrift, 1900, II:3, p. 80.

varied between 4 million marks in 1899, when large-scale emigration started, and 5 million marks in 1913. The same authority roughly estimated the expenditure of Finns other than emigrants travelling abroad to be "some million" marks. For 1913, K.W. Hoppu estimated the corresponding foreign payments of emigrants and ordinary travellers to be 8 million marks, which evidently meant somewhat less than 6 million for the emigrants' share. He based his calculations on the number of passports issued and information collected from the steamship companies.¹⁹ This should be the upper limit of these payments in the period concerned, as emigration was then about as large as in any one other year.

The other side of the balance, the income from foreigners travelling and spending their holidays in Finland, was very much more important than the corresponding outward payments. But this income is also more difficult to estimate as the available numerical information is even more sparse. Russians formed the main group of foreign visitors. Large numbers visited seaside resorts and watering places, and whole families spent their holidays in the countryside, especially in the district of Viborg in the southeast within easy reach of St. Petersburg, but also further afield. They rented houses for the summer or had houses of their own. Some lived there all year around and apparently drew their means of subsistence from Russia. Summer houses were built from the 1890's onwards, and after 1900 the summer traffic continually expanded. In the districts particularly concerned on the Carelian Isthmus the question of the farmers' ownership of land was finally settled in 1902 after a long-delayed reform. After this they could freely sell their land, which many of them did. Many of the buyers were Russians. In the rural communes of the district of Viborg, 1 242 houses were owned by foreigners in 1900, by 1908 their number had risen to 4 722, and for 1918 an inventory made on Finland's separation from Russia sets the number of lots and farms owned by Russians at 7 004.²⁰

Russians came to Finland both by boat and train, but no figures are available on the passengers who arrived or departed by sea, and for those travelling by rail only the totals, including all nationalities, are known. However, the total number of civilian travellers arriving by train from St. Petersburg and nearby stations rose from 174 000 in 1895 to 336 000 in 1900 and thereafter steadily to 697 000 in 1907. After a drop in 1908 their number again increased further to 875 000 by 1913.²¹ Although this includes Finns returning home it should, in combination with the well-known fact that Russians did come in large and increasing numbers, serve as an indicator of the number of foreign visitors at various times. By way of a comparison, this corresponded to 7, 12, 23 and 27 per cent, respectively, of the total Finnish population in the years mentioned.

¹⁹ K.W. Hoppu, Suomen maksubilanssi. Yhteiskuntataloudellinen Aikakauskirja 1920, pp. 10-11.

²⁰ Guvernörsberättelser, - Viipurin läänin maatalouskommissio, Mietintö II, Karjalan kannas, Viipuri 1909, especially Liite no. 1. - Karjalan Kannaksen komitea, Mietintö, Karjalan Kannaksen kysymys, Viipuri 1919, especially p. 30.

²¹ FOS XX Järnvägsstatistik, Bilaga V:1.

In order to obtain an estimate of the amounts spent by foreign visitors we again have to turn to Hoppu as an authority. In 1913 he investigated the matter by making personal visits and inquiries in the border district, supplementing his information with sheriffs' registers. He concluded that the Russians brought in 72 million marks in 1913.²² This was a large amount in those days, even considering that it included travel, rent, food and other costs. Other tourist income was estimated by the Tourist Association at 3 million marks for 1910,²³ and this figure was also used by Hoppu. In the beginning of the century Wegelius had calculated a net income from travelling of 7 million marks, which should have implied a gross income of some 10 million marks. In addition to regular tourist income this was supposed to include Russian military expenditure.²⁴ Although these were proportionately smaller at that time than in 1913, the total estimate may have been too low considering that allowance must be made for land purchases and house building, which, of course, are long-term investments but can hardly be estimated separately. On the other hand, prices were probably lower in the early tourist period than later when people had learned to rely on this income.²⁵

In the conditions sketched above, foreign travel receipts and payments are likely to have been somewhere in the vicinity of the following figures.

²² Hoppu, Suomen maksubilanssi, Yhteiskuntataloudellinen Aikakauskirja II:3, 1920, pp. 10–11.

²³ Amos Anderson, Synpunkter i frågan om vårt turistväsende med särskilt beaktande av Helsingfors utvecklingsmöjligheter som turistort, Ekonomiska Samfundets Tidskrift VII:10, 1911, p. 2.

²⁴ Wegelius, *ibidem*, p. 80.

²⁵ Pihkala (1970) and Kailasvuori (1967) have a similar picture of the travel balance. The most important part of travel exports – and also the most difficult to calculate – were the Russian-owned summer houses in Carelia.

Table 2.

Foreign travel balance in 1892-1913, mill. mk.

	Received from foreign visitors			Paid by Finnish travellers			Net receipts
	Russians	Other	Total	Emigrants	Other	Total	
1892	10	1	11	-	2	2	9
1893	10	1	11	-	2	2	9
1894	10	1	11	-	2	2	9
1895	10	1	11	1	2	3	8
1896	10	1	11	2	2	4	7
1897	10	1	11	1	2	4	7
1898	10	1	11	1	3	4	7
1899	10	1	11	4	3	7	4
1900	19	1	20	3	3	6	14
1901	18	2	20	4	3	7	13
1902	18	2	20	6	3	9	11
1903	28	2	30	4	3	7	23
1904	23	2	25	3	3	6	19
1905	38	2	40	5	3	8	32
1906	43	2	45	4	3	7	38
1907	50	2	52	4	3	7	45
1908	40	2	42	2	3	5	37
1909	50	2	52	5	3	8	44
1910	60	3	63	5	3	8	55
1911	55	3	58	2	3	5	53
1912	55	3	58	2	3	5	53
1913	82	3	85	5	3	8	77

Transportation. People and goods were transported by ship and by rail across the borders, and Finnish ships sailed on foreign seas. Part of the receipts from this traffic and the expenditure on it are known and part can be roughly estimated. The income from transportation by horse and carriage or sledge in the south-east, to nearby St. Petersburg above all, is not known, and no attempt at an evaluation has been made.²⁶

The shipping receipts are not known until 1918, except for a private estimate for 1912. It has therefore been necessary to estimate them for this study. The calculation is based on two facts: the slow development of Finnish shipping, and the similarity of the shipping receipts of the Finnish and Swedish mercantile marines in the inter-war period.

The registered tonnage of the Finnish merchant fleet is known since 1892 according to a uniform system. The records show that the total tonnage remained surprisingly stable for nearly 30 years in spite of minor fluctuations. From 1898 to 1913 the total tonnage increased by 33 per cent, but in 1926 it

²⁶ Transportation by horse was a significant source of income in some parts of Carelia. Despite local significance for individual households it is of small importance to the whole transportation balance.

was only 16 per cent larger than in 1898.²⁷ In comparison to Sweden this was a very small rise. The total Swedish tonnage more than doubled between 1898 and 1913, and by 1926 was 2.6 times the total of 1898.²⁸ Already in 1898 steamships constituted 73 per cent of the Swedish tonnage, whereas their share in the Finnish tonnage was only 32 per cent. In 1913 the share was 93 per cent for Sweden and 45 per cent for Finland.²⁹ An expert on shipping has given some explanations for the slowness in the growth of the Finnish fleet, which in the early 1800s had been much more important and continued to grow even after the middle of the century. He points out that in the decades when wooden sailing vessels were elsewhere replaced by iron steamships no marked change was recorded in Finland. Some old ships disappeared, but they were not replaced by new ones. Traditional shipbuilding had been based on domestic products and innate ability, which were both lacking when iron ships came to be built. Nor was there capital and initiative to spare for shipping at this time of active internal expansion in other fields. Another reason for the slow growth in shipping was that by this period grain, fodder, sugar, etc. were imported from Russia by rail and similarly the exports of paper and pulp went chiefly eastward by rail. This reduced the incentive to build ships.³⁰

The total tonnage, excluding barges, is considered from 1892 to 1939. Only in the last few years covered is there an appreciable rise in the figures. The corresponding Swedish tonnage emphasises the slow development of Finnish shipping. For Finland the tonnage used in foreign traffic is not known until 1918. In that year and the following year the tonnage was relatively small. This agrees with the fact that, unlike Sweden, Finland had not carried a neutral flag during the war although she did not take part in the war. In consequence, a number of her ships were captured by the belligerents. And, more important still, the post-war years were for Finland a period of difficult adjustment to new markets and a new economy. From 1920 onwards the tonnage in foreign trade follows the total tonnage rather closely, gradually approaching it. In 1920 and 1921 the percentage of the tonnage used in foreign traffic was still only 56 and 58 per cent respectively, it then rose, at first slowly, to 62–68 per cent over the next six years, then faster as new ships were added to the fleet and as evidently coastal shipping lost ground to transportation by land. From then onwards a new era began in shipping. The fleet grew continually and new markets were

²⁷ FOS I B Sjöfart.

²⁸ SOS E Sjöfart.

²⁹ The carrying capacity of sailing vessels being smaller than that of engine-driven vessels, the tonnage of the sailing vessels has been divided by three throughout this study. Cf. FOS I B, Sjöfart, Ny serie I, 1918, p. 3 in the text, and SOS E, Sjöfart. The lower limit of the ships included in the statistics is 19 register tons in Finland and 20 register tons in Sweden. Up to 1935 the Finnish statistics classify sailing vessels with auxiliary motors among steamers and motor vessels. The Swedish statistics have been changed so as to correspond to this way of recording.

³⁰ Henrik Ramsay, *Vår inhemska sjöfartsnäring*, Ekonomiska Samfundets Tidskrift, Ny serie, V, 1925, pp. 1–29. Cf. also K.W. Hoppu *Suomen laivanvarustus*, Yhteiskuntataloudellinen Aikakauskirja 1928, pp. 355–376.

finally found for Finnish products in place of those lost in the east and conditions probably did not correspond any more to those of pre-war days.

It has been assumed here that 65 or 70 per cent of the pre-war Finnish merchant fleet was employed in foreign traffic; probably 70 per cent, because smaller ships could then run across the Gulf of Finland and Lake Ladoga to places that were later closed to them. Of course, no attention can here be paid to the effect of market conditions on foreign shipping. The changes in the estimated Swedish freight earnings per ton will have to suffice as an indicator of this.

The second main assumption implies that Finnish and Swedish foreign gross freights are similar in nature. A study of shipping in the 1920s and 1930s supports the view that on the whole the conditions of the two neighbouring countries resemble each other fairly closely although the Finnish conditions are slightly less favourable. The income of Finnish foreign shipping is available for this period and it has been compared to the corresponding Swedish income. The Swedish gross freight earnings in each year have been calculated per net register ton by dividing the total freight earned in foreign traffic by the total net tonnage engaged in foreign traffic, separately for engine driven ships and sailing ships. The earnings per ton thus arrived at have been multiplied by the corresponding Finnish tonnage engaged in foreign trade and the result compared with the actual receipts in the same year.³¹ The correspondence between this third series and actual earnings varies from year to year, but the series follow each other close enough over the whole period to justify the conclusion that the two fleets show a remarkable similarity as regards their earning capacity, which was, however, somewhat lower for Finnish shipping. On this basis it has been assumed that the Swedish freight earnings, duly reduced, can be used for estimating the corresponding Finnish earnings in the pre-war period.

It has further been assumed that roughly speaking Finnish ships annually earned 10 per cent less per net register ton than Swedish ships, calculated separately for sailing vessels and for steamers and motor vessels. The result of this estimate is reported below as gross freight receipts.

A large part of the receipts was spent abroad, in loading and unloading, as ships' dues, on maintenance and fuel, and on food. In order to calculate this expenditure and how much remained as net earnings in the balance of payments sense one more assumption is necessary. From 1922 to 1957 it was assumed at the time that 35 per cent of the gross earnings were spent abroad. This proportion was established by a limited study carried out in 1949, which confirmed the result of a similar study carried out in 1924.³² No earlier estimates are available for Finland, but again the Swedish conditions may serve as a guide. The net receipts for Sweden were estimated at 65 per cent in 1924 and at 63 per cent by another expert for the same year.³³ The comprehensive study of the national income of Sweden arrives at expenditures which, for steamers and motor vessels, are very close to 65 per cent for 1880, 1890, 1900

³¹ FOS I B, SOS E, and National Income of Sweden 1861-1930, Part 2, p. 421.

³² Henrik Ramsay, *Sjöfartens bidrag till betalningsbalansen*, pp. 278-286 in *Företagande, ekonomi och teknik*, Stockholm 1950.

³³ Henrik Ramsay, *Sjöfartens bidrag till betalningsbalansen*, pp. 282-283.

and 1913. They differ from it by only fractions of a percentage point. The conditions of sailing ships had never been investigated, but it was arbitrarily assumed that their debit items amounted to 50 per cent of the earnings. Their expenditure on fuel is almost nil, but the relative share of their expenditure going on wages is probably greater than that of the steamers.³⁴ Finnish sailing ships probably also spent about half of their earnings abroad as they sailed on the high seas and seldom returned home, perhaps once a year or even only once in three years.³⁵ Their wooden hulls were not made to withstand the northern winter and ice.

The estimate for shipping expenditure arrived at is shown in the table below along with the corresponding credit item. These series can be checked for one year only, and then only the net amount. There is an estimate for 1912 made in the following year which reports net shipping receipts of 20 million marks.³⁶ The present estimate resulted in net freight receipts of 12 million for the same year.

To this should be added the earnings of the numerous barges and small boats of less than 19 register tons in use at the time, evidently also in traffic with Russia. To judge from the tonnage of the barges these earnings may have amounted to some 2 million marks in 1912. This means that the present estimate agrees reasonably well with the old one. In addition harbour dues of 2 million marks have been included. They have been roughly estimated by considering the average of the corresponding receipts for 1922 to 1931 in comparison to the sum of imports and exports and the share of foreign tonnage in Finnish shipping in the same years.

In the period ending in 1913, as later, shipping receipts include freights paid by domestic importers, which agrees with the system of recording the c.i.f. value of imports. The aggregate thus paid is not known, but the same amount is included in freight income as in expenditure on imports and it disappears from the net balance. If freights for exports are paid by the domestic exporter in the first instance, it does not create any statistical problem in this respect. Exports are recorded f.o.b. exclusive of freights.

Until 1917, when the political dependence on Russia ended, the Finnish State Railways ran an extension line from the border to St. Petersburg. It was only 30 odd kilometres in length and had nine stations, but the traffic both in passengers and goods was considerable, particularly from and to the metropolis. The main part of the passenger traffic was local. The rest of the travellers were probably mainly tourists, because many Russians spent their holidays on the Finnish side of the border and elsewhere in Finland. The tickets sold therefore rendered mainly foreign income. The return trip is in theory included in the

³⁴ National Income of Sweden, Part 2, pp. 416-417.

³⁵ Confirmed by H. Hallberg, Managing Director of the Finlands Redareförening. Hoppu, by contrast, uses an average of 70 per cent, "because Finland still has a relatively large sailing fleet", *Yhteiskuntataloudellinen Aikakauskirja* 1928, p. 366.

³⁶ K.W. Hoppu, *Suomen maksubilanssi*, *Yhteiskuntataloudellinen Aikakauskirja* 1920, pp. 7-21. The estimate is based on an inquiry into the profitability of sailing ships and the annual reports of steamship companies. Unfortunately, no details are available. - L. Krogus, *Sjöfart, Atlas öfver Finland* 1910, texten. 1911.

estimated tourist receipts. All the income from carrying goods from the stations in Russia belongs under transportation receipts. If the goods were imported into Finland the freight income offsets part of the c.i.f. price recorded for imports, as it should. The freight for goods sent in the opposite direction is included in the f.o.b. value of the goods and thus in the country's receipts from exports: in principle for the transportation to the border, in practice probably for the whole distance. The current expenditure of the stations was not published until 1910, but it has been estimated in rounding off the net receipts in the table below.³⁷ The capital expenditure is included in capital movements as investments.³⁸

Table 3. **Transportation receipts and expenditure in 1892-1913, mill. mk.**

	Shipping			Barges and small boats, receipts	Harbour dues received	Railways, net receipts	Total net receipts
	Gross freights	Expenditure	Net receipts				
1892	11	6	5	0	1	2	8
1893	10	6	4	0	1	2	7
1894	11	6	5	0	1	2	8
1895	12	7	5	0	1	2	8
1896	14	8	6	0	1	2	9
1897	15	8	7	0	1	3	11
1898	16	9	7	0	1	3	11
1899	18	10	8	0	1	4	13
1900	21	11	10	0	1	5	16
1901	16	9	7	0	1	4	12
1902	16	9	7	0	1	4	12
1903	17	10	7	1	1	5	14
1904	17	10	7	1	1	5	14
1905	17	9	8	1	2	5	16
1906	19	10	9	1	2	6	18
1907	19	11	8	1	2	6	17
1908	19	11	8	1	2	6	17
1909	19	11	8	1	2	5	16
1910	21	12	9	1	2	5	17
1911	24	13	11	2	2	7	22
1912	27	15	12	2	2	7	23
1913	30	17	13	3	3	8	27

³⁷ FOS XX, Järnvägsstatistik.

³⁸ Pihkala (1970) and Kailasvuori (1967) give similar estimates of the transportation balance. Kailasvuori has calculated only the year 1912 (and some years during the era of independence). Pihkala contains no strict time series, but more or less qualitative analyses of possible sources and methods for analyzing the balance of payments and transportation.

Gross freights:	Calculated on the basis of 70 per cent of the Finnish tonnage in foreign traffic and 90 per cent of the earning capacity of the Swedish mercantile marine.
Shipping expenditure:	For sailing ships 50 per cent of gross freights, for steamers 65 per cent.
Receipts of barges and small boats:	Free approximation according to the tonnage of the barges.
Harbour dues:	Imports + exports by sea and Lake Ladoga multiplied by the share of foreign ships in the total tonnage arriving and leaving, multiplied by 0.6 per cent (= average proportion of harbour dues in 1922–1931.)
Railways:	1892–1909 receipts known, current expenditure not available in published material. Receipts rounded downwards. 1910–1913 receipts and current expenditure known.

Insurance. Besides domestic insurance companies, both mutual and other, a number of foreign companies carried on business in Finland. Finnish companies did only very limited business in other countries. Some official statistics were collected on insurance, but Russian enterprises were exempted from supplying the necessary reports. As the known payments of premiums, claims and costs of all the other foreign companies regularly resulted in a net outward transfer of about one million marks every year up to 1910, and after that less than half a million, the corresponding payments of all companies were probably not very important. However, there is no record of any of the foreign reinsurance receipts and payments of domestic and foreign enterprises.^{39,40}

Investment income. As far as is known, investment income was mainly a debit item, as it is today, consisting of interest and discounts paid on long-term loans raised abroad. On the credit side small amounts of bonds in foreign currency were held by various state funds, banks and other entities, and they carried some interest. The banks received interest on their foreign exchange reserves and the state at times on funds deposited abroad. The interest paid or received on other kinds of obligations and possible dividends are not known.

The outstanding amounts of foreign bonds are known by interest rates at the end of each year. The interest paid each year is calculated on the amount outstanding at the end of the previous year. Some of the outstanding bonds were held within the country. These amounts are known for the years 1905 to

³⁹ FOS XXII, Försäkringsväsendet A, especially No. 22 for 1913, text, p. 66.

⁴⁰ Pihkala estimates that the insurance receipts and payments were in balance at the beginning of the 20th century. He gives no exact figures for insurance.

1913 thanks to an official statistical inquiry carried out in 1915.⁴¹ In the present investigation it has been assumed that the interest paid on long-term loans was shared by foreign and domestic bond-holders in proportion to the size of their holdings. For the years before 1905 domestic holdings of bonds are known only for the Bank of Finland and the commercial banks. From 1905 to 1914 the share of these bonds in total bond holdings stayed very close to 40 per cent for much of the period, and it has been assumed that this was also the proportion in the years preceding 1905. For the commercial banks data are available only for total holdings of all bonds in foreign currency, regardless of their being domestic or foreign. Thus for these years the interest payments include certain amounts which stay within the country, but they are offset by an equal amount of estimated income received as interest on holdings of domestic bonds in foreign currency.

Long-term loans were issued at a discount, large or small depending on the borrower, the loan and the market. The terms and conditions of loans were generally announced publicly and commented on, so that information is also available on the discounts paid. Only in some years of unusually extensive borrowing did discounts reach any noteworthy level.

The banks maintained foreign exchange reserves with their correspondents abroad, receiving modest amounts of interest on them. In the case of the Bank of Finland this interest has been published annually since 1900,⁴² but it is not available for the commercial banks. Their foreign balances were, however, almost without exception considerably smaller than those of the Bank of Finland and followed them with a certain degree of regularity. This indicates that their corresponding interest receipts must have been small; after 1900 probably about one million marks a year, in previous years less than that. Some amounts of state funds were also held with foreign bankers, in some years they yielded interest close on one million marks, but usually in amounts too small to be taken into account here.⁴³ No private interest other than on bonds can be traced. The direct loans of certain industrial firms, as well as the corresponding credits granted, are known but the resulting interest is difficult to calculate as nothing is known about maturity and conditions.

The following amounts were received and paid in interest and discounts from 1892 to 1913.

⁴¹ FOS C, Statistiska Meddelanden 21, utgivna av Statistiska centralbyrån, Obligationsstatistik för åren 1905-1914.

⁴² Annual Reports of the Bank of Finland.

⁴³ Lantdagshandlingar IV, annual accounts.

Table 4.

Investment income in 1892–1913, mill. mk.

	Interest received			Payments on bonds				Net payments
	On bonds	On short-term deposits	Total	Interest		Discount	Total	
				State	Other			
1892	—	1	1	4	..	0	4	—3
1893	1	1	2	3	1	—	4	—2
1894	1	1	2	3	1	—	4	—2
1895	2	1	3	3	1	1	5	—2
1896	4	1	5	3	2	0	5	—
1897	4	1	5	3	3	0	6	—1
1898	4	2	6	3	4	3	10	—4
1899	4	2	6	4	3	0	7	—1
1900	4	2	6	4	3	1	8	—2
1901	4	2	6	4	4	2	10	—4
1902	4	2	6	5	4	1	10	—4
1903	4	2	6	5	5	1	11	—5
1904	4	2	6	5	5	0	10	—4
1905	4	2	6	5	3	..	8	—2
1906	3	4	7	5	3	—	8	—1
1907	3	4	7	4	4	0	8	—1
1908	3	3	6	4	4	0	8	—2
1909	3	4	7	6	6	10	22	—15
1910	2	5	7	6	7	1	14	—7
1911	2	6	8	6	9	4	19	—11
1912	2	3	5	6	9	0	15	—10
1913	2	3	5	6	9	—	15	—10

Note: For 1892–1904 the estimated interest received on bonds is the interest on holdings of Finnish bonds in foreign currency and foreign bonds, and the interest paid is the interest on all Finnish bonds in foreign currency whether held abroad or at home. For 1905–1913 the interest received is the interest on holdings of foreign bonds, and the interest paid is the interest on Finnish bonds held abroad. Net payments are comparable for the whole period.⁴⁴

Emigrants' remittances. Large-scale emigration got under way in 1899. Political insecurity at home as a result of Russian pressure was particularly bad in the first few years of the new century and prompted many people to leave Finland for the freedom of North America. It also seems that many left with the express purpose of earning money in the rich New World in order to return later to build a home perhaps, or to buy a farm, or start a business. The emigrants consisted of young people of prime working age. Up to 70 per cent of them belonged to the agricultural population, just about as many were farmers as farm hands. The men often went alone at first, to establish a secure living before the family join them, or they returned after a few years. From

⁴⁴ Kailasvuori has estimated both the interest received and payments on bonds to have been slightly higher than Bärlund. The difference in net payments for 1912 is about 0.5 million (Kailasvuori's estimate is about 10.5 million).

1899 to the end of 1913 a total of 223 600 persons emigrated, and 86 200 or 39 per cent of this number returned home in the same period.⁴⁵ It has been shown that emigration was at a peak when there was a boom in America, while in these same years the numbers returning home dropped off; in times of regression and depression, in contrast, would-be emigrants were warned against coming, whereas many already there speeded up their return to the old country. Some people would return after two or three years away from home, but most of the returning emigrants are said to have been away for five years or more.⁴⁶

Emigrants sent money home for the maintenance of their families, but they also deposited money in banks or brought it home on their return.⁴⁷ Hoppu made an investigation of the money sent and brought back from the United States and Canada from 1909 to 1913. It covered remittances sent through banks and the largest shipping company as well as postal orders and notes enclosed in letters. In addition, money brought back by returning emigrants was included as an estimate. The remittances were as follows:⁴⁸

1909	17.5 mill. mk
1910	21.9 " "
1911	23.7 " "
1912	21.4 " "
1913	24.8 " "

The author found that the size of the remittances depended on economic conditions in America, not on the number of emigrants in the preceding year. Actually, considering the length of time the emigrants lived abroad in order to save money, there does not seem to be any reason why the remittances should depend on the number of emigrants in the previous year. Rather, they might be expected to agree, for instance, with the number who have emigrated in the previous five years. If people lived abroad for about five years chiefly in order to save money this should effect the remittances. If they emigrate for good they may be expected to remember people at home particularly in the first few years they are away, or to send money home until the family has joined them. The net number of persons who emigrated within the last five years prior to the year in question has been referred to that year. For example, the number of emigrants from 1904 to 1908 less the number of emigrants who returned in the

⁴⁵ Martti Tarkkanen, Siirtolaisuudesta, sen syistä ja seurauksista, Kansantaloudellisen yhdistyksen esite 1903, Sarja III, 16, p. 22. – Lantdagshandlingar 1914, Socialutskottets bet. N:o 6 i anledning av ett petitionsförslag angående utredande av orsakerna till emigrationen. – Ilmari Teijula, Suomen siirtolaisolot, Sosiaalinen aikakauskirja 1921, pp. 901–903. – K.V. Hoppu, Siirtolaisuuden merkitys maallemme, Yhteiskuntataloudellinen Aikakauskirja 1915, p. 25. – Annuaire statistique de Finlande.

⁴⁶ Edvard Gylling, Eräitä uusia tilastotietoja Suomen siirtolaisuudesta, Yhteiskuntataloudellinen aikakauskirja 1910, pp. 97–105.

⁴⁷ Teijula, *ibidem* p. 906.

⁴⁸ Hoppu, *ibidem* p. 27.

same years is referred to 1909 as those most likely to send money home in that year.

Only in 1913 was the number of emigrants most likely to send money home "too small" in proportion to the money actually sent, but in that year there was a sharp rise in emigration and already in the first six months the number leaving for abroad exceeded the total number for the previous two years combined. They may have settled quickly enough so as to have money to spare already within that year.

Five years, of course, is a very short period to base a conclusion on, but in order to obtain even an approximate concept of the probable importance of emigrants' remittances in the decade preceding 1909 they have to be estimated according to the remittances known from that year onwards and the number of emigrants, possibly also considering business conditions in the United States.

If emigrants had about the same success and the same habits from 1899 to 1908 as they did from 1909 to 1913, their remittances should have been more or less as shown in the first column below:

	First estimate Mill. mk	Rounded-off estimate Mill. mk
1899	3	5
1900	11	10
1901	15	15
1902	19	20
1903	30	30
1904	36	30
1905	33	30
1906	36	35
1907	37	35
1908	22	20

There were sharp fluctuations in economic activity in the United States in the period concerned, but they were of fairly short duration and the average level of business activity in the various years did not change very much. Only for 1900, 1904 and especially 1908 were noticeable recessions recorded by Snyder's index.⁴⁹ The second column above gives the presumable emigrants' remittances in round figures. It seems that for several years large sums were received in this way thanks to the exceptionally large number of people emigrating in the previous years. Much more must have been received than was generally believed at the time.⁵⁰

For the years 1890 to 1892 figures are available regarding emigrants' remittances to the district of Vasa, one of the main emigration districts. They were collected by the Governor of the province and based on information supplied by some banks and a New York firm. According to this data the

⁴⁹ Carl Snyder, A new clearings index of business for fifty years, *Journal of the American Statistics Association*, September 1924, Vol. XIX, pp. 329-335.

⁵⁰ As pointed out by Hoppu in *Siirtolaisuuden merkitys maalle*.

remittances amounted to about 4.3–5.3 million marks annually,⁵¹ which is here assumed to have been the case throughout the 1890's, especially as it is close to the above estimate for 1899.

The corresponding expenditure of emigrants should be included under travel. It seems that generally emigrants took with them only the minimum of money necessary for the trip. In one-quarter to one-third and more of all cases the ticket had even been provided by somebody abroad.⁵² The emigrants were poor people and seldom was any money sent to them later, inherited or otherwise.⁵³

Government expenditure. While Finland was dependent on Russia she had no diplomatic service of her own. Only the Finnish Secretariat in St. Petersburg and the passport office had a regular budget. Including some other small items of a similar nature, these official costs rose from 0.4 million marks in the 1890's to 0.6 million in 1913. In addition, certain amounts were paid for the advancement of trade, including exhibitions, and to the benefit of Finns living abroad, such as to religious and social organizations and as scholarships. The amounts recorded below are minimum amounts as some items may be hidden under general headings in the published accounts, which are the only source of information available. In all, the known current expenditure increased slowly from 0.6 million marks in 1890 to 1.6 million in 1913. The amounts used for various purposes show little variation from year to year.⁵⁴

The only public investments were those of the railways and they are included in capital movements.

The most important item of official expenditure was the compensation that had to be paid to the Russian Treasury as a substitute for personal military service by Finns. The old Finnish Army was illegally dissolved in 1901 and after some years of political tension the Finnish Diet was forced to assign certain amounts annually to cover all the costs of the external defence of the country. An advance payment of 2 million marks was made in 1902, and from 1904 onwards substantial amounts were paid. In 1906 and 1907 the payments were interrupted for political reasons,⁵⁵ but in 1908 and 1909 the amounts were twice as large as in 1905. In 1904 an extra amount of one million marks was illegally levied for the care of sick Russian soldiers.⁵⁶

When the Finnish Army had been dissolved, its equipment was sold to the Russians and its buildings temporarily let to them. Payment was annually received from 1901 to 1909, but only in 1902 and 1909 were the receipts large enough to show up as income in the present statistics.⁵⁷

⁵¹ According to O.K. Kilpi, *Suomen siirtolaisuudesta*, Oma maa V, Porvoo 1910, p. 706.

⁵² *Annuaire statistique de Finlande*.

⁵³ Teijula, *ibidem*, pp. 905–906.

⁵⁴ *Ld.*, U.B., *Statsverkets tillstånd*.

⁵⁵ *Ld.* 1912, *Statsverkets tillstånd*, p. 45. – Nevanlinna, *Suomen valtion talous I*, p. 19.

⁵⁶ *Ld.* 1907, U.B., *Statsverkets tillstånd*, p. 34.

⁵⁷ *Ld.* U.B., *Statsverkets tillstånd* 1904, p. 13; 1907, p. 5; 1908, p. 24; 1909, p. 5.

The actual amount of expenditure by foreign governments in Finland, i.e. in effect the expenditure of Russia, is not known. The Governor General and his office were maintained by Finland, except in the period 1898–1904 when only his office was maintained. His salary in these years was paid by Russia, the amount being unknown.⁵⁸ Similarly, expenditure on the maintenance of the Russian military police⁵⁹ and certain expenditure on the housing of Russian troops stationed in Finland are excluded here, because the money spent stayed within the country. On the other hand, large amounts of Russian funds were used for their maintenance. In 1912 these costs were estimated at 26 million marks,⁶⁰ based on the number of troops and estimates of the amount spent per troop.⁶¹

Table 5. Government expenditure in 1890–1913, mill. mk.
(2.67 FIM = 1 ruble)

	Current expen- diture	Paid to Russia for military requirements	Total expen- diture	Receipts for army goods sold	Income from Russian army	Total receipts	Net receipts
1890	1	–	1	–	1	1	–
1891	1	–	1	–	4	4	3
1892	1	–	1	–	5	5	4
1893	1	–	1	–	4	4	3
1894	1	–	1	–	5	5	4
1895	1	–	1	–	4	4	3
1896	1	–	1	–	3	3	2
1897	1	–	1	–	3	3	2
1898	1	–	1	–	4	4	3
1899	1	–	1	–	0	0	–1
1900	1	–	1	–	0	0	–1
1901	1	–	1	0	1	1	–
1902	1	2	3	1	1	2	–1
1903	1	–	1	0	2	2	1
1904	1	13	14	0	5	5	–9
1905	1	10	11	0	2	2	–9
1906	1	–	1	0	1	1	–
1907	1	–	1	0	2	2	1
1908	1	20	21	0	4	4	–17
1909	1	20	21	1	1	3	–18
1910	1	11	12	–	6	6	–6
1911	1	12	13	–	4	4	–9
1912	1	13	14	–	4	4	–10
1913	2	14	16	–	2	2	–14

⁵⁸ Ld. 1904, Statsverkets tillstånd, pp. 31–32. – Nevanlinna, Suomen raha-asiat vuosina 1863–1904, pp. 612–613.

⁵⁹ Ld. 1909 II, U.B., Statsverkets tillstånd, pp. 28–29.

⁶⁰ Pihkala has estimated that in 1902–1912 the so-called "military millions" paid to Russia for military requirements took 71 million marks or 5 % of the income of the Finnish Government. Pihkala 1970 and 1977.

⁶¹ Hoppu, Suomen maksubilanssi, Yhteiskuntataloudellinen Aikakauskirja 1920, pp. 10–11.

3 Capital Movements

In the decades preceding World War I, lack of capital was a recognised fact, which made for a high rate of interest at home. This, of course, discouraged lending and investment abroad, assuming that there was any possibility or wish to do so.⁶² On the other hand, it made cheap foreign loans particularly desirable. Therefore it is no accident that the main long-term capital movements, as far as we know, consisted of borrowing abroad for certain long-term purposes such as railway construction and construction and building in general. Data on short-term official and banking capital are available from published sources, and some information is available on the financial relations of industry on the basis of an uncompleted study. However, the corresponding direct claims and liabilities of commerce remain beyond reach.

Up to 1960, the post-war balance of payments reporting system approved by the International Monetary Fund classified capital movements into an official and banking sector and a private sector. Official loans comprised loans raised by the central bank and state departments and agencies, or guaranteed by them, while banks consisted of commercial banks and other unofficial enterprises accepting short-term deposits. One of the reasons for considering the banks as belonging to the official sector seems to have been that in the post-World War II period, which was characterised by restrictions on foreign payments, the monetary authorities exerted control over the private commercial banks. Consequently, the foreign exchange resources of the banks may in effect have constituted part of the official reserves.⁶³ In the most recent years conditions have become freer, and the IMF has changed its classifications correspondingly.⁶⁴ Also, in the early part of this century, and earlier, the banks acted as independent institutions. It therefore seems appropriate to follow the more recent division of the IMF into private, local, state and banking capital. State guarantees do not affect the grouping. Neither is there any longer a major division into long-term and short-term obligations. Rather, the primary emphasis is on the sectoral division. For practical reasons the material is discussed here by main types of capital.

Bonds. Bonds had previously been placed abroad only by the state and, beginning in the 1880's, also by the Mortgage Society, but in the period 1893–1913 the state issued only five foreign bonds, while the mortgage banks, two of the commercial banks, several towns, including the capital, and some industrial concerns made a number of issues. Finnish bonds were issued through the intermediary of foreign banks and bankers, at first mainly in Germany, but later also in France, Scandinavia, mostly Sweden, and in England, Switzerland and Holland.

⁶² Wegelius, *Angående landets betalningsbilans*, p. 80. – August Ramsay, *Några synpunkter rörande kapitalanskaffningen för byggnadsindustrin i städerna*, *Ekonomiska Samfundets Tidskrift* 1902, III:1, pp. 49–61. – Molander, *Ekonomiska Samfundets Tidskrift* 1894, I:1, p. 40.

⁶³ International Monetary Fund, *Balance of Payments 1937, 1946 and 1947*, especially p. 7.

⁶⁴ International Monetary Fund, *Balance of Payments Manual 1960*, especially pp. 40–42.

Bonds were important enough to be observed in statistics and writings on economic matters. It has been possible to trace them one by one and to follow the changes in their nominal outstanding amount from year to year. The official Statistical Yearbook⁶⁵ used to give a list of the outstanding amounts of all bonds at the end of each year beginning in 1901, and with the help of other sources the external loans can be picked out separately from the list. Among the writings touching on this matter, an article by Neovius and a book by Thesleff have proved particularly useful.⁶⁶ The state loans are referred to in official accounts and other published documents of the Diet.

The mortgage banks and the commercial banks concerned published annual reports, as did the city of Helsinki. The individual accounts and reports have been followed as far as possible in order to obtain the actual amounts issued rather than the amounts granted as reported by the Statistical Yearbook and various other sources. This has been possible for most of the loans, and the exceptions should not seriously affect the result. On the contrary, thanks to the good sources of information available the present statistics on loans drawn and repaid is believed to be fairly complete.

Annual drawings and repayments of foreign bond loans between 1892 and 1913, by main groups of borrowers, are recorded in millions of marks. A detailed list of the loans drawn is presented in Appendix 2. The outstanding amounts of the loans at the end of each year are given in Appendix 4.

Industry issued most of its bonds at home, but beginning in 1898 nine enterprises raised foreign loans. These were relatively small and expensive loans, between 0.6 and 5.5 million marks and carrying interest at a rate of 5, 5 1/2 and 6 per cent. Six towns issued 17 foreign bonds in all. Most of the loans were fairly small, from 0.9 million marks upwards, but in the later years Helsinki raised larger amounts, up to a maximum of 25 million marks for one loan in 1912. The interest rates on loans raised by towns varied between 3 1/2 and 5 per cent. State loans were all raised by the Treasury, and all of them were intended for the financing of new railways. Their amount ranged from 10 to 55 million marks and they carried interest at a rate ranging from 3 to 4 1/2 per cent. The loan raised in 1898 was actually partly used for the conversion of two less favourable old loans, but these too had been used for railway construction at one time. The bonds issued by banks in foreign markets were all raised for mortgage institutions, either by separate mortgage banks or by two commercial banks to be used by their mortgage departments. They were relent to the banks' clients against mortgage in property. The loans numbered 17 and ranged in size from 5.0 to 15.8 million marks. They carried interest at a rate varying from 3 1/2 to 4 1/2 per cent.⁶⁷

⁶⁵ *Annuaire statistique de Finlande.*

⁶⁶ Arthur Neovius, *En återblick på obligationslånerörelsen i Finland*, *Ekonomiska Samfundets Tidskrift* 1915, pp. 335–367. – Rolf Thesleff, *Den finska penningmarknaden 1879–1903*, Helsingfors, 1909.

⁶⁷ For more information on bonds, see Hoffman (1971).

Table 6.

**Foreign bonds: drawings and repayments of loans in
1892–1913, mill. mk.**

	Loans drawn by					Loans repaid by					Net change
	Industry	Towns	State	Banks	Total	Industry	Towns	State	Banks	Total	
1892	-	4.5	0.7	-	5.2	-	-	1.0	0.3	1.3	3.9
1893	-	-	-	-	-	-	0.0	1.0	0.3	1.3	-1.3
1894	-	-	-	-	-	-	0.0	0.8	0.3	1.1	-1.1
1895	-	-	18.0	21.6	39.6	-	0.1	1.2	0.3	1.6	38.0
1896	-	2.9	-	9.2	12.1	-	0.0	1.2	0.4	1.6	10.5
1897	-	1.7	-	10.4	12.1	-	0.1	1.2	0.5	1.8	10.3
1898	1.2	4.2	55.0	5.6	66.0	-	0.1	24.3	0.5	24.9	41.1
1899	-	1.0	-	2.0	3.0	0.0	0.1	3.5	0.7	4.3	-1.3
1900	-	3.0	-	5.0	8.0	0.0	1.1	1.0	0.7	2.8	5.2
1901	-	-	25.0	2.7	27.7	0.0	0.1	1.1	0.8	2.0	25.7
1902	5.5	9.0	-	6.6	21.1	0.0	0.1	1.2	0.8	2.1	19.0
1903	2.4	3.9	10.0	19.5	35.8	0.1	0.2	1.3	13.3	14.9	20.9
1904	1.9	-	-	-	1.9	0.2	0.2	1.3	0.8	2.5	-0.6
1905	-	-	-	-	-	0.3	4.5	1.3	1.0	7.1	-7.1
1906	-	-	-	-	-	0.4	0.1	1.4	1.0	2.9	-2.9
1907	-	-	-	4.0	4.0	0.4	0.3	1.4	1.1	3.2	0.8
1908	3.5	-	-	0.2	3.7	0.4	0.3	1.4	1.2	3.3	0.4
1909	10.0	25.6	45.2	32.1	112.9	0.6	0.3	1.6	1.1	3.6	109.3
1910	-	3.0	-	4.9	7.9	0.7	0.4	1.7	1.4	4.2	3.7
1911	-	32.1	-	29.9	62.0	0.7	0.4	1.7	1.5	4.3	57.7
1912	0.6	-	-	-	0.6	0.8	0.6	1.7	1.8	4.9	-4.3
1913	-	-	-	-	-	0.9	0.7	1.7	1.7	5.0	-5.0

As the loans were not tied to any specific purchases abroad – as was the case until after the Second World War – they were mostly drawn in the full amount at the same time and sold to some domestic bank where the sum concerned was added to foreign reserves. On a few occasions the transfer was spread over two or more years. The mortgage institutions were to utilize their loans on several occasions, drawing on them only to the extent that the proceeds were relented to the final consumers of the loans.

The loans have been included here at their face value. Actually, the bonds were as a rule placed on the market at a discount, which in some cases was considerable, as for example when the state bonds of 1909 were sold at 11.5 per cent below par. The discount has been included together with interest under current payments on investments.

Another matter to be considered in connection with the issuing of foreign bonds is the amount of the loan not actually placed abroad but possibly held at home, by banks or funds or other entities. Often a domestic bank was active in the loan transaction, and it may have wanted to keep, or have had to keep, part of the bonds for a while at least, or some party, the bank or the borrower or a third party may have bought bonds at some later date when they were for sale at a favourable price. Up to 1904 inclusive statistics are available or can be directly calculated only regarding the holdings of domestic bonds in foreign currency of the Bank of Finland and the commercial banks, but for each of the years from 1905 to 1913 a special inquiry gives the bond holdings of the

Treasury, banks, towns, industry and certain other groups.⁶⁸ During this period the holdings of the Bank of Finland and the commercial banks varied between 39 and 49 per cent of the total domestic holdings of all groups, being in the first few years close to 40 per cent of the total.⁶⁹ The probable total holdings from 1893 to 1904 have been roughly estimated assuming that the proportion between the holdings of the banks and those of others was then approximately the same as in the following years. The total holdings were so small that in practice an error of a few per cent is not of any great significance, especially considering that it is only the annual change in the holdings that affects external capital movements.

The domestic holdings of domestic bonds issued abroad in foreign currency are actually not foreign assets in the sense of the balance of payments estimate, but their inclusion in the foreign capital balance counterbalances two other errors in the balance. Part of the new bonds issued do not bring in any foreign capital as they are sold at home and added to previous bond holdings. In consequence, the only known amount for the new bonds issued that year, i.e. the gross amount received by the borrower, overstates the amount that can be considered as a foreign receipt. On the other hand, part of the annual amortisations pertains to bonds held at home and does not involve a foreign payment. In this case the only known payment, i.e. the gross payment by the borrower, is also too large. Neither the domestic part of the receipts nor the domestic part of the payments are known, but their net amount is the change in the domestic bond holdings, which is therefore recorded as a change in foreign assets, partly estimated and partly according to existing statistics. These changes in bond holdings should also cover advance repurchases of bonds outside the amortisation schedule, but there may be exceptions not covered by the estimation method applied. This is the case if the borrower himself has rebought extra amounts of his bonds, e.g. if they have been offered for sale at rates favourable to him. In addition, the bond holdings have here been recorded at their nominal value without considering possible reductions in their repurchase price.

The holdings of foreign bonds are known in regard to the Treasury, the Bank of Finland and, by estimation, the commercial banks from 1893 to 1904. For the later years of the pre-war period the amounts held by the Treasury, the Bank of Finland and other banks are known, as also are those held by other agents such as insurance companies, savings banks, towns and pensions funds. However, the Treasury and the Bank of Finland owned all but between 14 and 0.3 per cent of the total holdings, which indicates that the rest need not be considered for the earlier years. Private persons may have owned foreign bonds about which nothing is known, but capitalists are said to have sold their bonds

⁶⁸ Statistique des emprunts à obligations pour les années 1905-1913. - Bankfullmäktiges berättelser till ständernas bankutskott.

⁶⁹ Lantdagshandlingar IV, UB, VM XXXIII, 1900; VM I, 1904-1905. The accounting value of the holdings has been adjusted upwards so as to correspond to their assumed nominal value. For the commercial banks these sources give the total holdings of domestic bonds in foreign currency and foreign bonds, and the foreign bonds alone are approximately known on the basis of a manuscript in the Bank of Finland Institute for Economic Research. The first category is arrived at by subtraction.

in 1890, 1891 and 1892 when the Finnish banks increased the rate of interest on deposits. The Treasury also reduced its foreign bond holdings in the early 1890's, selling most of its bonds in order to ease the pressure of a recession,⁷⁰ but from 1893 onwards the investments of the Treasury and the banks in foreign bonds again increased until 1908 when there was a further slight reduction. On the whole the holdings seem to have been small and changes in them slow. Besides bonds, some foreign shares may have been held, but no information is available on any securities other than bonds.

The holdings of domestic bonds⁷¹ in foreign currency and foreign bonds and changes in them are shown below, either as estimates or according to statistics available from 1892 to 1913, in millions of marks.⁷²

⁷⁰ Ossian Donner, Kunna vi fortsätta med järnvägsbyggande utan att upptaga lån?, *Ekonomiska Samfundets Tidskrift* IV:5, 1906, pp. 73–87. Remarks by Wegelius, *ibidem*, p. 85. – M. Molander, Om de principer, som följas vid det handelsstatistiska materialets bearbetning, och möjligheten att ur Finlands import- och exportvärden sluta sig till dess handelsbalans med utlandet, *Ekonomiska Samfundets Tidskrift* I:1, 1894, p. 40. – Bankutskottets betänkande No 5 öfver Finlands Banks berättelse för 1891–1893, pp. 7–8.

⁷¹ From 1893 to 1904 the Treasury's holdings of foreign bonds are shown according to a manuscript in the Bank of Finland Institute for Economic Research. The bond holdings of the Bank of Finland are recorded at their book value as in *Bankfullmäktiges berättelser*, raised by an arbitrary 20 per cent to approach their face value. The rest, which would consist of the holdings of the commercial banks, is believed to constitute 15 per cent of the total holdings of foreign bonds. The sum of the commercial banks' holdings of domestic bonds in foreign currency and foreign bonds is shown according to *Lantdagens Handlingar* IV, UB., so that all of them have been included in either part of the table above. From 1905 to 1913 the figures are according to *Obligationsstatistik*, p. 3.

⁷² The Bank of Finland's bond holdings are according to *Bankfullmäktiges berättelser* and those of the commercial banks according to *Lantdagens Handlingar* IV, Table IIA. These two categories are presumed to account for 40 per cent of all holdings in 1893–1904, as they were approximately in the later part of the period for which statistics are available in *Obligationsstatistik*.

Table 7.

**Holdings of foreign currency bonds in 1892–1913,
mill mk.**

	Holdings of foreign bonds		Holdings of domestic bonds in foreign currency	
	At end of year	Change in year	At end of year	Change in year
1892	..	..	24.0	..
1893	11.4	..	15.8	-8.2
1894	22.8	11.4	20.3	4.5
1895	42.9	20.1	28.8	8.5
1896	48.4	5.5	39.8	11.0
1897	58.1	9.7	35.3	-4.5
1898	75.5	17.4	25.5	-9.8
1899	76.8	1.3	12.8	-12.7
1900	72.4	-4.4	32.0	19.2
1901	68.7	-3.7	31.0	-1.0
1902	80.2	11.5	28.8	-2.2
1903	85.5	5.3	21.5	-7.3
1904	<u>85.4</u>	-0.1	<u>20.8</u>	-0.7
1905	85.1	<u>-0.3</u>	31.5	<u>10.7</u>
1906	85.5	0.4	34.8	3.3
1907	86.1	0.6	41.6	6.8
1908	76.7	-9.4	42.6	1.0
1909	72.9	-3.8	50.6	8.0
1910	71.9	-1.0	48.6	-2.0
1911	72.8	0.9	47.6	-1.0
1912	72.0	-0.8	47.3	-0.3
1913	71.6	-0.4	46.3	-1.0

Direct investments. Very little is known of any Finnish investments abroad. Shortage of capital and a high rate of interest at home was a check on capital export. On the other hand there were few and modest foreign investments in Finland. The uncertain and depressed political situation, and the slow economic progress discouraged the inflow of foreign capital, particularly as there was no information available of dormant factors. Not until shortly before World War I was a foreign investment of some importance planned, but it was checked by the outbreak of war. Strong Russian interests then competed for waterpower in the south-east of the country, but only preliminary investigations had been initiated before the enterprise was cut short.⁷³

Of the foreign-owned firms of this period, Ab Gutzeit & Co is one of the best known. It was founded in 1872 with Norwegian capital and, still largely in Norwegian hands, grew steadily and was finally purchased by the Finnish state in 1918. A large wood-working enterprise being owned by foreigners was then of such general concern that the Diet decided to get it into Finnish ownership.

⁷³ Neovius, Är utländsk kapitalimport önskvärd, Mercator 1925/7, pp. 157–158. – Frågan om utnyttjande av vattenkraften i Vuoksen, Mercator 1914/50, pp. 998–1000.

The purchase and the publicity in connection with it indicate that Gutzeit was an exception as a foreign investment. And still, the foreign capital invested was not very large. In addition to the original share capital (2 million marks), capital was brought in only twice, approximately 3 million marks in 1909 and 4 million in 1912. The rest of the firm's capital increase was accomplished by transfers from saved-up reserves and domestic issues.⁷⁴ In 1902 Gutzeit for 4.4 million marks bought Utra Wood (1866 and 1881) which was owned by a company in S:t Petersburg.⁷⁵

A run through the pages of business calendars from various years of the period confirms that foreign ownership of firms active in Finland was actually an exception, at least as far as direct investments were concerned.⁷⁶ The residence of anonymous shareholders, of course, is not discernible by aid of this source. There seems to have been a handfull of small enterprises, most of them water and steam mills and saw mills, and blast furnaces, which were owned by Russians. There were, however, also some few industrial firms which apparently to some extent did cause capital movements across the border. Pitkäranta copper and tin works, in Impilahti by Lake Ladoga, founded in 1823, and a glass factory (1887) affiliated with it had a boom, as the whole branch, from 1894 to 1903. The firm changed hands several times in the period investigated, and in 1904 production was discontinued, but details have not been available regarding possible changes in the foreign investments involved. The output, which had been close on one million marks in 1890, was somewhere around 2½ million annually shortly before production was closed. There was also Strömsdal (1860) in Nilsjä, a Russian-owned blast furnace with affiliated branches, which in 1898 had a production value of 0.7 million marks. Some time in the beginning of the new century it was turned into a share company which in 1903 was reported as being insolvent. In Impilahti, Pitkäranta, there was further Nurmisaari saw mill (1876), the output of which was 0.8 million marks in 1903. It stayed in the same hands at least up to that year but later disappears. These examples show that the foreign investments in industry that did take place were not of essential importance as capital movements.

Large amounts of money are said to have been invested in Finland by Finns who had made use of the possibilities offered by remunerative economic activity in Russia in the decades before World War I. No statistics are available about the size of these earnings. Well known within this group of Finns is Hugo Standertskjöld, who while an officer in the Russian army was made supervisor of large state-owned factories for the production of weapons and ammunition. He soon took them over as leaseholder and eventually as owner of the place. Thanks to great efficiency and favourable contracts, he collected a large fortune. He, indeed, finished off this undertaking before 1890, but he retained profitable engagements until the war. At home he bought large landed

⁷⁴ Ab W. Gutzeit & Co 1872–1922, Helsinki 1924, especially pp. 74, 86 and 101.

⁷⁵ Ibidem, pp. 62–64. Previous owners John Hubbard and Mr. Durant.

⁷⁶ Victor Forselius Handelskalender, Åbo 1890, 1898 and 1903. – Mercators Handels- och Industrikalender 1913–1914. – FOS XVIII. – Finlands metallindustri och Finlands Metallindustriförening 1918–1938, Helsingfors 1938, pp. 11–13.

properties, town houses, industries and shares, and he supported a score of relatives and friends. On the whole he lived as a very wealthy man until his death in 1931.⁷⁷

The Russian investments into summer houses in Finland have been mentioned above under foreign travel, because there seems to be no basis for a separate estimate of their value. By the time Finland gained her independence, the Russian-owned houses on the Carelian Isthmus numbered 7 000 and the corresponding ground was 54 000 hectares. Similarly the Russian military expenditure on fortifications have been discussed under government expenditure, as far as anything is known about them. In neither case did the investments, strictly speaking, yield any economic profit.

In connection with the Finnish Government's expenditure abroad the railway extension line from the Finnish border to S:t Peterburg was mentioned above as being Finnish property. The cost of it was finally settled already in 1882.⁷⁸ Later it demanded certain additional investments, which in the first decade studied were, however, below half a million marks per annum, except in 1894, when 0.7 million marks were spent. Later somewhat more was mostly spent annually.

This survey of the numerically known direct investments results in the following meagre table.

Direct investments made in 1892-1913, mill. mk.

	Change in assets	Change in liabilities	Change in net assets
1892	.1	-	.1
1893	.1	-	.1
1894	.7	-	.7
1895	.1	-	.1
1896	.3	-	.3
1897	.5	-	.5
1898	.2	-	.2
1899	.1	-	.1
1900	.0	-	.0
1901	.1	-	.1
1902	.1	-4.4	4.5
1903	3.0	-	3.0
1904	.3	-	.3
1905	4.1	-	4.1
1906	.9	-	.9
1907	1.5	-	1.5
1908	7.3	-	7.3
1909	1.2	3.0	-1.8
1910	1.5	-	1.5
1911	1.2	-	1.2
1912	1.5	3.9	-2.4
1913	1.5	-	1.5

⁷⁷ Standertskjöld, Johan, *Kaukas 1873-1944 med en minnesteckning över Hugo Standertskjöld av Hugo E. Pipping*, Helsingfors, 1973.

⁷⁸ Nevanlinna, *Suomen raha-asiat*, pp. 363-364.

Short-term official and banking capital and gold. Movements in the short-term capital of the state and banks can be reconstructed fairly well on the basis of published accounts and statistics.

State finances were managed by means of a number of separate funds, each with its own accounting. The main one was the Treasury Fund, and the other one of any importance in this connection the Transportation Fund. The latter, but also the Treasury Fund and other funds, held current accounts and deposits with foreign banks and bankers. When long-term loans were raised, the proceeds not immediately used were held on bank accounts until utilised for their final purpose. This is why the largest funds belonged to the Transportation Fund because the state loans were raised for railway construction. The state also held small amounts of gold in the early 1900's as bullion at the Mint. However, the amounts quoted also include unknown amounts of silver, which cannot be eliminated as detailed records are no longer available.

No ordinary short-term liabilities can be traced in the state accounts, but in 1908 a short-term credit of 16.0 million marks was raised. The Diet of 1905-1906 had authorised the government to procure a foreign loan for the needs of the railways, but as money markets were heavily strained abroad, the negotiations did not reach a successful conclusion even in 1908. Therefore a one-year credit was raised in France, through the issue of 5 1/2 per cent Treasury bills and repaid in 1909 using the proceeds of a long-term loan eventually obtained.⁷⁹

⁷⁹ Lantdagens Handlingar IV, for liabilities see 1910, IV:6 and 1911, IV:6.

Table 8.

**Short-term foreign accounts of the state in 1890–1913,
mill mk.**

	Assets					Liabilities		Net assets, change in the year
	Deposits	Gold	Foreign bills	Total	Change in the year	Short- term	Change in the year	
1890	6.6	–	–	6.6	–	–	–	–
1891	3.3	–	–	3.3	–3.3	–	–	–3.3
1892	0.5	0	–	0.5	–2.8	–	–	–2.8
1893	1.5	0	–	1.5	1.0	–	–	1.0
1894	0.6	–	0.1	0.7	–0.8	–	–	–0.8
1895	10.4	–	0.2	10.6	9.9	–	–	9.9
1896	13.8	–	–	13.8	3.2	–	–	3.2
1897	4.6	–	–	4.6	–9.2	–	–	–9.2
1898	23.3	–	–	23.3	18.7	–	–	18.7
1899	12.3	–	–	12.3	–11.0	–	–	–11.0
1900	1.3	–	–	1.3	–11.0	–	–	–11.0
1901	16.3	0.1	–	16.4	15.1	–	–	15.1
1902	5.5	0.1	–	5.6	–10.8	–	–	–10.8
1903	10.8	0.9	–	11.7	6.1	–	–	6.1
1904	11.9	0.5	–	12.4	0.7	–	–	0.7
1905	7.9	0.2	–	8.1	–4.3	–	–	–4.3
1906	4.2	0.3	–	4.5	–3.6	–	–	–3.6
1907	0.7	0.4	–	1.1	–3.4	–	–	–3.4
1908	10.4	0.1	–	10.5	9.4	16.0	16.0	–6.6
1909	15.9	0.1	–	16.0	5.5	–	–16.0	21.5
1910	6.3	–	–	6.3	–9.7	–	–	–9.7
1911	4.1	–	–	4.1	–2.2	–	–	–2.2
1912	3.3	–	–	3.3	–0.8	–	–	–0.8
1913	5.4	–	–	5.4	2.1	–	–	2.1

Table 9. Short-term accounts of private banks in 1890-1913, mill. mk.

	Commercial banks								Mortgage banks		Net assets, change in the year
	Assets						Liabilities	Change in the year	Assets	Change in the year	
	Foreign correspondents	Notes and coupons	Gold coin	Foreign bills	Total	Change in the year					
1890	..	..	..	..	10.0	..	2.0	..	..	..	..
1891	5.2	0.2	-	3.3	8.7	-1.3	2.4	0.4	-	-	-1.7
1892	5.4	0.3	-	5.2	10.9	2.2	2.8	0.4	-	-	1.8
1893	10.8	0.4	-	6.6	17.8	6.9	1.0	-1.8	-	-	8.7
1894	13.1	0.6	-	6.5	20.2	2.4	1.4	0.4	-	-	2.0
1895	21.1	0.7	-	7.8	29.6	9.4	1.9	0.5	-	-	8.9
1896	20.9	0.9	-	10.8	32.6	3.0	2.5	0.6	0.2	0.2	2.6
1897	18.0	0.8	-	10.4	29.2	-3.4	3.0	0.5	0.3	0.1	-3.8
1898	9.9	0.9	-	8.8	19.6	-9.6	5.3	2.3	0.1	-0.2	-12.1
1899	11.4	0.7	-	10.3	22.4	2.8	7.7	2.4	0.5	0.4	0.8
1900	9.8	1.5	-	10.5	21.8	-0.6	6.0	-1.7	0.5	-	1.1
1901	12.8	1.0	-	12.7	26.5	4.7	4.7	-1.3	0.4	-0.1	5.9
1902	10.3	0.9	-	13.1	24.3	-2.2	3.6	-1.1	0.3	-0.1	-1.2
1903	12.9	0.6	-	15.1	28.6	4.3	2.8	-0.8	0.4	0.1	5.2
1904	17.6	1.0	-	13.8	32.4	3.8	4.5	1.7	0.4	-	2.1
1905	22.4	1.0	-	9.7	33.1	0.7	4.5	-	0.4	-	0.7
1906	25.2	1.0	-	12.4	38.6	5.5	5.5	1.0	0.4	-	4.5
1907	10.8	1.0	-	12.6	24.4	-14.2	10.6	5.1	0.4	-	-19.3
1908	6.7	1.0	-	11.1	18.8	-5.6	21.6	11.0	0.4	-	-16.6
1909	15.3	1.0	-	13.4	29.7	10.9	14.9	-6.7	0.5	0.1	17.7
1910	16.4	1.1	0.4	17.9	35.8	6.1	15.9	1.0	0.5	-	5.1
1911	23.8	1.2	0.4	19.5	44.9	9.1	11.8	-4.1	0.6	0.1	13.3
1912	16.3	1.2	0.6	16.6	34.7	-10.2	15.7	3.9	0.6	-	-14.1
1913	19.6	1.3	0.4	30.0	51.3	16.6	16.2	0.5	0.5	-0.1	16.0

4 Conclusions

The decades around the turn of the century 1800/1900 were marked by an allround increase in economic activity in Finland, accompanying growth in population and a fast advancing technical development. The consequent effects on trade, transport, travel and other forms of economic intercourse with foreign countries are mirrored by the foreign balance of payments. Foreign trade increased from year to year, practically without exceptions, imports as well as exports. Imports allways exceeded exports, so that the deficit had to be covered by income from other sources. The chief gross amounts of income were provided by shipping, foreign travel and emigrants remittances. Particularly in the early part of the period concerned considerable amounts of imports were also financed by borrowing abroad, especially some building projects. The amounts outstanding of foreign loans were steadily increasing during the period, as the loans were raised on long terms and therefor accumulated. In some years repayments did indeed surpass the new loans raised, but only by small amounts. Short-term foreign accounts of various institutions moved up and down more often than long-term accounts. Net assets actually meant a negative amount in most cases, i.e. liabilities exceeded assets. Only in the first few years studied the case was the opposite.

In theory the result of all current transactions, i.e. those in goods, services and transfer payments with foreign countries, should be offset by the net movements on all capital accounts in the same year. In other words, a net surplus of payments abroad for current transactions should equal the amount of increase in net capital holdings, either as an increase in assets or a decrease in liabilities. Vice versa, a deficit in current transactions is financed by drawings on assets or an increase in credits. The result should be zero for the year.

However, the calculations above are not exact in this respect. So many free evaluations, not to say sheer guesses, have been made in the compilation of various series of the balance, that full exactness cannot be expected. The final survey is presented in Table 10.

The last column of Table 10 gives the portion of the "change in net assets not accounted for by net receipts from goods and services" and transfer payments. The rise in net assets may be so large that recorded net receipts of the year from current transactions are not sufficient to cover it. The discrepancy is then entered without any prefix in the last column of Table 10. If on the contrary the net rise in assets is not large enough to comprise the net receipts from current transactions, the discrepancy is marked with a minus sign.

The amounts not accounted for in the final summary of the balance of payments studied above, are not very large if compared to the total amounts of various kinds moving between Finland and other countries each year. Rather, it is surprising that the discrepancies at times are so small that they may even be considered insignificant in proportion to the total turnover in question. In some cases there may have been a difference in time of the different recordings of the same transaction, so that the discrepancy is levelled out as between years. In the latter part of the period studied net assets, however, consistently increased more than the recorded net receipts from goods and services sufficed to finance. As referred to in several connections in the text above, the transactions with Russia probably are not known to their full extent. Also, money invested abroad but

not known of may have been taken home, as similarly money earned by Finns active in Russia in various capacities. Or as likely, evaluations of various series of data have been too pessimistic. There may be systematic misjudgements or occational transactions not noticed.

Table 10. Balance of payments in 1890–1913, mill. mk.

	Total recorded assets	Total recorded liabilities	Recorded net assets	Change in recorded net assets	Additional		Total change in net assets	Net receipts of goods and services	Changes in net assets not accounted for by net receipts from goods and services
					assets, outward investments (State)	liabilities, inward investments (Private)			
1890	..	99.2	..	..	..	..	..	..	..
1891	..	99.0	..	..	..	..	..	..	..
1892	..	113.2	..	..	0.1	-	..	-29.0	..
1893	89.8	102.6	-12.8	-	0.1	-	..	9.0	..
1894	113.3	99.3	14.0	26.8	0.7	-	27.5	21.0	6.5
1895	162.7	138.2	24.5	10.5	0.1	-	10.6	14.0	-3.4
1896	191.4	149.7	41.7	17.2	0.3	-	17.5	9.0	8.5
1897	186.7	161.2	25.5	-16.2	0.5	-	-15.7	-11.0	-4.7
1898	210.2	204.2	6.0	-19.5	0.2	-	-19.3	-36.0	16.7
1899	173.0	204.7	-31.7	-37.7	0.1	-	-37.6	-48.0	10.4
1900	182.9	208.5	-25.6	6.1	0.0	-	6.1	-38.0	44.1
1901	204.2	232.9	-28.7	-3.1	0.1	-	-3.0	0.0	-3.0
1902	216.7	251.1	-34.4	-5.7	0.1	-4.4	-1.2	4.0	-5.2
1903	227.7	271.3	-43.6	-9.2	3.0	-	-6.2	-2.0	-4.2
1904	217.7	272.4	-54.7	-11.1	0.3	-	-10.8	-13.0	-2.2
1905	246.8	265.4	-18.6	36.1	4.1	-	40.2	36.0	4.2
1906	263.4	263.3	0.1	18.7	0.9	-	19.6	41.0	-21.4
1907	239.0	269.3	-30.3	-30.4	1.5	-	-28.9	-32.0	3.1
1908	223.9	307.2	-83.3	-53.0	7.3	-	-45.7	-66.0	21.3
1909	277.7	383.9	-106.2	-22.9	1.2	3.0	-24.7	-68.0	43.3
1910	273.2	388.7	-115.5	-9.3	1.5	-	-7.8	-15.0	7.0
1911	288.5	441.3	-152.8	-37.3	1.2	-	-36.1	-48.0	11.9
1912	260.3	441.0	-180.7	-27.9	1.5	3.9	-30.3	-55.0	24.7
1913	297.2	446.9	-149.7	31.0	1.5	-1.0	33.5	11.0	22.5

Appendix 1

Summary of goods, services and transfer payments in 1890–1913, mill. mk

	Merchandise			Travel			Transport			Investment income		
	Receipts	Payments	Net receipts	Receipts	Payments	Net receipts	Receipts	Payments	Net receipts	Receipts	Payments	Net receipts
1890	92	140	-48	..	..	..	..	..	..	..	..	..
1891	103	146	-43	..	..	..	..	..	..	..	..	..
1892	93	145	-52	11	2	9	14	6	8	1	4	-3
1893	113	126	-13	11	2	9	13	6	7	2	4	-2
1894	135	138	-3	11	2	9	14	6	8	2	4	-2
1895	142	150	-8	11	3	8	15	7	8	3	5	-2
1896	158	172	-14	11	4	7	17	8	9	5	5	-
1897	167	202	-35	11	4	7	19	8	11	5	6	-1
1898	178	237	-59	11	4	7	20	9	11	6	10	-4
1899	183	251	-68	11	7	4	23	10	13	6	7	-1
1900	195	270	-75	20	6	14	27	11	16	6	8	-2
1901	184	215	-31	20	7	13	21	9	12	6	10	-4
1902	199	233	-34	20	9	11	21	9	12	6	10	-4
1903	212	268	-56	30	7	23	24	10	14	6	11	-5
1904	215	267	-52	25	6	19	24	10	14	6	10	-4
1905	247	268	-21	40	8	32	25	9	16	6	8	-2
1906	280	314	-34	45	7	38	28	10	18	7	8	-1
1907	265	379	-114	52	7	45	28	11	17	7	8	-1
1908	243	364	-121	42	5	37	28	11	17	6	8	-2
1909	255	367	-112	52	8	44	27	11	16	7	22	-15
1910	288	384	-96	63	8	55	29	12	17	7	14	-7
1911	318	446	-128	58	5	53	35	13	22	8	19	-11
1912	338	470	-132	58	5	53	38	15	23	5	15	-10
1913	402	495	-93	83	8	77	44	17	27	5	15	-10

continued

Appendix 1, continued

	Government, n.i.e.			Gifts & emigrants' remittances			Total		
	Receipts	Payments	Net receipts	Receipts	Payments	Net receipts	Receipts	Payments	Net receipts
1890	1	1	--	..	..	..	..	..	..
1891	4	1	3	..	..	..	..	..	..
1892	5	1	4	5	--	5	129	158	-29
1893	4	1	3	5	--	5	148	139	9
1894	5	1	4	5	--	5	172	151	21
1895	4	1	3	5	--	5	180	166	14
1896	3	1	2	5	--	5	199	190	9
1897	3	1	2	5	--	5	210	221	-11
1898	4	1	3	5	--	5	224	261	-36
1899	0	1	-1	5	--	5	228	276	-48
1900	0	1	-1	10	--	10	258	296	-38
1901	1	1	--	10	--	10	242	242	--
1902	2	3	-1	20	--	20	268	264	4
1903	2	1	1	20	--	20	294	297	-3
1904	5	14	-9	20	--	20	295	307	-12
1905	2	11	-9	20	--	20	340	304	36
1906	1	1	--	20	--	20	381	340	41
1907	2	1	1	20	--	20	374	406	-32
1908	4	21	-17	20	--	20	343	409	-66
1909	3	21	-18	18	--	18	362	429	-67
1910	6	12	-6	22	--	22	415	430	-15
1911	4	13	-9	24	--	24	447	496	-49
1912	4	14	-10	21	--	21	464	519	-55
1913	2	16	-14	25	--	25	561	551	10

Appendix 2

Summary of movements in capital and monetary gold in 1890–1913, mill. mk

	Private			Towns	State					Bank of Finland		
	Assets	Liabilities		Liabilities	Assets			Liabilities		Assets	Liabilities	
	Foreign bonds	Bond loans	Investment	Bond loans	Foreign bonds	Investment	Short-term accts	Bond loans	Short-term accts	Foreign bonds	Short-term accts	Short-term accts
1890	..	..	..	..	..	..	..	..	..	..	..	..
1891	..	..	..	-	..	..	-3.3	-0.9	..	..	-2.3	-
1892	..	-	-	4.5	..	0.1	-2.8	-1.0	-	..	6.7	9.9
1893	..	-	-	-	..	0.1	1.0	-1.0	-	-2.5	-3.6	-7.5
1894	..	-	-	-	0.1	0.7	-0.8	-0.8	-	7.5	6.4	-2.6
1895	..	-	-	-0.1	4.4	0.1	9.9	16.8	-	13.5	1.3	0.4
1896	..	-	-	2.9	1.8	0.3	3.2	-1.2	-	0.7	2.9	0.4
1897	..	-	-	1.7	5.8	0.5	-9.2	-1.1	-	2.2	4.6	0.5
1898	..	1.2	-	4.1	18.1	0.2	18.7	30.7	-	-1.8	10.1	-0.4
1899	..	-	-	0.9	1.0	0.1	-11.0	-3.5	-	-2.5	-13.7	-0.6
1900	..	-	-	1.9	-1.6	0.0	-11.0	-1.0	-	0.2	0.2	0.3
1901	..	-	-	-0.1	-1.9	0.1	15.1	23.9	-	-1.0	6.0	-
1902	..	5.2	-4.4	8.9	8.6	0.1	-10.8	-1.2	-	3.7	17.5	0.3
1903	..	2.3	-	3.7	4.0	3.0	6.1	8.7	-	-1.3	5.2	0.1
1904	..	1.7	-	-0.2	0.2	0.3	0.7	-1.3	-	-	-13.6	-
1905	..	-0.3	-	-4.5	1.8	4.1	-4.3	-1.3	-	-0.4	23.1	0.1
1906	-0.1	-0.4	-	-0.1	0.3	0.9	-3.6	-1.4	-	0.4	11.1	-0.2
1907	-	-0.4	-	-0.3	0.2	1.5	-3.4	-1.4	-	2.6	-14.0	0.1
1908	-	3.1	-	-0.3	-0.4	7.3	9.4	-1.4	16.0	-4.7	-10.8	10.5
1909	-0.7	9.4	3.0	25.3	-1.0	1.2	5.5	43.6	-16.0	-0.2	33.2	-9.9
1910	-	-0.7	-	2.6	-3.1	1.5	-9.7	-1.7	-	2.4	2.0	0.1
1911	-	-0.7	-	31.7	-	1.2	-2.2	-1.7	-	-0.1	8.5	-1.0
1912	-	-0.2	3.9	-0.6	-0.1	1.5	-0.8	-1.7	-	-0.6	-16.2	0.1
1913	-	-0.9	-	-0.7	-	1.5	2.1	-1.7	-	-0.7	19.7	10.4

continued

Appendix 2, continued

	Other banks				Unallocated assets	Total assets				Total liabilities				Net assets
	Assets		Liabilities		Holdings of Finnish bonds in foreign currencies	Bonds in foreign currency	Investment	Short-term accts	Total	Bond loans	Investment	Short-term accts	Total	
	Foreign bonds	Short-term accts	Bond loans	Short-term accts										
1890	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1891	..	-1.3	0.1	0.4	..	..	..	-6.9	..	-0.8	..	0.4	-0.4	..
1892	..	2.2	0.4	0.4	..	..	0.1	6.1	..	3.9	-	10.3	14.2	..
1893	-0.2	6.9	-0.3	-1.8	-8.2	..	0.1	4.3	..	-1.3	-	-9.3	-10.6	..
1894	3.4	2.4	-0.3	0.4	4.5	15.5	0.7	8.0	24.2	-1.1	-	-2.2	-3.3	27.5
1895	2.4	9.4	21.3	0.5	8.5	28.8	0.1	20.6	49.5	38.0	-	0.9	38.9	10.6
1896	5.9	3.2	8.8	0.6	11.0	19.4	0.3	9.3	29.0	10.5	-	1.0	11.5	17.5
1897	-0.3	-3.3	9.9	0.5	-4.5	3.2	0.5	-7.9	-4.2	10.5	-	1.0	11.5	-15.7
1898	-2.0	-9.8	5.1	2.3	-9.8	4.5	0.2	19.0	23.7	41.1	-	1.9	43.0	-19.3
1899	-1.5	3.2	1.3	2.4	-12.7	-15.7	0.1	-21.5	-37.1	-1.3	-	1.8	0.5	-37.6
1900	3.5	-0.6	4.3	-1.7	19.2	21.3	0.0	-11.4	9.9	5.2	-	-1.4	3.8	6.1
1901	-0.5	4.6	1.9	-1.3	-1.0	-4.4	0.1	25.7	21.4	25.7	-	-1.3	24.4	-3.0
1902	-2.0	-2.3	5.8	-1.1	-2.2	8.1	0.1	4.4	12.6	19.0	-4.4	-0.8	13.8	-1.2
1903	-0.1	4.4	6.2	-0.8	-7.3	-4.7	3.0	15.7	14.0	20.9	-	-0.7	20.2	-6.2
1904	-0.4	3.8	-0.8	1.7	-0.7	-0.9	0.3	-9.1	-9.7	-0.6	-	1.7	1.1	-10.8
1905	-3.5	0.7	-1.0	-	10.7	8.6	4.1	19.5	32.2	-7.1	-	0.1	-7.0	39.2
1906	-0.3	5.5	-1.0	1.0	3.3	3.6	0.9	13.0	17.5	-2.9	-	0.8	-2.1	19.6
1907	-2.1	-14.2	2.9	5.1	6.5	7.2	1.5	-31.6	-22.9	0.8	-	5.2	6.0	-28.9
1908	-4.3	-5.6	1.0	11.0	1.3	-8.1	7.3	-7.0	-7.8	2.4	-	37.5	39.9	-47.7
1909	-2.0	11.0	31.0	-6.7	8.0	4.1	1.2	49.7	55.0	109.3	3.0	-32.6	79.7	-24.7
1910	-0.2	6.1	3.5	1.0	-2.0	-2.9	1.5	-1.6	-3.0	3.7	-	1.1	4.8	-7.8
1911	0.9	9.2	28.4	-4.1	-1.0	-0.2	1.2	15.5	16.5	57.7	-	-5.1	52.6	-36.1
1912	-	-10.2	-1.8	3.9	-0.3	-1.0	1.5	-27.2	-26.7	-4.3	3.9	4.0	3.6	-30.3
1913	0.3	16.5	-1.7	0.5	-1.0	-1.4	1.5	38.3	38.4	-5.0	-	10.9	5.9	-32.5

Appendix 3

Summary of foreign assets at the end of 1890–1913, mill. mk

	Private	State			Bank of Finland			Other Banks			Unallocated assets
	Foreign bonds	Foreign bonds	Deposits, gold and foreign bills	Total	Foreign bonds	Short-term accounts and gold	Total	Foreign bonds	Short-term accounts	Total	Holdings of Finnish bonds in foreign currencies
1890	..	..	6.6	..	..	37.8	..	..	10.0	..	..
1891	..	..	3.3	..	..	35.5	..	..	8.7	..	..
1892	..	..	0.5	..	4.4	42.2	46.6	6.4	10.9	17.3	24.0
1893	..	8.0	1.5	9.5	1.9	38.6	40.5	6.2	17.8	24.0	15.8
1894	..	8.1	0.7	8.8	9.4	45.0	54.4	9.6	20.2	29.8	20.3
1895	..	12.5	10.6	23.1	22.9	46.3	69.2	12.0	29.6	41.6	28.8
1896	..	14.3	13.8	28.1	23.6	49.2	72.8	17.9	32.8	50.7	39.8
1897	..	20.1	4.6	24.7	25.8	53.8	79.6	17.6	29.5	47.1	35.3
1898	..	38.2	23.3	61.5	24.0	63.9	87.9	15.6	19.7	35.3	25.5
1899	..	39.2	12.3	51.5	21.5	50.2	71.7	14.1	22.9	37.0	12.8
1900	..	37.6	1.3	38.9	21.7	50.4	72.1	17.6	22.3	39.9	32.0
1901	..	35.7	16.4	52.1	20.7	56.4	77.1	17.1	26.9	44.0	31.0
1902	..	44.3	5.6	49.9	24.4	73.9	98.3	15.1	24.6	39.7	28.8
1903	..	48.3	11.7	60.0	23.1	79.1	102.2	15.0	29.0	44.0	21.5
1904	..	48.5	12.4	60.9	23.1	65.5	88.6	14.6	32.8	47.4	20.8
1905	1.0	50.3	8.1	58.4	22.7	88.6	111.3	11.1	33.5	44.6	31.5
1906	0.9	50.6	4.5	55.1	23.1	99.7	122.8	10.8	39.0	49.8	34.8
1907	0.9	50.8	1.1	51.9	25.7	85.7	111.4	8.7	24.8	33.5	41.3
1908	0.9	50.4	10.5	60.9	21.0	74.9	95.9	4.4	19.2	23.6	42.6
1909	0.2	49.4	16.0	65.4	20.8	108.1	128.9	2.4	30.2	32.6	50.6
1910	0.2	46.3	6.3	52.6	23.2	110.1	133.3	2.2	36.3	38.5	48.6
1911	0.2	46.3	4.1	50.4	23.1	118.6	141.7	3.1	45.5	48.6	47.6
1912	0.2	46.2	3.3	49.5	22.5	102.4	124.9	3.1	35.3	38.4	47.3
1913	0.2	46.2	5.4	51.6	21.8	122.1	143.9	3.4	51.8	55.2	46.3

continued

Appendix 3, continued

	Total assets			
	Foreign bonds	Finnish bonds in foreign currencies	Gold, bank accts and bills	Grand total
1890	..	..	54.4	..
1891	..	..	47.5	..
1892	..	24.0	53.6	..
1893	16.1	15.8	57.9	89.8
1894	27.1	20.3	65.9	113.3
1895	47.4	28.8	86.5	162.7
1896	55.8	39.8	95.8	191.4
1897	63.5	35.3	87.9	186.7
1898	77.8	25.5	106.9	210.2
1899	74.8	12.8	85.4	173.0
1900	76.9	32.0	74.0	182.9
1901	73.5	31.0	99.7	204.2
1902	83.8	28.8	104.1	216.7
1903	86.4	21.5	119.8	227.7
1904	86.2	20.8	110.7	217.7
1905	85.1	31.5	130.2	246.8
1906	85.4	34.8	143.2	263.4
1907	86.1	41.3	111.6	239.0
1908	76.7	42.6	104.6	223.9
1909	72.8	50.6	154.3	277.7
1910	71.9	48.6	152.7	273.2
1911	72.7	47.6	168.2	288.5
1912	72.0	47.3	141.0	260.3
1913	71.6	46.3	179.3	297.2

Appendix 4

Summary of foreign liabilities at the end of 1890–1913, mill. mk

	Industry			Towns	State			Bank of Finland	Other banks			Total liabilities			Of which bonds held in Finland
	Bond loans	Other credits	Total	Bond loans	Bond loans	Short-term credit	Total	Short-term accounts	Bond loans	Short-term accounts	Total	Bond loans	Other	Grand total	
1890	-	..	-	..	74.5	..	..	0.2	22.7	2.0	24.7	97.2	2.2	99.4	..
1891	-	..	-	..	73.6	-	73.6	0.2	22.8	2.4	25.2	96.4	2.6	99.0	..
1892	-	..	-	4.5	72.6	-	72.6	10.1	23.2	2.8	26.0	100.3	12.9	113.2	24.0
1893	-	..	-	4.5	71.6	-	71.6	2.6	22.9	1.0	23.9	99.0	3.6	102.6	15.8
1894	-	..	-	4.5	70.8	-	70.8	0.0	22.6	1.4	24.0	97.9	1.4	99.3	20.3
1895	-	..	-	4.4	87.6	-	87.6	0.4	43.9	1.9	45.8	135.9	2.3	138.2	28.8
1896	-	..	-	7.3	86.4	-	86.4	0.8	52.7	2.5	55.2	146.4	3.3	149.7	39.8
1897	-	..	-	9.0	85.3	-	85.3	1.3	62.6	3.0	65.6	156.9	4.3	161.2	35.3
1898	1.2	..	1.2	13.1	116.0	-	116.0	0.9	67.7	5.3	73.0	198.0	6.2	204.2	25.5
1899	1.2	..	1.2	14.0	112.5	-	112.5	0.3	69.0	7.7	76.7	196.7	8.0	204.7	12.8
1900	1.2	..	1.2	15.9	111.5	-	111.5	0.6	73.3	6.0	79.3	201.9	6.6	208.5	32.0
1901	1.2	..	1.2	15.8	135.4	-	135.4	0.6	75.2	4.7	79.9	227.6	5.3	232.9	31.0
1902	6.7	..	6.7	24.7	134.2	-	134.2	0.9	81.0	3.6	84.6	246.6	4.5	251.1	28.8
1903	9.0	..	9.0	28.4	142.9	-	142.9	1.0	87.2	2.8	90.0	267.5	3.8	271.3	21.5
1904	10.7	..	10.7	28.2	141.6	-	141.6	1.0	86.4	4.5	90.9	266.9	5.5	272.4	20.8
1905	10.4	..	10.4	23.7	140.3	-	140.3	1.1	85.4	4.5	89.9	259.8	5.6	265.4	31.5
1906	10.0	..	10.0	23.6	138.9	-	138.9	0.9	84.4	5.5	89.9	256.9	6.4	263.3	34.8
1907	9.6	..	9.6	23.3	137.5	-	137.5	1.0	87.3	10.6	97.9	257.7	11.6	269.3	41.3
1908	12.7	..	12.7	23.0	136.1	16.0	152.1	11.5	86.3	21.6	107.9	258.1	49.1	307.2	42.6
1909	22.1	..	22.1	48.3	179.7	-	179.7	1.6	117.3	14.9	132.2	367.4	16.5	383.9	50.6
1910	21.4	..	21.4	50.9	178.0	-	178.0	1.7	120.8	15.9	136.7	371.1	17.6	388.7	48.6
1911	20.7	..	20.7	82.6	176.3	-	176.3	0.7	149.2	11.8	161.0	428.8	12.5	441.3	47.6
1912	20.5	..	20.5	82.0	174.6	-	174.6	0.8	147.4	15.7	163.1	424.5	16.5	441.0	47.3
1913	19.6	..	19.6	81.3	172.9	-	172.9	11.2	145.7	16.2	161.9	419.5	27.4	446.9	46.3

Figure 1

Goods, services and transfer payments by kinds in 1892-1913, net receipts, mill. mk.

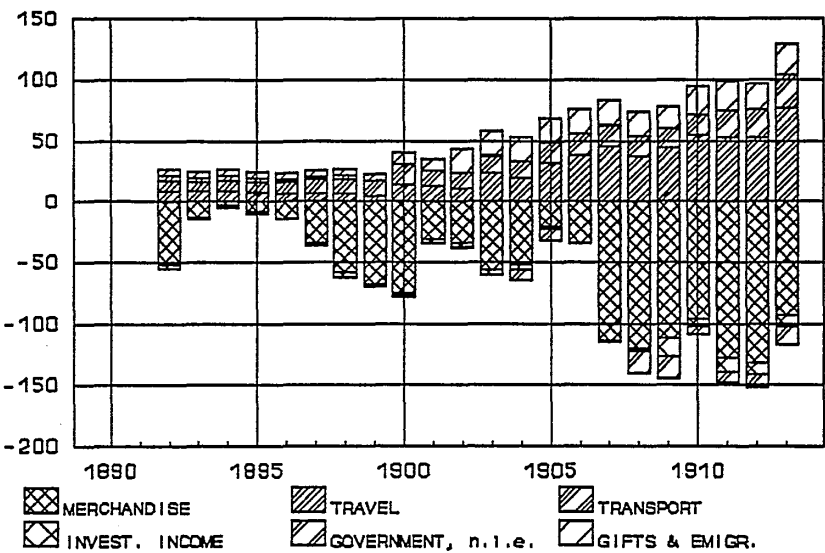


Figure 2

Goods, services and transfer payments in 1892-1913, total net receipts, mill. mk

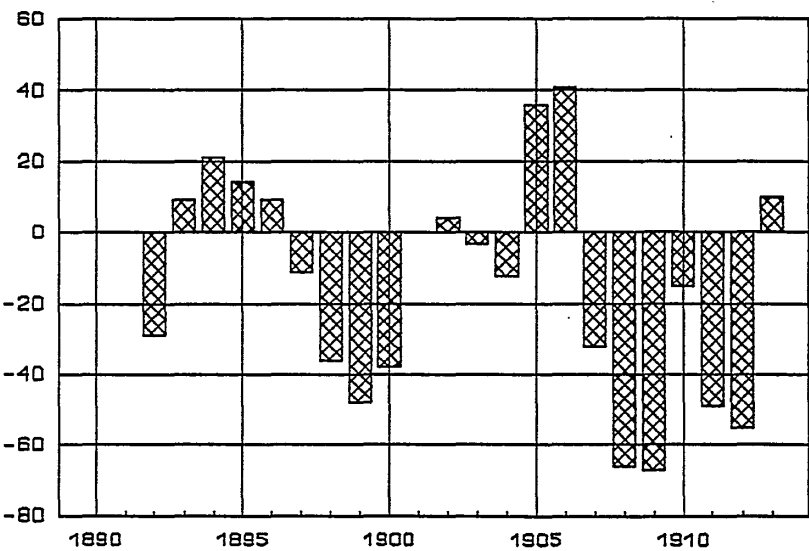


Figure 3

Movement in capital and monetary gold by kinds in 1892-1913, total assets, mill. mk

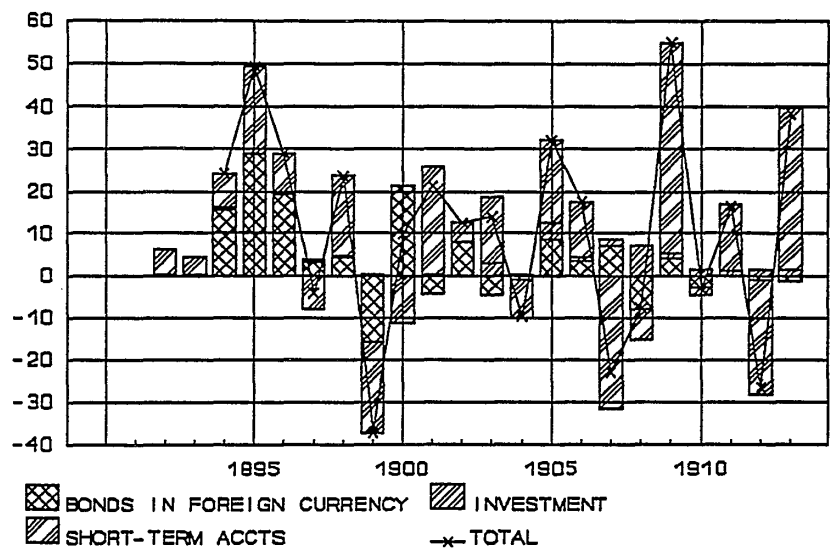


Figure 4

Movement in capital and monetary gold by kinds in 1892-1913, total liabilities, mill. mk

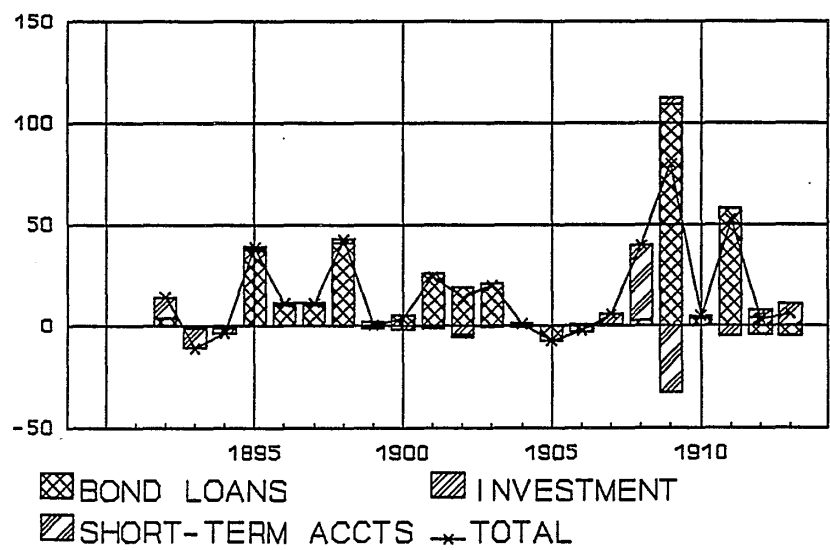


Figure 5

Movement in capital and monetary gold in 1894–1913, total net assets, mill. mk

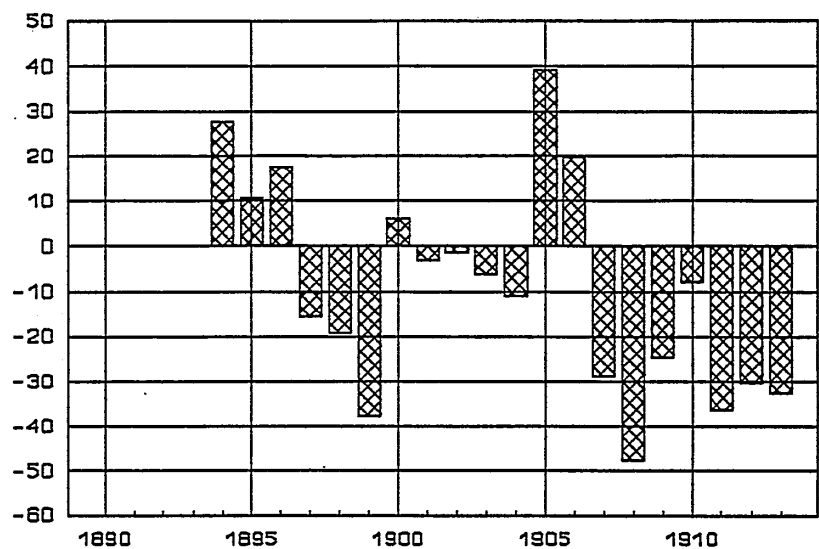


Figure 6

Foreign assets by kinds at the end of the years 1893–1913, mill. mk

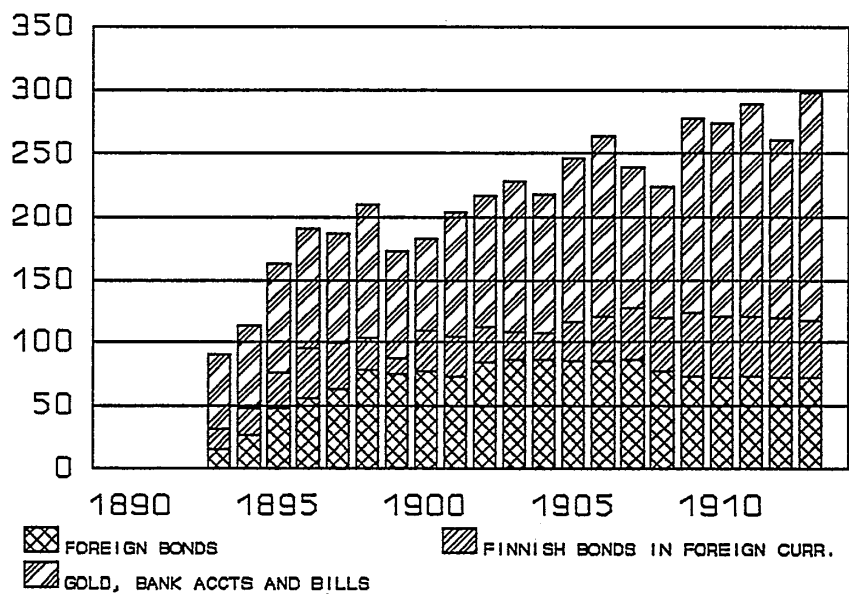


Figure 7

Foreign assets by owners at the end of the years
1893-1913, mill. mk

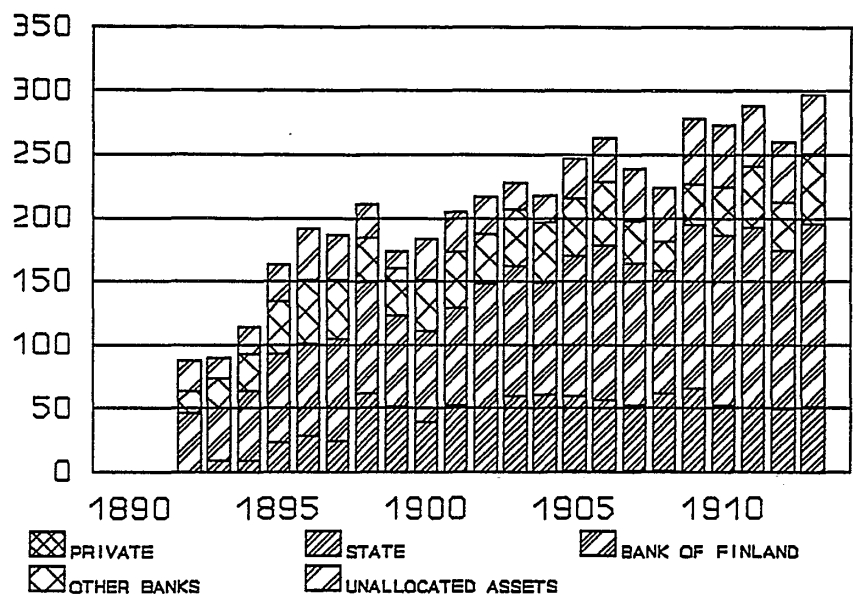


Figure 8

Total foreign liabilities by kinds at the end of the
years 1892-1913, mill. mk

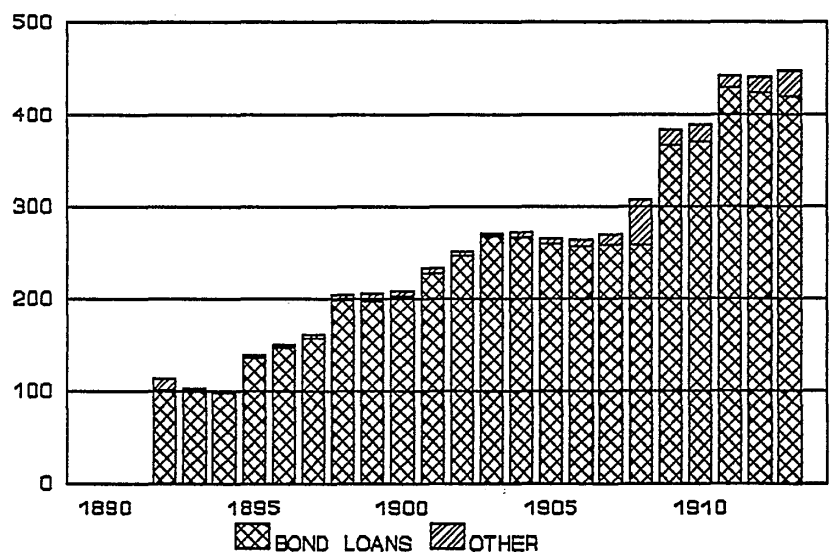
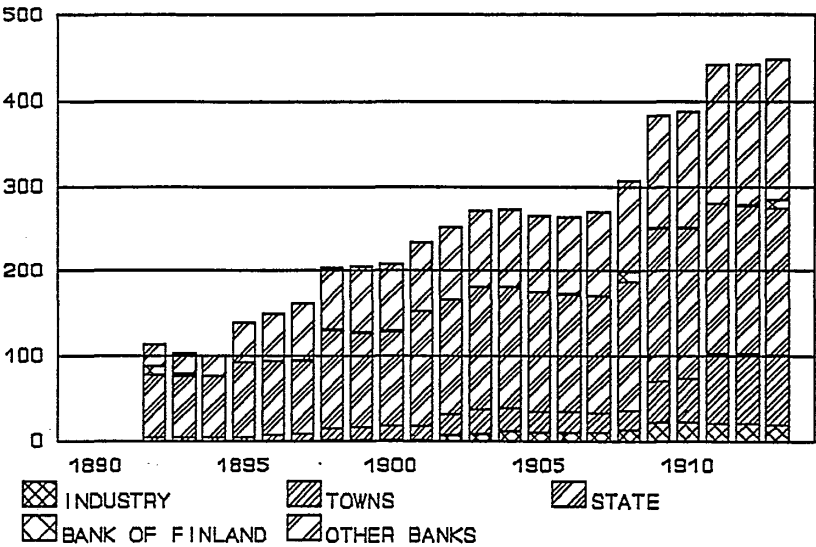


Figure 9

Total foreign liabilities by borrowers at the end of the years 1892–1913, mill. mk



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The following studies have been used to compare Ragni Bärlund's figures with those calculated by other historians and to check some concepts. Most of them were published in the 1970's and the 1980's, after Ragni Bärlund had completed her manuscript. During the editing, it was not possible to carry out any major data collection from original sources.

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