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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

JAPAN: ECONOMIC SITUATION AND PROSPECTS

June 18, 1953

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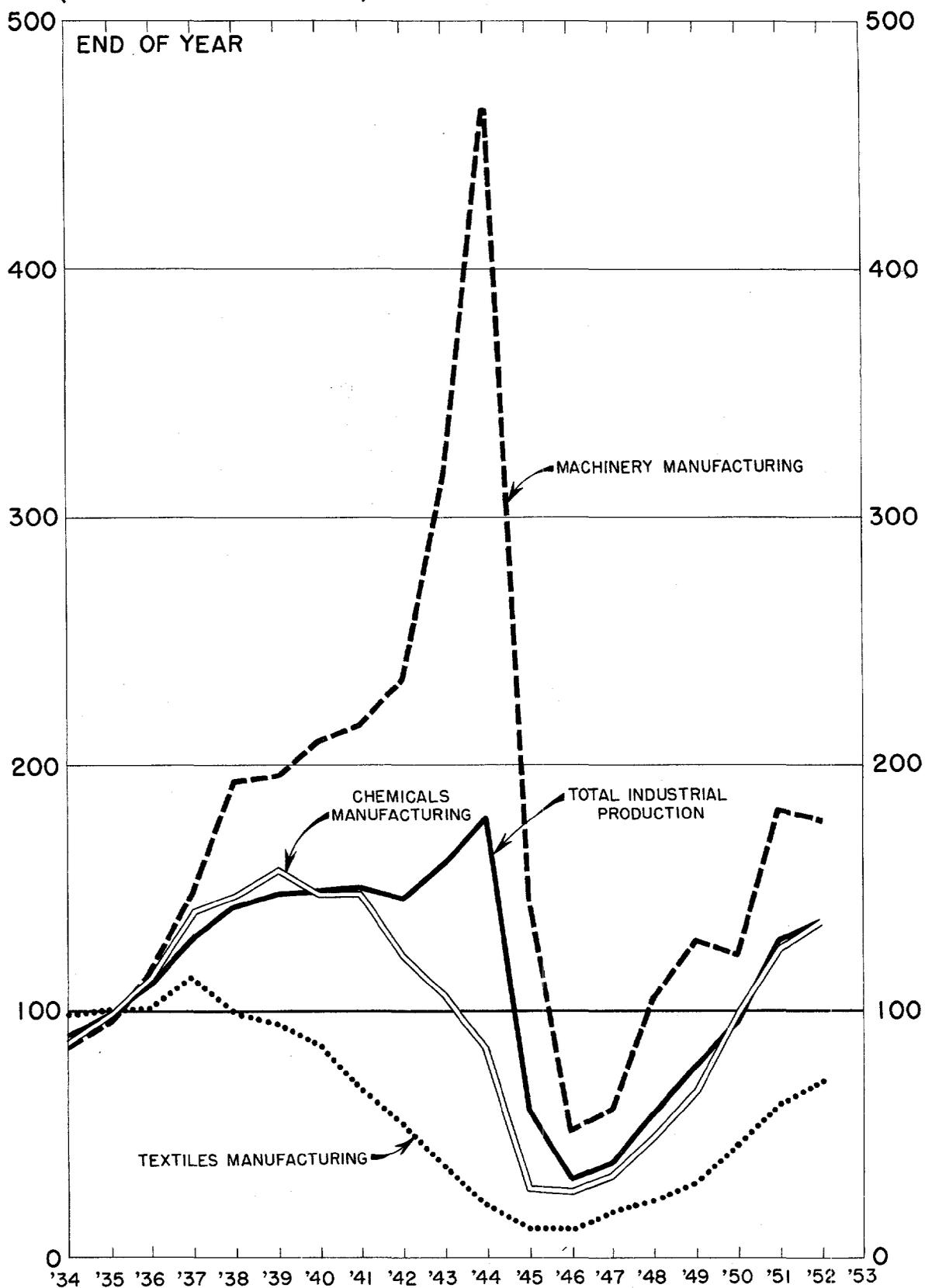
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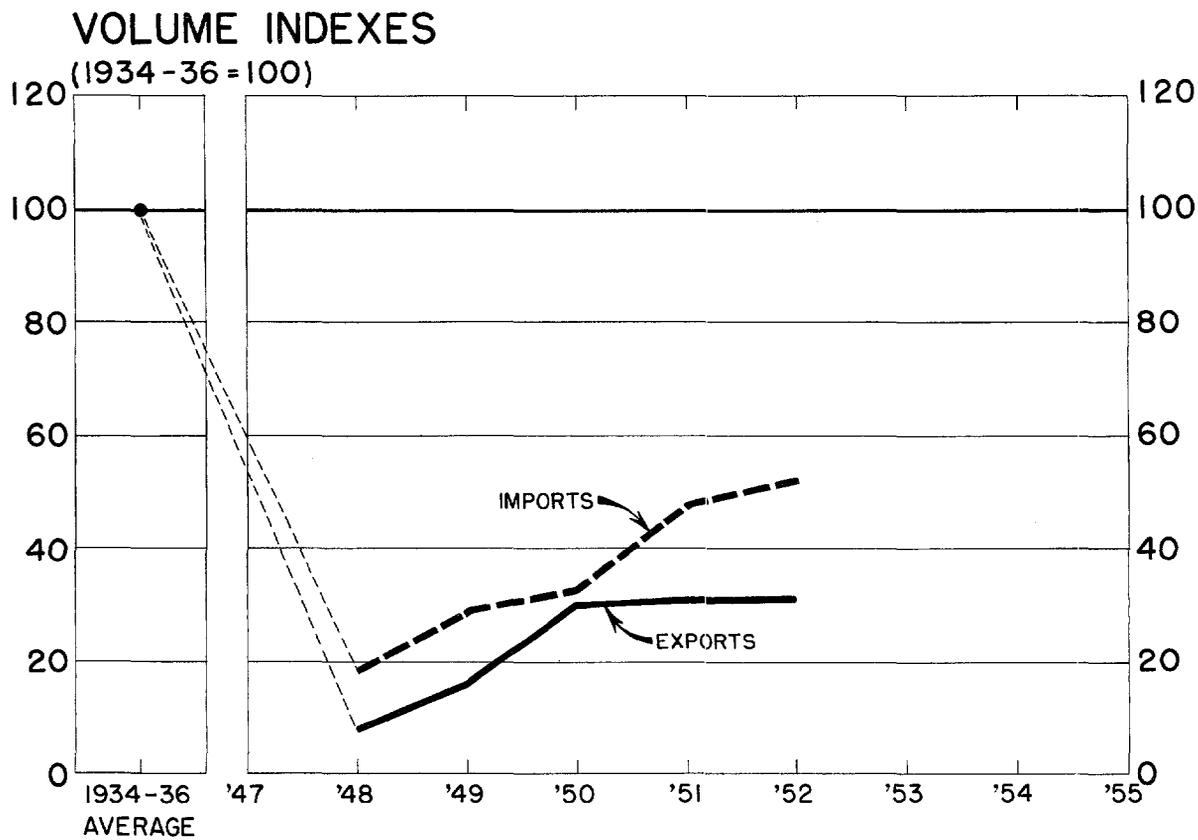
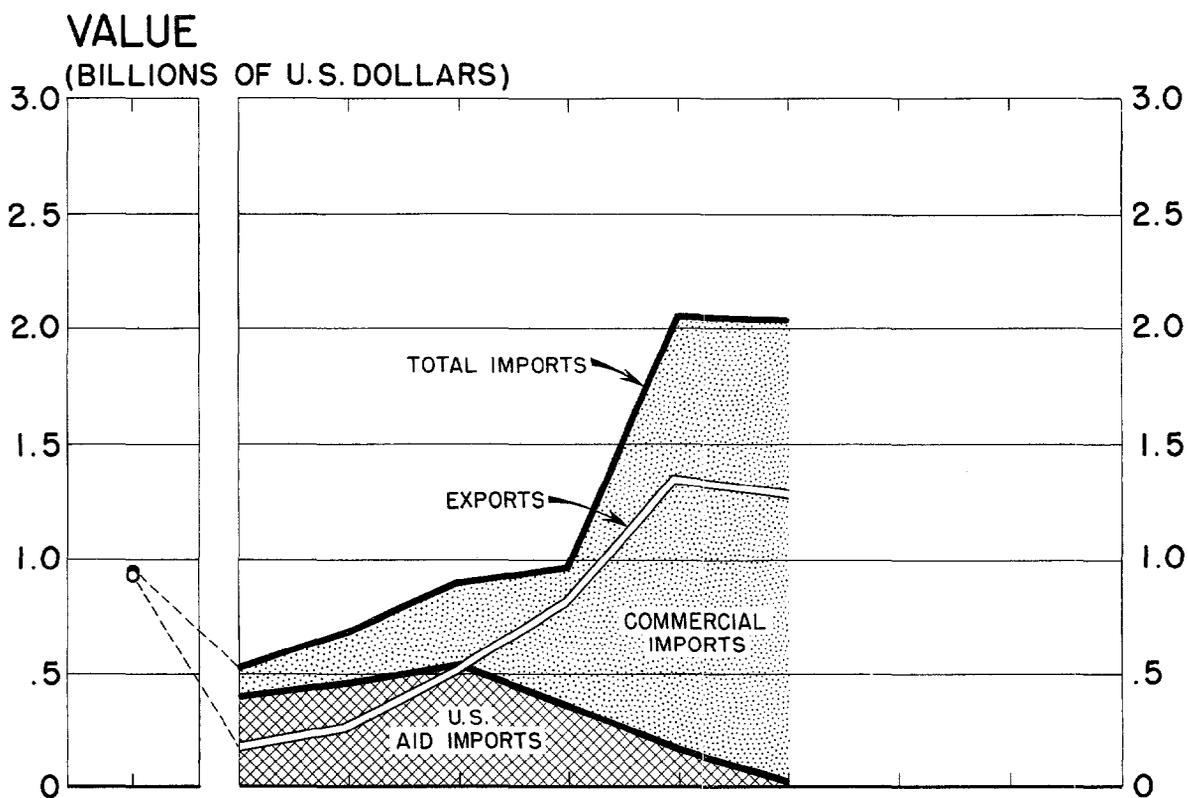
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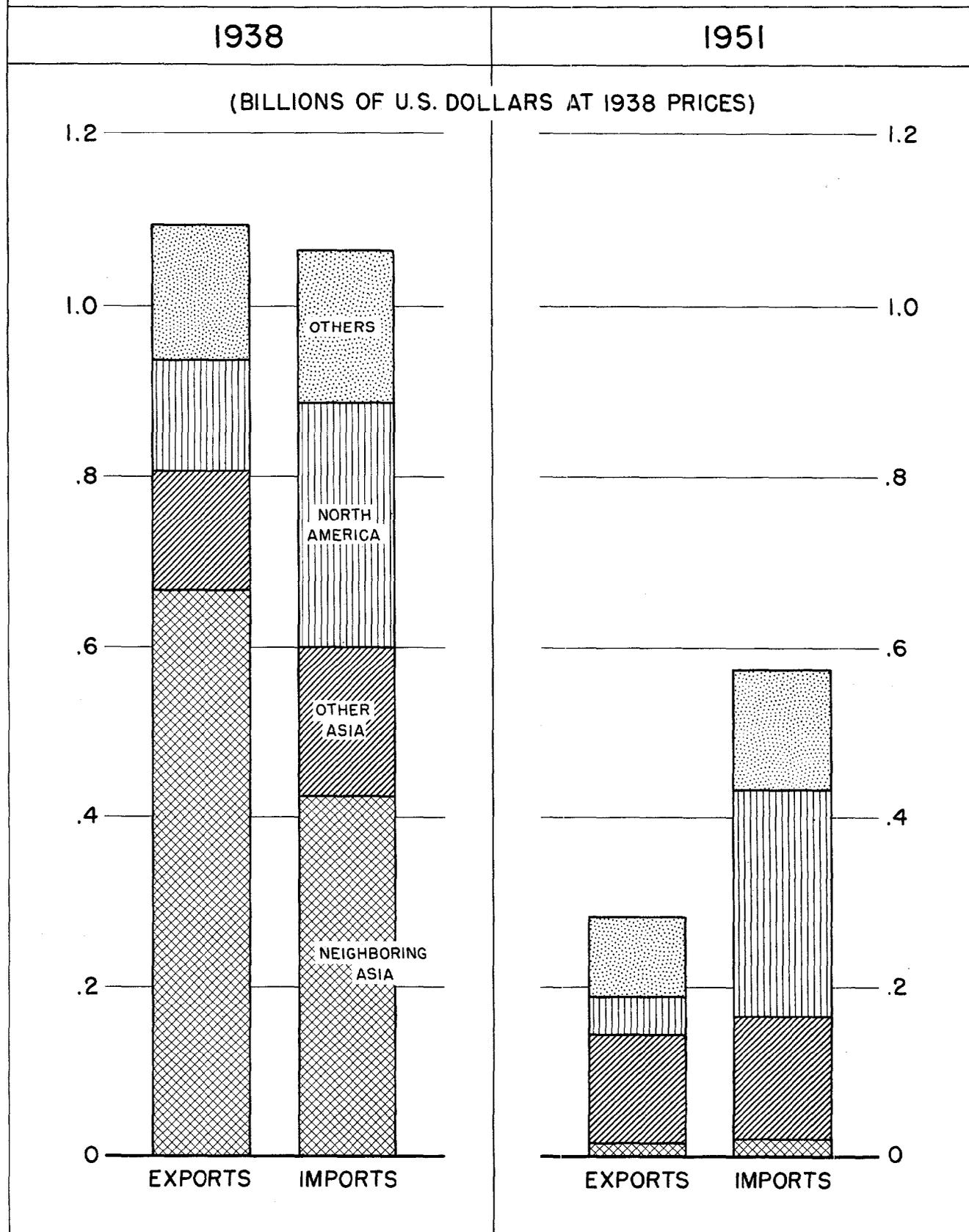
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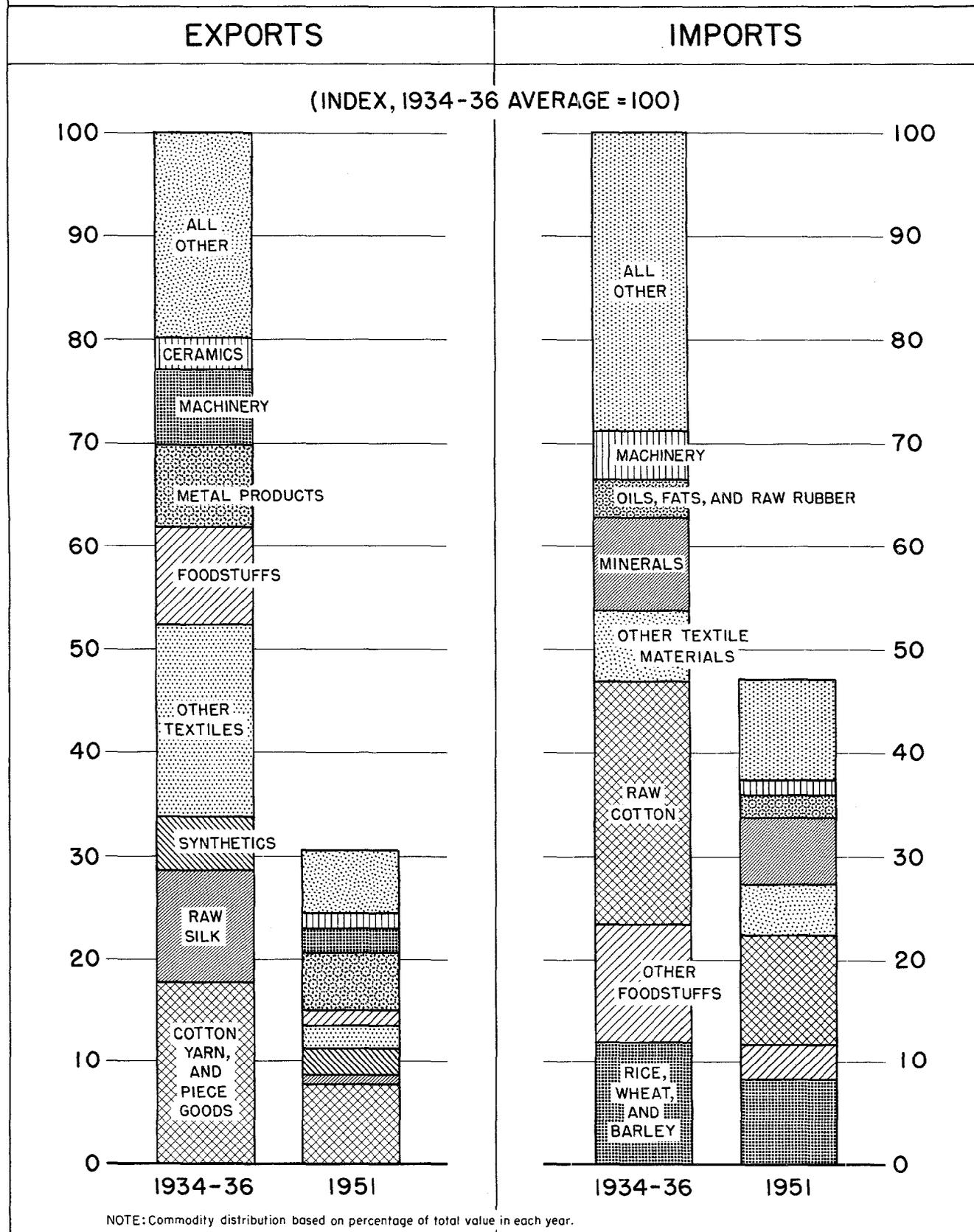
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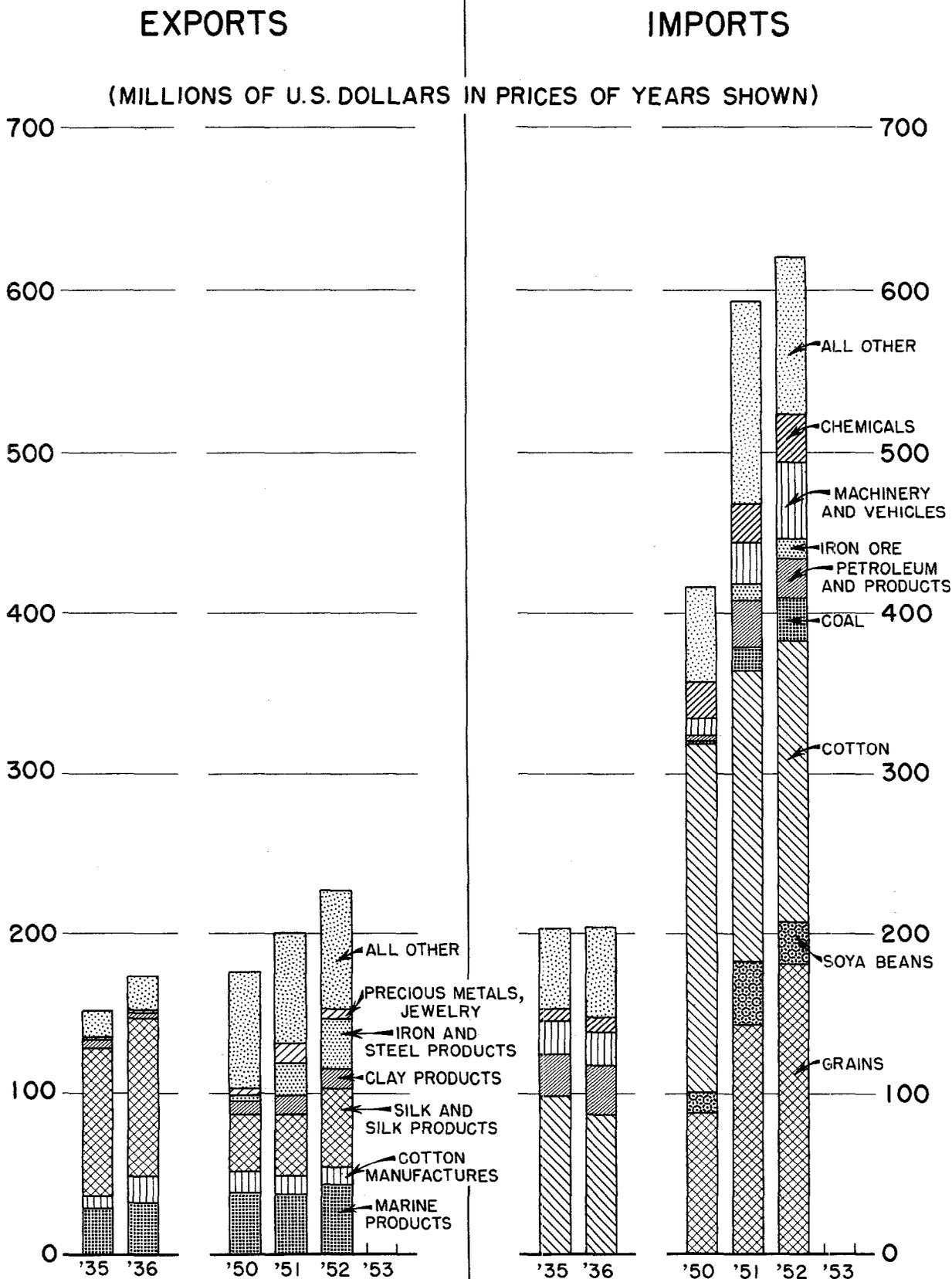
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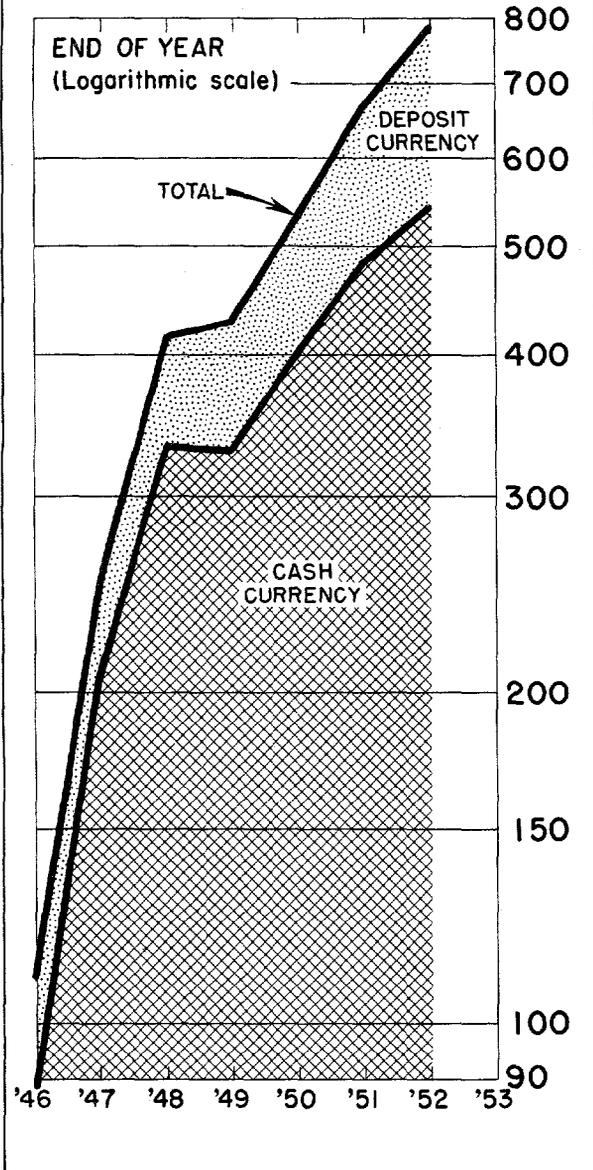
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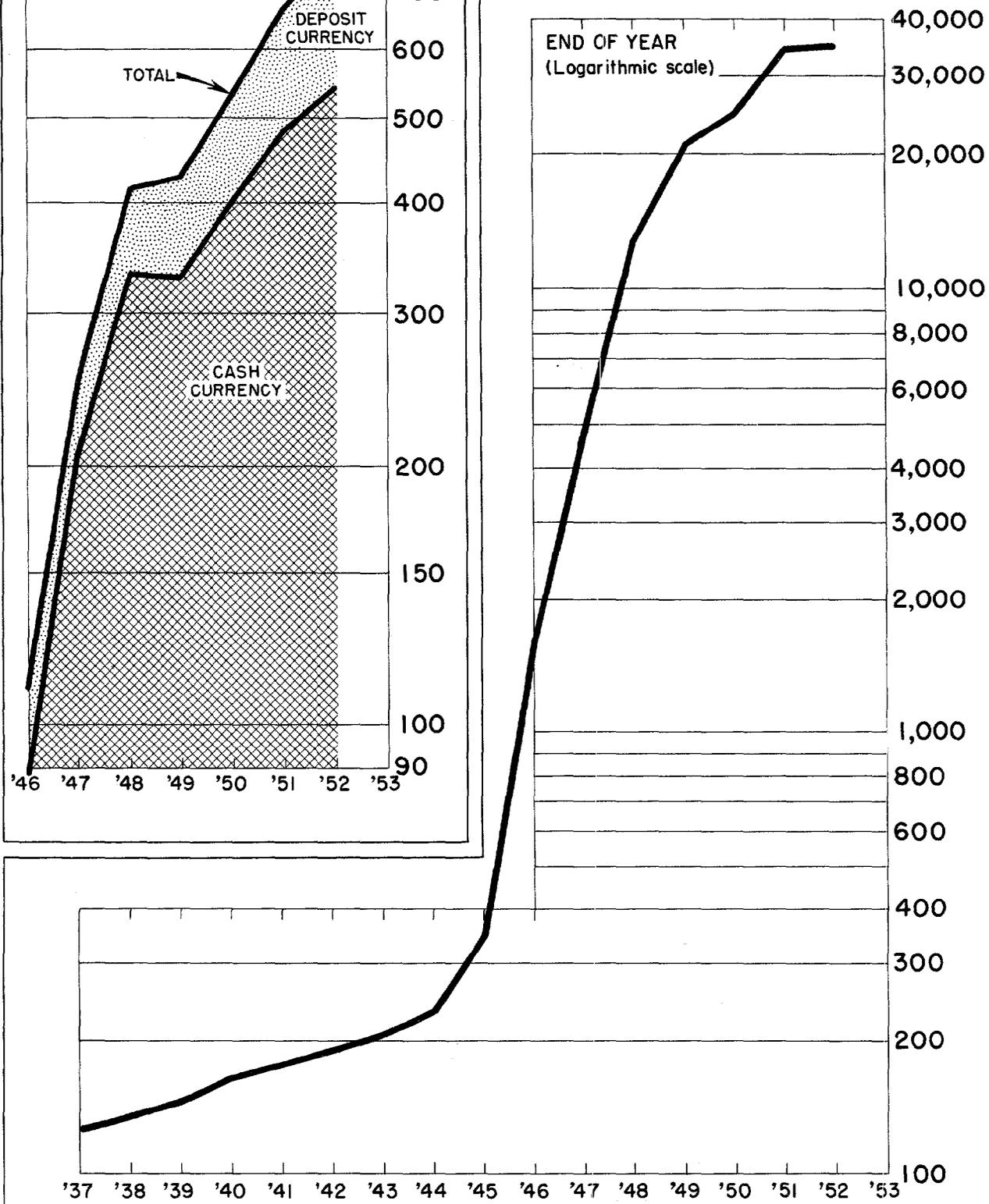
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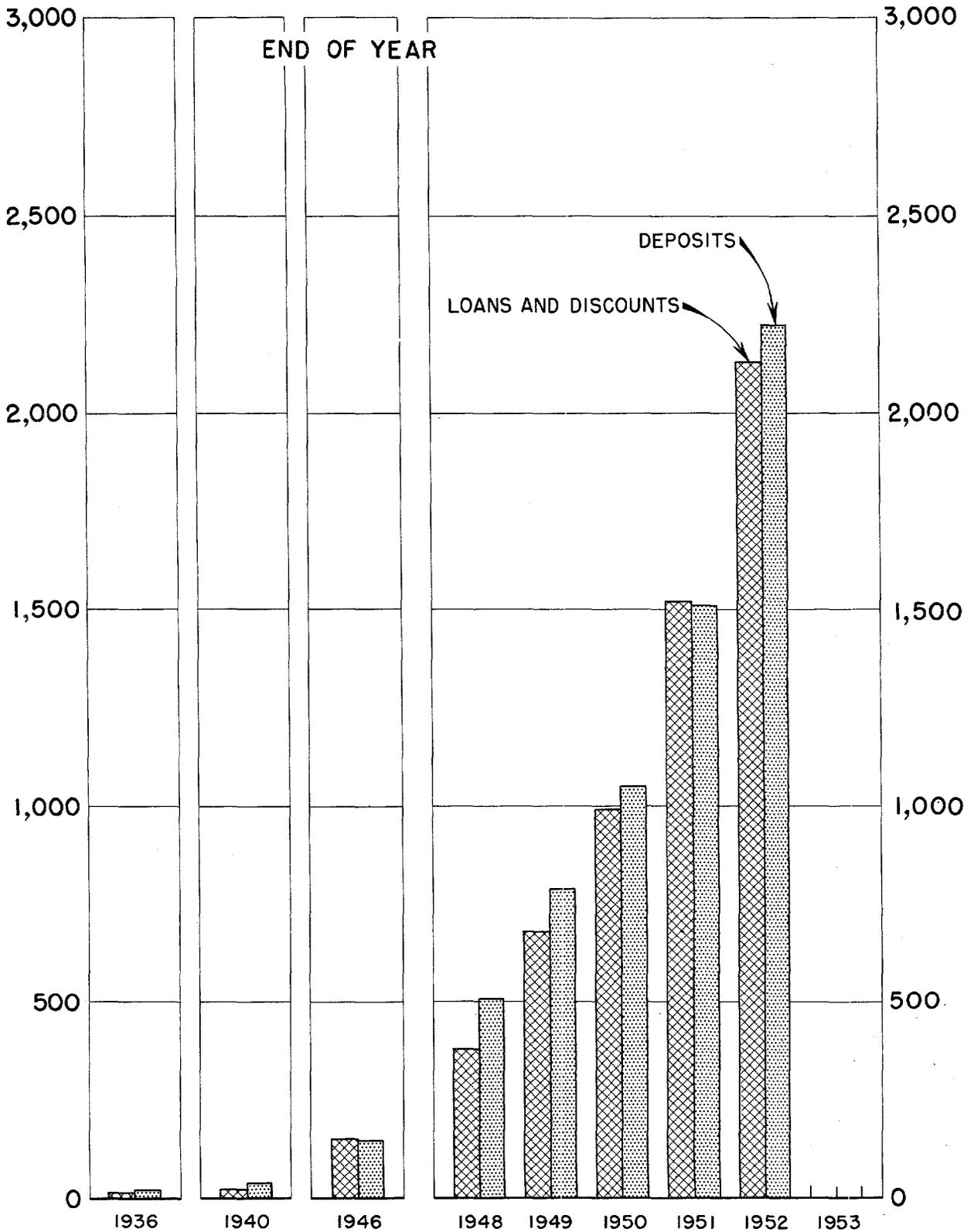
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SUMMARY AND CONCLUSIONS

1. Japan has experienced a rapid economic recovery since the war. Industrial production in 1952 was 42% higher than in 1934-36; and agricultural output has also exceeded prewar levels. Per capita consumption approximates prewar standards even though housing conditions are still inadequate. The physical damage wrought by the war has been largely repaired. Substantial foreign exchange reserves have been accumulated. At the end of April 1953 these reserves apparently amounted to about \$1,026.5 million, including nearly \$828 million in dollars. Total reserves are equivalent of 50.6% of the value of goods imported in 1952. There was a small decline in reserves for the first time in the second half of 1952, and in the first four months of 1953 total foreign exchange holdings declined by about \$116 million, although dollar reserves continued to rise. It can be anticipated, however, that the rate of decline in the first part of 1953 will diminish during the balance of the year.

2. These figures, however, obscure certain basic weaknesses in the economy. Japan with her 85 million people is probably the most densely populated country in the world in relation to available natural resources. She is heavily dependent on imports of foodstuffs, raw materials and fuel. Serious difficulties in supporting a growing population largely inspired the prewar expansionist drive for secure markets and sources of supply. Since the prewar years the problem has been complicated by a 19% increase in the population, the loss of overseas territories and the denial of access to the nearby Asiatic mainland which supplied Japan with much of her requirements for bulky raw materials and foodstuffs. Thus Japan has to support a larger population on the basis of diminished resources. At the same time she suffers from certain structural changes in the pattern of world trade which have severely curtailed the market for raw silk and for cotton textiles which have always constituted a large proportion of Japanese exports.

3. These difficulties are manifested particularly in Japan's foreign trade figures. The volume of commercial exports is only a little over 30% of prewar levels, although at the same time Japan has been able to keep imports to almost 50% of prewar quantities through shifts in production, more intensive use of domestic supplies and economies in the utilization of raw materials. The postwar period has been characterized by large commercial trade deficits. In 1952 the total deficit was about \$750 million of which about \$560 million was with the dollar area. With the United States alone Japan had a commercial trade deficit of nearly \$424 million. In 1952 commercial export (excluding exports under U.S. procurement) covered about 63% of imports. The virtual loss of the nearby Asiatic mainland as a source of supply and the limited availability of foodstuffs and raw materials in non-dollar areas has caused Japan to turn increasingly to the dollar area and particularly to the United States for necessary imports, especially of foodstuffs.

4. In the postwar years these trade deficits have basically been covered by U.S. aid and various forms of special dollar expenditures in Japan. The U.S. has supplied to Japan more than \$2 billion in goods paid out of appropriations made by the U.S. Congress. These appropriations ceased by the middle of 1951, but in recent years they have been supplemented and more than replaced by other special sources of dollar income to Japan. This income has been derived primarily from (a) U.S. procurement of goods and services to support forces in Japan and Korea, (b) personal dollar outlays by U.S. personnel, primarily military, in Japan and (c) Mutual Security Program purchases. In 1952, Japan received from these sources a dollar income of about \$800 million. U.S. aid and U.S. dollar disbursements have together exceeded commercial trade deficits and have thus resulted in a substantial balance of payments surplus and considerable accumulation of foreign exchange, particularly dollar exchange. Without this special dollar income, the balance of payments would have shown a deficit of about \$500 million. There appears to be no prospect of any early decline in expenditures associated with the presence and maintenance of U. S. Forces in Japan regardless of the course of events in Korea. With cessation of Korean hostilities U.S. dollar expenditures in Japan for the supply of forces in Korea may be expected to decrease. But for some time at least this decline will be offset, probably to a considerable extent, by outlays for Korean reconstruction and sharply augmented Mutual Security Program expenditures in Japan. For the near term there is, therefore, a strong likelihood that special earnings will continue at high levels. Over a longer period, as Japan assumes a progressively greater share of the burden of her own defense, the volume of these types of U.S. special dollar procurement may, however, be expected to drop off substantially.

5. Japan's most urgent future task is therefore to increase her foreign exchange earnings to compensate for the probable decline in special dollar income and at the same time to provide for the natural growth in the population which at an annual rate of 1.25% may be expected to approximate 6 million over the next five years. In view of the intensive exploitation of her resources which Japan has already achieved, this task undoubtedly offers a severe challenge. It should be remembered, however, that the Japanese are a resourceful and energetic people who have in the past demonstrated their ability to make the most use of scanty resources and to adopt modern and efficient techniques of production. Japan also possesses a rather diversified industry which, however, requires modernization and certain structural changes in view of the impact of the war and changes in world markets.

6. A detailed projection of Japan's balance of international payments suggests that she may well be able over the next five years to reduce her annual deficit, exclusive of special dollar income, to a figure between \$300 and \$400 million. In the longer run, it is possible that a further reduction may be effected as a result of accelerated development of the raw material and foodstuff resources of non-dollar areas, particularly of southern Asia and of Oceania, and, to the extent that future changes in world political conditions may permit it, by some

extension of trade with the mainland. In the face of all these uncertainties, it would hardly be prudent, however, to anticipate that Japan will be able, particularly in the near future, to balance her international accounts at a tolerable level without the continued availability of some sort of special dollar disbursements.

7. The reduction in the deficit foreseen above involves marked changes not only in the volume but also in the structure and orientation of Japanese foreign trade. Total exports by 1957 will have to be about 45% higher than in 1951 while the increase in imports will need to be restricted to approximately 20%. Some reduction in current dollar imports will be necessary and all of the additional imports required will have to be obtained from the non-dollar area. At the same time the Japanese have perhaps rather too sanguine expectations of expanding exports at a rapid rate. Since the future market for cotton textiles and certain other consumer goods is hardly promising, Japan expects in the future to export a much larger volume of capital goods, particularly machinery and chemicals. The detailed analysis made later in this report suggests that the trade targets as a whole may be realized in the main, although an objective assessment of the prospects indicates that the residual commercial deficit by 1957 is more likely to approach \$400 million than \$300 million. Another critical factor in the forecast is the anticipated volume of exports of machinery, equipment and chemicals. In most of these products Japan has not in the past had a competitive advantage, as in the case of textiles. In these lines it has been handicapped partly by high raw material costs and partly by a lag in technology. Thus a determined effort to make these products more competitive will be necessary.

8. If Japan is to reduce her dependence on special dollar exchange earnings and reduce her commercial trade deficit, a considerable volume of domestic investment will be necessary. The goal of greater self-support implies much higher levels of industrial and agricultural production and corresponding expansion in transport and communications and in the generation and distribution of electric power. Certain urgent consumer requirements, particularly in housing, also have to be satisfied. Japan still has idle industrial capacity, but there is great need to modernize production facilities for the purpose of improving quality and lowering costs. Modernization programs have been undertaken in some industries, and in recent years a large number of technological assistance contracts have been concluded between Japanese and foreign firms for the purpose of "updating" Japanese industrial technology. For the future it is particularly urgent to carry out appropriate investment programs to raise the quality and reduce the cost of coal, iron and steel which intimately affect the cost of machinery, equipment and chemicals. Particularly heavy investments will be necessary in power which at present is a serious bottleneck in the economy. Most of the power expansion will be in the hydroelectric field since Japan possesses ample water power resources and comparatively little coal, although it should be noted that the unstable supply of hydroelectric power will necessitate complementary investment in thermal generating facilities. In domestic transport further electrification of the railways and expansion of rail capacity appears most urgent although some improvement

of existing roads and some expansion of port facilities will also be necessary. Further additions to the merchant marine appear desirable in the light of its potential foreign exchange earnings and savings. Finally, it should be noted that considerable investment in agriculture will also be required if Japan is to become more self-sufficient in food-stuffs. Although Japan already has a comparatively intensive agriculture, there are definite possibilities for increasing output through drainage, irrigation, reclamation and even improvement in agricultural practices.

9. Past experience indicates that Japan can sustain a high rate of investment. In the postwar years, however, this high rate of investment has created severe inflationary pressures. Following the end of the war Japan experienced a drastic runaway inflation. This was halted through the adoption of a financial stabilization program in 1949. With the boom generated by the outbreak of the Korean war in 1950 inflationary pressures again became very marked. While government financial policy continued to be disinflationary in effect, an extraordinary expansion of bank credit abetted to some extent by the Bank of Japan took place. There was little or no effective control over credit or the volume and type of investment. "Overlending" brought about a rapid expansion in money supply and sharp increases in prices which were undoubtedly sustained and stimulated by the fact that Japanese industry had no difficulty in selling its products at rising prices under the prevailing boom conditions. More recently, however, a contractive tendency has set in with the moderation of the Korean boom. While government financial policies over the past four years have helped to check inflation, pressures arising from demands to increase both investment and consumption may jeopardize financial stability in the long run unless the government is firmly determined to hold the line. Recently the Japanese have shown a tendency to relax restraints. If continued, this relaxation might produce alarming results.

10. For Japan it is obviously necessary to finance future investment requirements without resort to inflation. Renewed inflation would increase the demand for imports and at the same time seriously reduce Japanese exports some of which are already experiencing difficulty in competing in foreign markets. The current disequilibrium in the trade balance would thus be aggravated rather than improved. To avoid inflation and ensure the volume of investment essential to greater self-support, it will above all be necessary to strike a close balance between investment requirements and capital resources. A careful husbanding of resources will be essential. The government will have to institute a strict screening of future investment needs and, through appropriate fiscal and credit policies, encourage savings and essential investments while discouraging less urgent investments. In order to release more resources for investment the rise in consumption will have to be restricted by tax policies and curtailment of consumption outlays in the government budget. Although changes in the tax structure may well be needed to stimulate savings and self-financing by industry, overall tax revenues will have to be kept at a high level to provide the government adequate funds not only for essential public investment in such fields as transport,

agriculture and power but also for investment in essential private industries through such government financial institutions as the Development Bank.

11. The Japanese Government has recently given some evidence of its determination to screen future investment requirements and to determine appropriate priorities. Firm policies are necessary to husband available resources carefully by restricting increases in consumption, stimulating savings and limiting investment to essential requirements. If such policies are followed, it should be possible to avoid serious inflation or large-scale foreign borrowing. The Japanese Government feels, however, that it should be in the position to borrow modest amounts abroad. In view of the volatile nature of a considerable part of Japan's foreign exchange income, it is necessary for Japan to maintain relatively large foreign exchange reserves. Some foreign borrowing would provide Japan with an extra foreign exchange cushion with which to meet the possible impact of additional investments on its foreign exchange position in the years immediately ahead. The Japanese Government considers that it can plan to meet the needs of the future with greater confidence if it can rely on some additional external resources.

12. Attainment of Japanese economic viability in the long run would be markedly facilitated by acceleration of economic development in southeast Asia and the removal of obstacles to an expansion of international trade. Southeast Asia is a potential producer of greatly increased amounts of foodstuffs and basic raw materials for which Japan would supply a ready market. Such increased production would, in turn, mean increased purchasing power and thus a wider market for imported goods. This market expansion would afford opportunities for Japanese consumer and capital goods to come in without crowding out the trade of other countries also dependent for their existence upon overseas markets. Governmental action by the countries concerned, private investment, international cooperation through such agencies as the Colombo Plan and the Bank, are all needed to accomplish this mutually beneficial development.

13. Increased use of existing physical and manpower resources can, however, only be effective if trade restrictions are relaxed and a free exchange of goods and services accelerated. Limitations placed on Japan's access to overseas markets, of course, contribute to her present trade deficit. Unless these restrictions can be relaxed, improvement in her industrial efficiencies and reduction in the cost of the raw materials which she produces can be only partially effective.

14. United States postwar policy in the Far East generally and large postwar special dollar expenditures in Japan in particular, reflect U.S. recognition of its basic interest in Japan as a vital element in the Pacific area. There is no reason to anticipate that in the foreseeable future the importance of Japan will diminish.

15. There is little doubt that Japan would make every effort to repay loans which are contracted in the future. The Japanese record of

meeting debt obligations has generally been good. Debt service was interrupted by the war, but in September 1952 the Japanese Government made an agreement with representatives of sterling and dollar bondholders providing for resumption of payments and full settlement of all principal and interest in arrears. An accord on the small French franc debt is still under negotiation. A settlement on the dollar debt incurred for supplies furnished by the U.S. Government in the postwar years is still pending.

JAPAN: ECONOMIC SITUATION AND PROSPECTS

I. INTRODUCTION

The War's Aftermath

Japan's economic problems, serious even before the war, have been greatly aggravated as the result of the war and its aftermath. The growing disparity between population and available resources, which was the compelling factor in the aggressive drive of the thirties for assured markets and sources of supply, has become still more marked. The repatriation of millions of Japanese from overseas and the process of natural growth have increased the population by 19% since 1938. Today 85.8 million people are crowded together in an area of 142,300 square miles which is roughly the size of California. The war inflicted a tremendous amount of physical destruction which is officially estimated to have impaired about 25% of Japan's national wealth. Japan has not only lost her overseas possessions - Formosa, Korea, Kwantung, the southern half of Sakhalin and the southsea islands, but has also been virtually deprived of access to China following the enforced relinquishment of economic domination over Manchuria and North China and the Communist revolution on the Asiatic mainland. Thus she has been largely cut off from areas which in 1938 took 61% of her exports and supplied 40% of her imports, including all of her imports of rice, sugar and soya beans and a substantial part of her imports of coal, iron ore, pig iron and timber. As a result, Japan has had to shift to other sources of supply, particularly the dollar area, for essential food-stuffs and raw materials; and she has found it necessary to cultivate other markets where competition is keener. Japan's trade has also suffered from the existence in many countries of discriminatory trade restrictions on Japanese products. At the same time Japan as a leading textile exporter has experienced great difficulty in selling her cotton textiles in the face of a shrinking world market, and has lost a large part of her raw silk market in the United States to synthetic fibers. Japan has accordingly been confronted with the necessity of drastically changing both the direction and the character of her foreign trade.

Postwar political changes have also had their repercussions on the Japanese economy. The occupation under SCAP, terminated in 1952, left its impact in the shape of many political and economic reforms designed primarily to democratize political and economic life. Japan was endowed with representative democratic institutions at the local, prefectural and national government levels. While Japan has managed to avoid political extremes under this democratic regime, the national Diet or parliament to which the cabinet is responsible has been characterized by a delicate balance of political forces which has tended to inhibit vigorous and constructive government action in the economic field. For example, the Liberal Party government of Prime Minister Yoshida was defeated in March

1953 by internal dissension within the governing party and new elections had to be decreed for April even though the existing House had been elected only the preceding October .1/ The new Liberal Party government formed by Prime Minister Yoshida after the April elections does not enjoy an assured majority in the Diet.

In the economic sphere the dissolution of the Zaibatsu or large combines which largely dominated finance, trade and industry has at least temporarily weakened business leadership and the competitive power of Japanese industry. At the same time the encouragement given to labor unions and the growing political consciousness of labor has tended to create a demand for higher wages and living standards without a corresponding increase in the productivity of labor to maintain competitive costs.

Structure of the Economy

Despite a poverty of natural resources Japan has managed to build up in modern times a rather diversified economy thanks largely to her industrious and skillful population. The distribution of employment gives a general indication of the present structure of the economy. Out of a total average employment of 37,285,000 in 1952, 46.9% were engaged in primary production - agriculture, forestry, fisheries and mining. Agriculture and forestry alone accounted for 43.9% of employment. Manufacturing was next, with 17.5%. Of the balance, commerce and finance absorbed 14.5%; the service industries, 9.1%; transport, communications and public utilities, 5.1%; and government, 2.9%.

1/ The composition of the Lower House of the Japanese Diet as it emerged from the elections of April 19, 1953, is given below together with a comparison with the two preceding Diets.

<u>Party</u>	<u>April 1953 Election</u>	<u>October 1952 Election</u>	<u>Prior to October 1952</u>
Liberal (conservative)	199*	240	285
Hatoyama Liberals	35	-	-
Progressive (predominantly conservative)	76	85	67
Right-Wing Socialists	66	57	30
Left-Wing Socialists	72	54	16
Communists	1	0	22
Labor - Farmer	5	4	4
Cooperative	) 1	2	5
Minor Parties		5	4
Independents	11	19	4
Total:	<u>466</u>	<u>466</u>	<u>437</u>

* Liberal Party headed by Prime Minister Yoshida.

To some extent the continued large employment in agriculture is a result of population pressure and the comparative scarcity of other employment opportunities. In large measure, however, it reflects the intensive use to which Japan has put her limited land resources. Japanese agriculture is characterized by intensive cultivation, a high level of technique and correspondingly high yields. Because of the mountainous nature of the terrain, only 16% of the total area is cultivated. In terms of cultivated land Japan has the highest population density in the world. Yet Japan still manages to produce about 75% of her food requirements. With timber Japan is more generously provided, even though her timber resources have been seriously affected by overcutting during the war and postwar years.

Manufacturing has developed in Japan despite a rather slender supply of local raw materials and fuel. As far as energy resources are concerned, Japan has almost no petroleum; her coal deposits are of low quality and comparatively expensive to work, and between 35% and 40% of the coking coal requirements need to be imported; and hydroelectric power, of which there is a large potential supply, is made more expensive because the supply of water is seasonal and the topography of the country does not permit the establishment of adequate storage capacity, thus necessitating considerable thermal generating facilities to balance the power supply. Domestic iron ore and iron sand is low in quality and inadequate in quantity, so that approximately three fourths of total consumption have to be imported. Of non-ferrous metals Japan has almost enough copper, but has to import a substantial part of her requirements of lead and zinc, manganese, tungsten and molybdenum and all of her needs of bauxite and nickel. Except for silk, Japan is almost completely deficient in textile fibers. The chemical industry must obtain from abroad all of its phosphates and most of its salt. ^{2/}

That manufacturing has developed rapidly despite scanty natural resources is primarily attributable to (1) the existence of a plentiful and comparatively cheap labor supply, (2) a capacity for hard work and for rapid acquisition of industrial skills, and (3) a great resourcefulness in taking over the industrial techniques of the West. The textile industry was the first industry in which Japan demonstrated her capacity to compete with the West. Other consumers goods industries were also among the first to develop. The basic industries - iron and steel, machinery and chemicals, for which conditions were less favorable, grew much more slowly. They received their impetus largely from the two successive world wars and required considerable encouragement and assistance from the government

^{2/} The exact degree of Japanese dependence on imports necessarily fluctuates somewhat from year to year. In terms of her requirements Japan in 1951 had to import 100% of her crude rubber, bauxite, raw wool and cotton, and phosphates; 88.6% of her crude oil; 80.4% of her salt; 77.7% of her iron ore; 52.6% and 45.9% respectively of her wheat and barley; 8.1% of her rice; 66.2% of her sugar; and 39.1% of her soya beans.

for their development. Today, however, they far outrank the textile industry in importance.

The structure of manufacturing industry is best indicated by Table 1, based on the 1950 census of manufactures.

Table 1
Structure of Japan's Manufacturing Industry

<u>Type of Manufacturing Industry</u>	<u>Regularly Employed Workers in all Manufacturing</u>	<u>Value Added by all Manufacturing</u>	<u>Value of Shipments by all Manu- facturing Industry</u>
	(in terms of percentage of total)		
Heavy Industry			
Chemical and Related Products	9.22	14.94	13.23
Petroleum and Coal Products	0.68	1.17	1.43
Primary Metal Industries	8.54	12.37	13.45
Fabricated Metal Products	3.51	3.07	2.91
Non-electrical Machinery	8.94	6.70	4.89
Electrical Machinery and Goods	4.60	4.15	3.22
Transport Equipment	7.66	5.66	5.26
Sub-total	43.15	48.06	44.39
Textiles and Apparel			
Textiles	20.82	19.07	21.67
Apparel and related products	2.28	1.37	1.68
Sub-total	23.10	20.44	23.35
Food and Kindred products			
Lumber, Timber products, Furniture	8.42	4.59	4.37
Paper and Allied Products	2.58	3.84	3.57
Rubber Products	1.99	2.59	2.43
Leather and Leather Products	0.51	0.61	0.72
Stone, Clay and Glass Products	4.86	4.42	3.30
Instruments, Optical Goods, Watches	1.34	0.97	0.77
All Other	6.19	6.31	4.57
Total	100.00	100.00	100.00

Another distinguishing feature of Japanese manufacturing industry is the continued importance of small enterprise. In 1950, 56.6% of all those engaged in manufacturing were employed in establishments with less than 100 workers. Factories with 200 or more workers employed 35.5% of the

total; and there were only 339 plants with 1000 or more workers. The percentage engaged in establishments with less than 100 employees was highest - from 80% to 97% - for the metal fabricating, apparel, food, furniture and lumber and lumber products industries, and lowest - 40.9% and 24.8% - for the entire machinery and equipment industry and the primary metal products industry respectively. For the textile industry it was about 50%. To some extent the predominance of small-scale industry has complicated the task of rationalizing manufacturing with a view to improving efficiency and quality and reducing costs of production.

Stages of Postwar Recovery

In tracing postwar developments in Japan it is possible to distinguish roughly four phases: the first lasting until 1948; the second extending to the outbreak of the Korean War; the third covering the Korean war boom; and the current period beginning in 1952. These periods, of course, merged into each other but each was characterized by some distinguishing feature.

The first period was marked by the collapse of the war economy, rapidly growing inflation and concentration by the occupying authorities on fundamental reforms and measures designed to destroy militarism and the war potential of Japan. Comparatively little attention was paid to recovery, and imports consisted primarily of relief supplies.

In the second period emphasis shifted to recovery. With the help of generous U.S. appropriations more raw materials and foodstuffs were imported. Industrial activity doubled and exports began to revive. Initially this recovery was financed by inflationary means, but in 1949 SCAP ^{3/} began to enforce a stabilization program which brought an abrupt halt to further inflation. The various devices through which Japan had been insulated from the world economy and outside competition were progressively abandoned. Multiple exchange rates were abolished in favor of a uniform rate and the many subsidies which had supported industry were gradually eliminated. The budget was balanced and a debt retirement program instituted. The resulting deflation was putting severe pressure on industry to reduce costs when the Korean war broke out.

With the boom generated by the Korean war a sellers' market again emerged. War procurement contracts flowed to Japan in considerable volume, and Japan had no difficulty in selling abroad the products of her industry at rising prices. Even the products of the metal industry, which had hitherto been least competitive, found a ready market abroad. Although the financial stabilization program was generally maintained, wholesale prices rose 56% and retail prices 28% under the impact of market conditions. Industrial activity increased by 50%. Expanding exports, war contracts and rising dollar income from U.S. troops in Japan all combined to yield a very large surplus of foreign exchange amounting to no less than the equivalent of \$765 million in the year and a half following the outbreak of the Korean war.

^{3/} Supreme Commander Allied Powers.

The current period is characterized by the slackening of the war boom and the renewed necessity for Japanese industry to compete in the foreign market under more normal conditions. The beginning of this period cannot be precisely determined. Industrial production as a whole began to level off by the middle of 1952 and was increasingly sustained only by expansion of the domestic market. Export prices dropped rapidly and the value of commercial exports declined sharply in the second half of 1952. In the same period the balance of payments tended to become adverse. The end of this period of relative economic stagnation cannot be prophesied.

II. PRODUCTION

Despite the great difficulties confronting the Japanese economy there has been a remarkable recovery of production in the postwar period. This is reflected by figures on gross national product, agricultural output and industrial production.

Gross national product rose from an average of ¥16.3 billion in 1934-36 to an estimated ¥6079 billion in the fiscal year 1952. ^{4/} The latter figure, deflated by the wholesale price index, represents approximately an 8% increase over the prewar level. Per capita gross national product, however, was only about 87% of that in 1934-36.

Data on the volume of agricultural and industrial production indicate that the gross national product for 1952 may be somewhat underestimated. According to these figures industrial activity in 1952 was 43% higher than in 1934-36 while the output of agriculture, forestry and fisheries was about 7% greater.

Agriculture, Forestry and Fisheries

In this field the index of production stood as follows in 1952 (1934-36 = 100):

Agriculture - Total	106.5
Crops - Total	113.7
Rice	110.3
Wheat & barley	128.1
Others	115.9
Silk	30.9
Livestock	126.8
Forestry	108.3
Fisheries	106.2
<hr/>	
Grand Total	106.6

The increase in crop production is not borne out by official harvest figures but is nonetheless real. The postwar system under which the government has collected and distributed food grains has put a premium on under-estimation of acreage and production by farmers. On the basis of rather accurate consumption data, the government has recently increased its estimate of domestic output markedly. For 1950-51, for example, the actual rice harvest, which is generally about three times the volume of wheat and

^{4/} This is the fiscal year beginning April 1, 1952.

barley production, amounted to 9,950,000 metric tons (in terms of brown rice) as compared with an official estimate of 9,346,000 tons and an average harvest of 9,413,000 in the period 1933-37.

Because of a sharp decline in demand for silk and, in the postwar period, the profitability of rice production, silk is the only agricultural product in which there has been a conspicuous drop in output since prewar years. The area planted to mulberries dropped from 556,231 cho ^{5/} in 1936 to 181,565 cho in 1951; the production of cocoons from 82.9 to 24.9 million kan, ^{6/} and the output of raw silk from 705,458 132-lb. bales to 215,268 bales. Although production has risen in the postwar period, exports have actually declined in recent years owing to a substantial increase in domestic demand ^{7/} which by raising prices has tended to make silk less competitive in foreign markets, particularly in the United States.

Among the forest products the production of timber has increased most rapidly - namely, from 66.3 million koku ^{8/} in 1934-36 to 102.4 million in 1951 and an estimated 85.9 million in 1952. The large demand of timber for building has led to considerable overcutting. In 1952, for instance, output exceeded total annual growth by 19% and annual growth in the accessible, developed forests by 139%. The situation has been aggravated by the fact that for many years reforestation has been carried out on an inadequate scale. Since 1949 the area replanted has again exceeded the area cut, but as of 1952 it was estimated that 1.2 million cho were still in need of reforestation.

The recovery of fisheries is particularly vital to Japan primarily because fish constitutes an important part of the diet ^{9/} and, to some extent, also, because marine products are a significant item in exports

^{5/} 1 cho = 0.992 hectares or 2.451 acres.

^{6/} 1 kan = 3.75 kilograms or 8.267 lbs.

^{7/} Raw Silk Output and Distribution
(bales)

	<u>Export</u>	<u>Domestic Retention*</u>	<u>Output</u>	<u>Percentage Exported</u>
1950	94,621	82,372	176,993	53.5
1951	68,378	146,890	215,268	31.8
1952	70,185	186,502	256,687	27.3

*Including that for export fabrics. The amount of silk fabrics exported declined steadily, however, over this period.

^{8/} 1 koku = 9.827 cu. ft.

^{9/} The importance of fish is primarily attributable to the fact that the intensive agriculture of Japan cannot support much livestock. In 1950-51 fish contributed four times as much protein to the diet as livestock and almost 2.5 times as much in terms of calories.

to the dollar area.^{10/} Despite the loss of extensive fishing areas such as those in Russian waters and off the Kurile Islands, the Japanese fish catch in 1951 (about 7.8 million lbs.) was about 93% of that in 1936. While the total catch has lagged considerably behind the increase in the population, the production of fish in terms of edible products was apparently 98% greater in 1951 than in 1936 (408.9 million kan as compared to 206.6 million kan). By 1951 the total number of fishing vessels was 18% greater than in 1936 and the number of powered vessels 146% larger.

Industrial Production

The development of industrial activity as a whole and separately for utilities, mining and manufacturing is shown in Table 2. Overall production, while still about 20% below the wartime peak, has shown a remarkable recovery. The degree of recovery, however, has varied widely. The manufacture of non-durable goods reached 1934-36 levels only in 1952. Within this category textiles are still about 30% below prewar while chemicals are substantially higher. In the field of durable manufactures the largest increases over prewar levels have taken place in precision instruments, transport equipment and non-electrical machinery. Even in the latter category, however, the production of machine tools has been at very low levels. In non-manufacturing output the biggest increases were registered by electric power and by a number of raw materials, particularly iron and zinc ores. On the other hand, coal production has continued to lag behind the general recovery. A few of the more significant developments in industrial production will be discussed in some detail below.

1. Electric Power

The production of electric power rose, as Table 3 indicates, from 32.7 billion KWH in 1938 to 47.7 billion in 1951. The estimated output for 1952 - about 51.6 billion - was more than double the average in 1934-36 and 58% greater than in 1938. For a number of reasons electricity production far outran industrial production. Electricity has tended to replace coal as a source of energy in the postwar period because coal has been relatively scarce and much higher in price. Most of the electric power output - about 83% in 1949-51 - comes from hydroelectric plants; and there was initially considerable excess generating capacity so that output could increase rapidly despite a relatively modest increase in capacity. While coal prices have risen 329 times since 1934-36, the average price of power has increased only 144 times. The relatively low price, for instance, has encouraged residential and commercial consumption of electricity which is currently running at about 7.9 billion KWH as compared with about 3.3 billion in 1938. Other factors in the sharp rise in power consumption is the steep increase in the output of certain products such as chemical fertilizers, which require large amounts of power, and the electrification of the railways.

^{10/} In 1951 marine products accounted for 5% of Japanese exports to the dollar area.

Table 2
INDICES OF INDUSTRIAL ACTIVITY AND PRODUCTION
(1934-36 = 100)

	Prewar or Wartime Peak	Postwar Low	Postwar Peak	1948	1949	1950	1951	1952	Dec. 1952	Feb. 1953
<u>INDUSTRIAL ACTIVITY</u>	176.2 (1944)	39.2 (1946)	150.3 (Dec. 1952)	67.1	86.6	101.9	133.9	142.9	150.3	138.6
<u>UTILITIES</u>	156.2 (1943)	87.8 (1945)	207.2 (Dec. 1952)	138.4	156.2	169.2	183.7	198.9	207.2	182.9
ELECTRICITY	155.6 (1943)	94.6 (1945)	211.8 (July 1952)	147.4	164.8	176.6	186.8	200.0	205.4	171.7
<u>INDUSTRIAL PRODUCTION</u>	178.8 (1944)	30.7 (1946)	143.4 (Dec. 1952)	58.5	78.2	93.8	127.8	136.1	143.4	133.3
<u>MINING</u>	147.0 (1942)	73.0 (1945)	141.7 (Mar. 1952)	82.9	96.2	101.5	115.0	119.6	107.4	136.7
<u>METALS</u>	222.9 (1944)	61.9 (1946)	178.3 (July 1952)	76.7	101.5	115.8	127.7	157.9	152.4	142.8
Iron Ore	595.4 (1944)	193.8 (1947)	499.2 (July 1952)	217.8	296.5	320.9	345.6	405.1	349.6	357.4
Copper Ore	150.0 (1943)	26.3 (1946)	92.3 (Oct. 1952)	40.7	51.8	62.3	67.0	84.3	89.8	81.4
Zinc Ore	288.6 (1943)	67.8 (1946)	312.2 (Oct. 1952)	105.6	140.9	165.4	204.4	274.9	270.4	228.7
<u>COAL</u>	146.7 (1941)	52.8 (1946)	138.6 (Dec. 1951)	87.6	98.6	99.9	112.5	112.6	97.3	134.8
<u>MANUFACTURE</u>	182.1 (1944)	28.9 (1946)	146.4 (Dec. 1952)	56.5	76.7	93.2	128.9	137.4	146.4	133.2
<u>DURABLE MANUFACTURE</u>	320.4 (1944)	36.5 (1946)	181.6 (Dec. 1952)	78.6	107.2	119.0	169.5	173.5	181.6	161.7
Pig Iron	226.3 (1942)	11.1 (1946)	199.4 (May 1952)	43.0	82.3	118.7	166.3	184.7	183.9	189.9
Steel Ingot	166.2 (1943)	12.1 (1946)	160.1 (May 1952)	37.3	67.8	105.4	141.6	152.2	137.4	137.3
<u>MACHINERY</u>	463.3 (1944)	51.4 (1946)	201.8 (Dec. 1952)	105.3	128.3	122.6	181.0	177.1	201.8	170.3
Machinery (non-electrical)	308.2 (1943)	45.1 (1946)	214.4 (Dec. 1951)	110.9	144.9	118.7	183.5	164.2	189.8	163.5
Machine Tool	884.3 (1943)	21.0 (1946)	58.9 (Dec. 1952)	29.5	28.4	18.5	29.6	35.6	58.0	45.9
Sewing Machines	468.6 (1941)	10.8 (1945)	5709.3 (Dec. 1952)	439.6	731.5	1257.6	2913.0	4327.4	5709.3	4692.1
Electric Machinery	123.7 (1938)	16.4 (1945)	151.2 (July 1951)	102.2	112.7	105.7	135.4	107.6	134.8	100.3
Transportation Equipment	960.9 (1944)	52.6 (1947)	218.4 (May 1952)	90.5	87.8	113.8	180.7	191.8	202.6	176.0
Bus & Truck Chassis	855.6 (1941)	109.7 (1945)	601.2 (Aug. 1951)	315.9	379.0	387.1	517.7	476.7	467.6	489.0
Ship	1080.6 (1944)	41.1 (1947)	443.4 (Mar. 1952)	80.1	80.6	112.9	218.7	251.0	428.6	278.0
Freight Car	220.5 (1940)	29.8 (1947)	361.0 (July 1951)	191.9	113.3	112.0	185.5	154.7	148.4	86.0
Precision Equipment	137.0 (1941)	42.6 (1945)	619.3 (Nov. 1952)	186.2	374.5	292.8	389.8	500.2	603.8	517.3
<u>CERAMICS</u>	176.8 (1939)	29.1 (1946)	153.6 (Dec. 1951)	64.1	88.1	100.6	140.2	141.1	148.0	132.9
Sheet Glass	133.8 (1937)	11.9 (1945)	202.6 (Dec. 1952)	49.8	82.3	109.9	135.7	157.4	202.6	159.0
Cement	117.6 (1940)	18.0 (1946)	154.3 (Oct. 1952)	35.9	63.4	86.3	126.8	137.8	142.6	122.4
Chinaware	359.3 (1941)	35.8 (1945)	212.7 (Dec. 1951)	152.1	173.0	150.9	193.4	176.1	187.0	177.6
<u>LUMBER AND WOOD PRODUCTS</u>	131.9 (1941)	53.9 (1945)	170.9 (Mar. 1952)	92.7	94.9	97.6	149.2	156.0	158.2	157.9

Table 2 (Cont'd)

INDICES OF INDUSTRIAL ACTIVITY AND PRODUCTION
(1934-36 = 100)

	Prewar or Wartime Peak	Postwar Low	Postwar Peak	1948	1949	1950	1951	1952	Dec. 1952	Feb. 1953
NON-DURABLE MANUFACTURE	124.3 (1937)	21.8 (1946)	113.1 (Dec. 1952)	35.6	48.0	68.8	90.5	103.4	113.1	106.2
TEXTILES	144.2 (1937)	12.2 (1946)	75.3 (Sept. 1952)	23.1	30.1	44.6	61.5	70.9	73.5	69.5
Yarns	106.7 (1937)	8.3 (1945)	57.6 (Sept. 1952)	20.0	24.9	34.2	47.9	53.7	56.2	51.9
Cotton Yarn	111.8 (1937)	3.7 (1945)	62.2 (Jan. 1952)	19.4	24.5	37.0	52.3	54.9	56.8	51.3
Wollen Yarn	115.3 (1936)	10.3 (1945)	131.9 (Sept. 1952)	18.1	27.0	53.2	83.9	112.2	116.7	119.5
Silk Yarn	113.0 (1939)	18.4 (1946)	52.2 (1948)	52.2	44.6	31.6	29.2	30.0	28.9	24.7
Fabrics	124.0 (1937)	13.1 (1946)	98.6 (Sept. 1952)	27.3	37.0	58.4	79.6	93.5	96.3	92.6
Cotton Fabrics	124.1 (1937)	1.4 (1945)	62.6 (July 1951)	23.7	25.3	39.7	56.0	57.6	56.6	61.7
Rayon Staple Fabrics	2130.0 (1938)	52.7 (1945)	1134.0 (Aug. 1952)	109.5	157.4	465.9	717.5	1026.7	978.2	845.4
Silk Fabrics	167.4 (1942)	9.4 (1946)	64.2 (Nov. 1952)	31.2	35.9	34.6	41.6	51.1	58.8	39.7
Rayon Fabrics	143.6 (1937)	0.9 (1945)	75.5 (June 1952)	5.6	16.6	55.1	67.7	69.0	68.3	68.3
Woolen Fabrics	100.6 (1936)	1.8 (1945)	57.0 (Sept. 1952)	8.1	10.9	25.1	36.5	47.9	49.5	51.1
CHEMICALS	156.8 (1939)	26.5 (1946)	150.8 (Oct. 1952)	48.6	67.2	98.9	124.6	136.0	142.4	136.9
Paper and Allied Products	136.9 (1939)	22.0 (1946)	159.4 (Oct. 1952)	44.6	65.8	91.5	122.8	141.2	153.8	147.2
Chemical Fertilizer	144.3 (1941)	25.0 (1945)	243.0 (May 1952)	111.1	149.2	189.4	196.0	222.2	192.0	192.8
Industrial Chemicals	177.2 (1939)	32.4 (1946)	131.4 (Oct. 1952)	54.7	69.3	90.0	112.7	115.7	122.0	107.6
Chemical Textiles	211.3 (1939)	10.4 (1945)	175.7 (Nov. 1952)	28.1	50.1	98.6	143.1	156.4	173.1	174.0
FOODS AND TOBACCO	127.4 (1939)	36.9 (1945)	154.8 (Dec. 1952)	40.5	58.0	74.3	109.2	123.3	154.8	136.2
PRINTING	114.8 (1937)	26.2 (1945)	138.9 (Dec. 1952)	35.2	38.2	44.8	52.7	96.8	138.9	123.1

Table 3

Electric Power Capacity, Production and Consumption

	<u>1938</u>	<u>1940</u>	<u>1951</u>
<u>Capacity (million KW)</u> ^{a/}			
Hydro - Authorized	4.3	5.1	6.8
- Effective ^{b/}		4.0	5.5
Thermal - Authorized	3.3	3.9	4.0
- Available		2.9	3.0
Total - Authorized	7.6	9.0	10.8
- Effective and Available		6.9	8.5
 <u>Production (billion KWH)</u>			
Hydro	23.7	24.4	37.5
Thermal	8.9	10.2	10.2
Total	32.7	34.7	47.7
 <u>Sales</u> ^{c/} (billion KWH)			
Lighting	3.0	2.9	5.9
Other	19.4	25.7	23.5
<hr/> Total	<hr/> 22.4	<hr/> 28.6	<hr/> 29.5

^{a/} For 1940 and 1951 for the end of the fiscal year, namely March 31, 1941 and March 31, 1952, respectively.

^{b/} Effective capacity at average stream flow.

^{c/} By public utilities only. The rather large difference between total production of power and sales is attributable to the output of industrial power plants, transmission and distribution losses of public utilities, unpaid consumption of power by unmetred consumers and consumption by the power companies.

Power consumption has risen so rapidly that it has been necessary to ration power in recent years. This has taken the form of penalty rates applicable to consumption in excess of designated allocations, and also of temporary interruptions of power supply during the winter months when peak demand coincides with low water supply and correspondingly low output of hydro power. Thus in December 1951 the peak load on public power plants had to be curtailed by 8.8% and in December 1952 peak power capability apparently fell about 19% short of unrestricted peak demand.

2. Coal

The failure of coal output to rise in accordance with industrial production has been a serious handicap to the economy. The tonnage mined reached 1934-36 levels only in 1950 and is still far below the immediate

Table 4

Year	Total Output (1000 MT)	Percentage Coking Coal in Output	Monthly Output		Proportion of Under-ground Workers to Total (in percent)
			Per Worker	Per Underground Worker	
1934-36 (av.)	38,496	21.8	17.8	24.2	73
1940	56,313	21.1	14.8	20.3	73
1946	19,340	21.2	5.4	9.7	55
1949	37,946	20.3	7.4	12.7	58
1950	38,459	18.6	8.4	14.1	61
1951	43,330	16.1	10.4	16.5	63
1952	43,357	14.8	9.9	15.4	64

prewar and wartime volume. Above all, output per worker lags far behind prewar productivity even though it has improved markedly in recent years. In part this is a reflection of the relatively high percentage of workers employed above ground.

The low productivity and high cost of coal mining is attributable to a number of factors. Coal deposits were exploited rather recklessly during the war in order to get maximum output without much thought to the future. The quality of the coal seams which have had to be worked has steadily deteriorated and the distance of the coal face from pithead has continuously lengthened. With the end of the war Korean coal miners, who in 1944 constituted 51% of the underground working force, left the mines and had to be replaced with new workers who were less skilled and demanded higher wages and better working conditions. The working week was reduced and wages rose sharply. The number of hours spent by underground workers at the coal face was reduced by 30% and monthly wages in the mining industry were 332 times higher in 1952 than in 1934-36 while those in the manufacturing industries rose only 253 times. The average price of coal (lump coal with a calorific value of 7000 per kg.) rose from ¥ 18.58 (\$4.64) in Oct.-Dec. 1940 to ¥ 6,107 (\$16.96) in April-Sept. 1952.

In the immediate postwar years rehabilitation of the coal industry proceeded slowly largely because of the poor financial condition of the mining companies. In recent years, however, investment in new equipment has been substantial and output has accordingly increased. Considerable

numbers of mechanical loaders, cutters and conveyors and large amounts of steel props have been installed; and through increased use of mechanical coal washing facilities, quality has been improved. Much, however, remains to be done.

3. Iron and Steel

Among the durable manufactures, the production of iron and steel has risen rapidly. In 1952 production of pig iron amounted to 3,474,300 metric tons, of steel, 6,988,200 tons, and of rolled products, 4,864,000 tons. These figures compare with a peak wartime output of 4.26, 7.65 and 4.8 million tons respectively.

Output increased not only in response to large domestic demand of steel for postwar reconstruction in Japan, but also, since 1949, to a rapid expansion in export demand. Exports of primary and secondary steel products rose from 238,665 tons in 1949 to 653,283 tons in 1950, 974,536 tons in 1951 and 1,655,266 tons in 1952. In the latter period the proportion of exports of primary rolled products and secondary steel products to the total output of rolled products amounted to 34% as compared with only 14.3% in 1950. In 1950, 1951 and 1952 exports of iron and steel products accounted for 9.9, 16.4 and 20.5% respectively of the total value of Japan's exports.

The export boom was a reflection of the world-wide scarcity of steel generated by the Korean war and the resulting rearmament effort. With a considerable amount of excess steel capacity at its disposal, Japan was able to expand her output to meet the growing demand and to charge high prices for her steel products. Recently, however, both demand and prices have been declining, and export prospects have become unfavorable.

Because of her high cost of production Japan is now finding it increasingly difficult to compete in the foreign market. Japan does not have the advantage of cheap raw materials which account for such a large proportion of the total cost of steel. Her iron and steel industry developed in the past largely as the result of deliberate government efforts to expand Japan's war potential. In 1929, for instance, total ingot steel production amounted to only 2.3 million tons. Both imported and domestic raw materials are high in cost compared to those consumed by other leading steel producing countries. The freight charges on bulky imported materials are high. Almost 40% of the coking coal must be brought from such distant sources of supply as India and the United States. In October 1952 freight still accounted for 57.5% of the landed cost of American coking coal even though there had been a sharp drop in freight rates from the 1951 peaks. Moreover, Japanese coal when compared on the basis of caloric value was still higher in cost. On imported iron ore, which accounted for about three quarters of the total requirement, freight accounted for about one third of the landed cost of supplies from the United States and the Philippines in the

Table 5

PRODUCTION OF IRON AND STEEL PRODUCTS
(in metric tons)

Year	PIG IRON			FERRO-ALLOYS	INGOT STEEL					ROLLED STEEL PRODUCTS			FORGED STEEL			CAST STEEL		
	For Steel	Foundry	Total		Open Hearth	Thomas & Bessemer	Electric	Other	Total	Ordinary	Special	Total	Ordinary	Special	Total	Ordinary	Special	Total
1929	n.a.	n.a.	1,087,128	25,309	2,218,198	1,210	52,654	1,778	2,293,640	1,927,677	18,529	1,946,206	38,450	n.a.	38,450	49,224	n.a.	49,224
1936	n.a.	n.a.	2,007,571	64,868	4,900,555	4,504	316,475	1,483	5,223,017	4,264,253	65,339	4,349,592	82,039	n.a.	82,039	116,481	n.a.	116,481
1943	3,694,405	337,890	4,032,295	173,170	5,630,371	333,167	686,512	134	7,650,184	4,348,367	463,206	4,809,573	189,585	293,146	482,731	253,768	25,943	279,711
1946	124,880	78,137	203,027	12,058	166,862	-	390,325	1	577,188	359,405	56,849	426,254	19,247	7,473	26,720	65,287	5,416	70,703
1949	1,443,561	405,126	1,848,687	53,509	2,425,859	77,265	608,288	-	3,111,412	2,441,395	78,686	2,220,081	48,660	13,353	62,013	100,873	10,686	111,559
1950	1,767,343	465,568	2,232,911	65,931	3,891,152	194,887	752,483	-	4,838,522	3,486,137	80,110	3,566,247	57,589	16,333	73,922	97,928	16,213	114,141
1951	2,531,336	595,582	3,126,918	100,443	5,374,845	195,549	931,455	-	6,501,849	4,739,082	164,995	4,904,077	75,284	21,358	96,642	125,378	22,373	147,751
1952	2,976,900	497,400	3,474,300	111,200	5,839,700	199,500	949,000	-	6,988,200	4,637,600	226,800	4,864,400	62,100	29,200	91,300	128,100	28,800	156,900
Capacity ^{a/}			6,085,190	272,930	7,920,640	494,400	3,832,120		12,257,160			7,180,200 ^{b/}						

^{a/} Surveyed as of March 1952

^{b/} Capacity for semi-products

fall of 1952. (See Table 6.) Domestic ores are poor in quality and correspondingly high in price. Thus in 1952 raw materials accounted for 76.6% of the cost of pig iron after deducting the value of by-products.

Table 6
Prices of Imported Coal and Iron Ore
(in dollars per ton)

	<u>June 1950</u>	<u>April 1952</u>	<u>Oct. 1952</u>
<u>Coal from</u>			
United States - c.i.f.	17.70 <u>a/</u>	29.91	25.24
freight		17.96	14.51
India - c.i.f.	11.30 <u>b/</u>	22.59	14.96
freight		15.14	7.35
China - c.i.f.	11.20	19.165	-
freight		5.50	-
<u>Iron ore</u>			
Hong Kong - c.i.f.	7.70 <u>c/</u>	10.73 <u>d/</u>	14.25
India - c.i.f.	9.40 <u>c/</u>	22.89	19.80
freight		13.50	10.60
Philippines - c.i.f.	8.90	17.12	15.48
freight		7.59	5.11
United States - c.i.f.	-	23.83	24.10 <u>e/</u>
freight		14.36	8.23
Malaya - c.i.f.	9.00	22.40	19.36

a/ Dec. 1950; b/ July 1950; c/ Aug. 1950; d/ March 1952; e/ Aug. 1952.

As compared with before the war, costs have been adversely affected by the fact that nearby sources of bulky materials are no longer available. In 1936-38, for example, 90% of Japan's coal imports and 28% of her iron ore imports came from Korea, Formosa, Sakhalin, Manchuria and China. In addition about a third of her total requirements of pig iron was imported, which involved a much smaller transport charge than if the pig iron had been imported in the form of raw materials. In recent years, on the other hand, virtually no pig iron has been imported and supplies of iron ore and coal have had to come from much more distant sources. In 1951, 24% of her imports of iron ore and 65% of her coal imports actually came from the United States and Canada. 11/ In view of these factors it is not surprising that pig iron sells in Japan for \$75 per ton as compared with \$54.50 per ton in the United States.

11/ See Table 7. Statistics on the source of Japanese imports of coal and iron ore for 1952 are not yet available. Total imports of coal and coke were 3,355,356 metric tons in 1952, and of iron ore, 4,767,936 tons.

Table 7

PRODUCTION AND IMPORTS OF IRON ORE AND COAL
(in metric tons)

Year	IRON ORE					COAL		
	SUPPLY		SOURCE OF IMPORTS			Total Imports	Imports from Nearby	Imports from U.S. & Canada
	Domestic Production	Imports	Total	Nearby	U.S. and Canada			
1929	177,556	2,258,920	2,436,476	1,264,437	-	3,604,000	3,092,000	-
1936	620,449	4,022,846	4,643,295	1,494,711	-	6,360,100	5,453,300	-
1943	2,630,177	3,765,714	6,395,891	3,629,936	-	6,142,900	6,217,900	-
1946	555,998	-	555,998	-	-	-	-	-
1949	760,994	1,549,538	2,310,532	285,913	311,522	1,612,323	33,261	1,493,291
1950	825,714	1,455,349	2,291,063	185,396	-	830,260	590,429	75,107
1951	998,365	3,228,202	4,226,567	28,763	985,401	2,203,441	19,907	1,424,971

With a rising rate of operations and some modernization of plant and techniques the efficiency of the Japanese iron and steel industry has improved in recent years. Thus the amount of coke used to make a ton of pig iron declined from 1224 kg. in the first half of 1948 to 869 kg. in the first half of 1951; and in the same period the rolling yield in the production of steel bars increased from 85.1% to 93.0%. Beginning with the fiscal year 1951 the industry launched a three-year modernization program costing ¥ 62.8 billion, which was later increased to about ¥ 90 billion to cover also the cost of improving facilities for production of special steels. This program was designed to reduce the cost of pig iron by 4% and the cost of various types of rolled products by percentages ranging from 12% for steel billets to 30% for steel pipes. ^{12/} It is doubtful, however, that Japanese iron and steel products can ever be made fully competitive on the international market under normal conditions.

4. Machinery and Equipment

The production of machinery and equipment has risen considerably more than industrial output as a whole, primarily in response to the need for re-equipping industry and transport. The largest increases have taken place in the output of non-electrical machinery and transport equipment, including ships. Production of electrical machinery has lagged behind because investment in the power industry has not been very large.

^{12/} Expenditures under the original program were apportioned as follows:

Pig iron		
Beneficiation and preparation of raw materials	¥ 2.9 billion	
Modernization of blast furnaces and coke ovens	6.3 "	
Other	2.2 "	
Sub-total	<u>11.4 "</u>	
Steel		
Repair and modernization of open-hearth furnaces	6.4 "	
Oxygen equipment for open-hearth furnaces and other facilities	2.1 "	
Sub-total	<u>8.5 "</u>	
Rolling mills		
Modernization of blooming and slabbing mills	6.2 "	
Improved pipe manufacturing equipment	5.3 "	
Plate-rolling mill	2.0 "	
Sheet manufacturing facilities such as continuous strip and reversible mills to replace present pull-over method of producing sheet	17.7 "	
Continuous rod rolling equipment	2.0 "	
Other equipment	0.9 "	
Sub-total	<u>34.1 "</u>	
All other equipment	<u>8.8 "</u>	
Grand Total	¥ 62.8 billion	

In the fiscal year 1951, ¥ 22.8 billion were spent on this program; and for 1952 expenditures of ¥ 32.3 billion were projected.

In non-electrical machinery a phenomenal increase was registered in the production of sewing machines over half of which have been exported in recent years. On the other end of the scale have been machine tools, the output of which has been only about a quarter of 1934-36 levels. The fact that Japan retained from the war a stock of metal-working tools far in excess of normal needs has depressed the market even though many of the existing tools are of obsolescent design. 13/ On the other hand, the manufacture of textile machinery reached an all-time high in 1951, thereafter declining sharply as the equipment programs of the domestic textile industry were completed and as the textile market went into a slump.

In transport equipment the sharp increase in production during the last two years is primarily due to shipbuilding. The Japanese merchant fleet, including coastwise vessels, was reduced from over 6 million gross tons in 1941 to about 1.3 million at the end of 1945. Owing to the importance of the merchant marine to the balance of international payments a construction program was launched in 1949 with the ultimate objective of having half of Japan's foreign trade carried in Japanese bottoms. By the end of 1952 the merchant marine had increased to 2.85 million tons. In 1951 Japanese yards built about 450,000 gross tons of shipping of which 36,000 tons were for export; and in 1952 construction approximated 510,000 tons of which 23,000 tons were for export. 14/ Recently there has been a sharp drop in new orders because of the decline in international freight rates.

With the slackening of the post-Korean boom most branches of the machinery industry have faced increasing difficulty in reducing costs to a level which would make them competitive in the international market. Cost has been a particularly critical problem because Japan's hope of becoming more self-supporting is to a considerable extent dependent on a rapid expansion of machinery exports. In 1951 and 1952 machinery and equipment, including vessels, accounted for only 7.8% and 10.9% respectively of the value of all exports. The proportion of exports to total units produced varies widely as indicated in the following figures for 1951: steam locomotives, 78.6%; vessels (in terms of tonnage), 27%; sewing machines, 57.5%; cotton spinning machines, 5.1%; cotton weaving machines, 12.5%; internal combustion engines (in terms of horsepower), 31.6%; D.C. and A.C. motors (in terms of horsepower), 4.8%; bicycles, 16.6%; and automobiles, 2.8%.

13/ At the beginning of 1952 Japan's stock of machine tools was estimated at 560,000 units compared to a normal requirement of about 250,000. Postwar production has consisted largely of small bench-drilling machines, bench lathes and small single-purpose lathes.

14/ In 1950 the tonnage of ships built for export was 82,620.

Two factors handicap the export of machinery: one, the high cost and poor quality of iron and steel; the other, backwardness in technology. As a general average the cost of iron and steel represents about 30% of the cost of machinery, 15/ and manufacturers claim that the poor quality of Japanese iron and steel increases the amount of materials which must be rejected or reprocessed and necessitates the construction of machinery which is much heavier than corresponding types built in other countries. In some fields such as textile machinery and sewing machines Japanese technology is, on the whole, up-to-date, but in other fields, including machine tools and thermal generating equipment, it has lagged behind that of competing countries.

The situation of the shipbuilding industry exemplifies the problem faced by the industry as a whole. As of the fall of 1952 Japanese shipbuilders were paying ¥ 55,000 per ton for ship plates as compared with about ¥ 30,000 paid by competing European builders. The cost of construction of a dry-cargo vessel and a tanker was about 20% and 10% higher respectively than that in European yards. In recent years Japanese shipbuilders were able to build a considerable tonnage for foreign account, but only because foreign yards were being used to capacity and Japanese builders could offer more rapid delivery. Now, however, the Japanese yards no longer have this advantage.

5. Chemicals

Among chemicals, the largest increases in production have been registered by fertilizers, particularly ammonium sulphate. Among the basic industrial chemicals the output of dyestuffs has lagged considerably behind prewar levels, while the production of alkalis, after exceeding 1934-36 averages in 1951, dropped again below prewar in 1952. Nearly all of the chemical production has been for the domestic market. For ammonium sulphate, dyestuffs and calcium cyanamide the percentage of the output exported in 1951 was 11.2, 9.0 and 5.3 respectively, 16/ but for pharmaceuticals, caustic soda and soda ash it was only 2.5, 1.8 and 0.7.

15/ The percentage varies widely as the following figures supplied by the machinery industry indicate: lathes, 14.2%; textile machinery, 20%; ships, 22%; boilers, 32%; thermal generating equipment, 38%.

16/ In 1952 the proportion of ammonium sulphate exported rose to 13%, but exports of calcium cyanamide were negligible.

Table 8

Production of Principal Chemicals
(in metric tons)

	<u>Soda Ash</u>	<u>Caustic Soda</u>	<u>Ammonium Sulphate</u>	<u>Calcium Cyanamide</u>	<u>Calcium Superphosphate</u>	<u>Dyestuffs</u>	<u>Synthetic Resins</u>
1936-40	237,459	368,873	1,006,600	268,400	1,470,800	23,420	3,950
1950	182,211	227,316	1,519,600	462,200	1,389,700	9,000	17,300
1951	223,945	321,890	1,593,700	392,000	1,425,900	14,100	30,200
1952	200,800	268,400	1,955,228	525,780	1,355,304	13,944	n.a.

Chemicals are another group of products which Japan hopes to export in increasing measure. In the last few years, however, they have contributed only about 2% of the total value of exports. Like steel and machinery, chemicals have difficulty in competing in the foreign market, largely because of the high cost of raw materials, but in part also because of the technical backwardness. The technical lag has affected only certain branches of the industry, such as those concerned with some pharmaceuticals, particularly antibiotics, synthetic resins and, in general, products of organic synthesis. The comparatively high cost of raw materials, however, adversely affects the greater part of the industry. The high cost of coking coal and coke-oven by-products, significantly increases the cost of producing pharmaceuticals, dyestuffs and certain resins. Two of the basic chemicals used widely in the chemical industry - sulphuric acid and alkalis - cost about twice as much as in the United States. The alkali industry, for instance, has to rely on imported salt which at the end of 1952 cost \$12 per ton as compared with a price of \$1 or less paid by the American chemical industry. Sulphuric acid is made from domestic pyrites which, partly because of the exhaustion of the better deposits, is expensive to mine. Coal, widely used both as a fuel and raw material in the chemical industry, has been relatively expensive. Coal, for instance, accounted in 1952 for approximately 30% of the cost of calcium cyanamide.

6. Consumers Goods - Textiles

In the field of consumers goods the record of postwar production is spotty. In certain relatively new industries such as the production of optical goods and instruments Japan has forged ahead with phenomenal rapidity. Here Japan has demonstrated her ability to adopt advanced techniques and to produce articles of the highest quality. In 1950 and 1951 about half of the output of cameras, binoculars and other optical goods and instruments were exported, and in 1952 output and exports continued to rise. Promising as this development has been, it could not remotely offset, however, the continued postwar lag in the production and export of textiles which have always occupied an extremely important position in the Japanese economy.

The output of various types of textile yarns and fabrics is given in Table 9. In physical volume total production in 1952 was only a little over 62% of the average in 1935-37. The output of silk was still the lowest in relation to prewar. Cotton textiles, which account for well over half of the total volume, were produced in slightly more than half the prewar amount. The woolen industry, which is relatively much less important, has done somewhat better. Rayon is the only textile which has approximated the prewar volume of output, primarily because of the very large increase in staple fiber production. The production of synthetic fibers (other than rayon) is a postwar development, but the 1952 output of about 6,000 tons was relatively insignificant.

Capacity has not been a limiting factor. In the cotton textile industry the number of spindles was reduced by war damage and compulsory scrapping from a prewar peak of 12,776,220 to only 2,005,052 at the end of the war. The number of operable looms and available capacity for bleaching, dyeing and printing had also drastically declined by the end of the war. In the last three years, however, the industry has re-equipped itself on a considerable scale, so that the number of spindles by the end of 1952 reached about 7.5 million and the number of looms was only about 20% below the prewar peak. Operations in 1952 were well below capacity. In the rayon industry, too, the increase in capacity has more than kept pace with production.

Table 9

Production of Textile Yarns and Fabrics

	<u>1935-1937 Av.</u>		<u>1946</u>		<u>1951</u>		<u>1952</u>	
	<u>Output</u>	<u>Index</u>	<u>Output</u>	<u>Index</u>	<u>Output</u>	<u>Index</u>	<u>Output</u>	<u>Index</u>
Yarn (1000 lbs.)								
Cotton	1,484,599	100	128,919	8.7	711,715	47.9	778,520	52.4
Silk (Raw)	93,818	100	12,433	13.2	28,415	30.3	33,883	36.1
Rayon (filament)	279,790	100	9,028	3.2	137,937	49.3	142,196	50.1
Staple Fiber	78,323	100	20,624	26.3	230,824	294.7	262,196	334.8
Wool	145,192	100	28,186	19.4	112,876	77.7	150,979	82.9
Total	2,081,722	100	199,190	9.5	1,220,767	58.5	1,367,774	65.7
Fabrics (1000 sq.yds.)								
Cotton	4,144,704	100	241,698	5.8	2,179,408	52.7	2,238,410	54.0
Silk	378,911	100	46,667	12.3	158,462	41.8	194,395	51.3
Rayon (filament)	897,754	100	42,156	4.7	487,380	53.6	498,826	55.6
Staple Fiber	131,164	100	30,284	23.1	322,437	245.1	462,874	352.9
Wool	306,361	100	21,139	6.9	110,297	37.6	151,038	49.3
Total	5,855,894	100	381,744	6.5	3,257,984	55.6	3,665,543	62.6

Production of Synthetic Fibers

(Metric Tons)

<u>Type</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953 (planned)</u>
Polyvinyl (Vinylon)	540	4,032	5,304	7,000
Polyamide (Nylon)	96	468	864	3,100

The comparatively low level of textile production has been primarily due to a contraction in the foreign market, although the slow recovery of domestic consumption has also been a factor until recently. The cotton, rayon and silk industries have always been heavily dependent on exports. As Table 10 indicates, 76% of cotton fabrics, 58% of rayon fabrics and 72% of raw silk were exported in prewar years. The woolen industry was much less dependent on exports. In 1952 the yardage of cotton fabrics exported was only 26% of prewar and that of rayon fabrics approximately half. Raw silk exports were less than 14% of the prewar volume.

Table 10

Volume of Textile Exports and Percentage
of Output Exported

	<u>1935-37</u>		<u>1946</u>		<u>1951</u>		<u>1952</u>	
	<u>Volume</u>	<u>%</u>	<u>Volume</u>	<u>%</u>	<u>Volume</u>	<u>%</u>	<u>Volume</u>	<u>%</u>
<u>Rayon</u>								
Yarn (1000 lbs.)								
Rayon filament	47,774)	15	3,001)	1	17,039)	10	11,056d/)	2
Rayon staple	4,924)		-)		20,437)		3,085d/)	
Spun rayon	2,725	7	-		10,892	7	15,776d/)	6
Fabrics (1000 sq.yds)								
Filament	574,821)	58	-		232,110)	60	176,343d/)	31
Spun rayon	25,736)		-		60,658)		70,085d/)	
<u>Cotton</u>								
Yarn (1000 lbs.)	52,870a/	4	3,359	3	28,114	4	29,552	4
Fabrics (1000 sq.yds)	2,945,000a/	76	1,964	1	1,094,503	52	760,955	34
<u>Wool</u>								
Yarn (1000 lbs.)	6,998a/	5	-		1,075	1	n.a.	n.a.
Fabrics (1000 sq.yds)	39,000a/	12	-		1,237b/	1	n.a.	n.a.
<u>Silk</u>								
Raw silk (1000 lbs.)	67,637	72	11,408	91	9,026	32	9,264	27
Fabrics (1000 sq.yds)	124,769	33	900c/	2	40,333c/25		31,542	16

a/ 1934-36.

b/ 9 million, including special procurement.

c/ Thousands of linear yards.

d/ 10 months.

The principal factors responsible for the low volume of exports have been (1) the marked contraction in world exports of cotton textiles and silk, and (2) a decline in the Japanese share in the world market for cotton and rayon textiles.

A gradual contraction in world cotton textile exports has been discernible since the first world war. Over the last four decades the tendency of importing countries to become more self-sufficient has been the principal cause of this development. Since the second world war, however, the failure of many countries to recover their prewar living standards has also been a factor of importance. ^{17/} World exports of cotton textiles were only 5 billion and 5.5 billion square yards in 1950 and 1951 respectively as compared with 7.2 billion in 1937. As far as silk is concerned, the most important factor has been the competition of synthetic fibers.

Japan's share in world cotton textile exports declined from 36.7% in 1937 to only 19.7% in 1951. As Table 11 shows, both the United States and India gained at the expense of Japan and the United Kingdom. While the world trade in rayon (staple fiber, yarn and fabrics) increased from 439 million pounds in 1937-38 to 908 million in 1951, Japan's share of this trade fell from 42% to 11%. In the export of rayon piece goods Japan's share dropped from 62% to 17%. Italy and the Netherlands have meanwhile captured a much larger share of the world rayon market (42% and 27% respectively).

^{17/} The All Japan Cotton Spinners Association has pointed out (Causes of Decline in the World's Cotton Textile Trade, Osaka, August 1952) that in the poorer agricultural countries of the world, principally those in Asia and Africa, per capita cotton textile consumption dropped from 7.8 yards in 1936-38 to 5.6 yards in 1950. The imports of this group of countries declined from 5,107 million yards to 3,354 million or by 1,753 million yards while their output increased by only 442 million. Statistics compiled by FAO indicate that per capita consumption of the principal textile fibers (cotton, wool and rayon) in Asia was 1.7 kg. in 1951 as compared with 2.2 kg. in 1938.

Table 11

World Exports of Cotton Fabrics
(in millions of yards)

<u>Exporting Country</u>	<u>1937</u>		<u>1950</u>		<u>1951</u>		<u>1952</u>
	<u>Quantity</u>	<u>% of Total</u>	<u>Quantity</u>	<u>% of Total</u>	<u>Quantity</u>	<u>% of Total</u>	<u>Quantity</u>
Japan	2,643.6	36.7	1,064.5	19.4	1,086.3	19.8	760.9
U.K	1,921.9	26.7	822.4	15.0	865.2	15.7	710 a/
U.S.A.	226.8	3.1	559.6	10.2	807.2	14.7	750 a/
India	221.0	3.1	1,108.8	20.2	743.9	13.5	600 a/
Italy	448.0	6.2	338.1	6.1	381.2	6.9	n.a.
Belgium	170.0	2.4	229.3	4.2	246.0	4.5	n.a.
France	349.6	4.8	391.8	7.1	401.4	7.3	n.a.
Netherlands	227.2	3.1	153.6	2.8	176.6	3.2	n.a.
Germany	212.7	3.0	127.1	2.3	232.5	4.2	n.a.
Spain	32.8	0.5	140.8	2.6	128.9	2.3	n.a.
Others	746.2	10.4	563.7	10.1	430.8	7.9	n.a.
Total	7,200.0	100.0	5,499.7	100.0	5,500.0	100.0	n.a.

a/ Estimate

Despite the above figures, it cannot be said that Japanese textiles have generally ceased to be competitive. In cotton textiles Japan undoubtedly does not have as marked a competitive advantage as before the war. Wages in textile industry, for example, are apparently no longer as low in relation to other countries as before the war. Real monthly wages in spinning and weaving plants rose on the average 56% from 1934-36 to 1952 and in terms of dollar equivalents they rose by 260%. ^{18/} Moreover, in low quality textiles (i.e. textiles of low counts) India has definitely tended to undersell Japan, partly because the Indian government has kept the price of domestically produced cotton sold to Indian mills relatively low.

The principal factors responsible for the decline in the Japanese share of the world market appear to have been the following:

(1) Other countries obtained a headstart over the Japanese in regaining the market. For a long time after the war foreign trade transactions were exclusively in the hands of SCAP. Only in recent years have

^{18/} The average monthly wage in 1934-36 was ¥ 21.81 or \$6.32 at the exchange rate prevailing at that time; in 1952 the average wage was ¥ 8,197 or \$22.77 at the current exchange rate.

the Japanese been permitted to have their own trade representation abroad and in a few countries Japan is still not allowed to have permanent trade representatives. The "deconcentration" of a few powerful Japanese foreign trade firms into a large number of firms, each with inadequate financial resources, has also hindered the promotion of exports.

(2) A very large part of Japanese cotton textile exports has gone to the relatively poor Asiatic countries whose per capita textile consumption has remained below prewar levels. For example, Indonesia's imports from Japan, the United Kingdom, the United States and India dropped from 496.4 million yards in 1937 to 343.9 million yards in 1951, and her imports from Japan declined from 434.4 million to 233.7 million.

(3) The loss of the Chinese market forced Japan to seek other outlets which were not easy to find. In 1934-36 China imported from Japan on the average 329 million yards of cotton cloth or 12.3% of Japan's exports.

(4) Japan has suffered severely from discriminatory trade restrictions, particularly in the sterling area where she normally markets the bulk of her cotton textile exports. Trade restrictions have also affected her market in Indonesia.

The drop in textile exports has been the most important cause of the overall contraction of Japan's export trade. In 1934-36 textile goods, including raw silk, accounted for 52.1% of the total value of Japan's exports. Cotton yarn and cotton cloth alone represented 17.7% and raw silk and silk manufactures 13.4% of the total exports. In 1951 and 1952 textile materials still constituted 44% and 36.9%, respectively, of the value of all exports, but export volume as a whole was only about 30% of

Table 12

Percentage of Textiles in Total Exports

<u>Item</u>	<u>1934-36</u>	<u>1950</u>	<u>1951</u>
Total exports	100 (928,360)	100 (820,187)	100 (1,354,520)
Total, textiles	52.1 (483,400)	48.7 (399,331)	44.0 (595,600)
Cotton yarn	1.2	2.0	2.4
Cotton cloth	16.5	25.2	23.0
Rayon yarn	0.8	0.6	1.8
Rayon fabrics	4.1	6.1	6.4
Woolen yarn	0.4	0.2	0.3
Woolen fabrics	1.5	0.5	0.3
Raw silk	11.1	4.8	3.1
Silk manufactures	2.3	2.7	1.5
Others	14.2	6.6	5.2

the average in 1934-36. The fact that textiles constitute still such a large share of exports epitomizes the difficulty which Japan has had in replacing shrinking textile sales with those of other products.

Construction

A large volume of construction has taken place in postwar years to make good the tremendous damage inflicted during the war. Today there is little or no visible evidence of the wartime destruction. The number of new office buildings, railway stations, cinemas, night clubs and other commercial structures erected in all the major cities is very impressive; and many of these have been erected on a scale and in a style far more lavish than in the past. About 3,016,000 housing units were constructed in the period 1945-51.

Table 13

Monthly Average of Building Units Started
in Terms of Floor Area (tsubo) a/

<u>Year</u>	<u>All Buildings</u>					<u>Dwellings</u>	
	<u>Total</u>	<u>Wooden</u>	<u>Reinforced Concrete</u>	<u>Steel Frame</u>	<u>Others</u>	<u>Floor Area of Units Begun (Monthly average)</u>	<u>Units Actually Constructed (Annual Total)</u>
1946	645,358 ^{b/}	n.a.	n.a.	n.a.	n.a.	384,775 ^{b/}	459,300
1947	638,651	n.a.	n.a.	n.a.	n.a.	413,664	626,100
1948	955,901	n.a.	n.a.	n.a.	n.a.	581,003	740,900
1949	799,535	n.a.	n.a.	n.a.	n.a.	451,983	370,100
1950	914,542	829,011 ^{c/}	45,597 ^{c/}	21,987 ^{c/}	2,977 ^{c/}	474,070	337,300
1951	815,405	719,703	68,586	23,776	3,340	396,907	246,300
1952	853,375	769,440	54,486	20,895	5,584	439,975	n.a.

a/ One tsubo = 3.954 square yards

b/ Average August-December

c/ Average April-December.

The number of dwelling units erected since the war almost equals the estimated shortage of 3.8 million units estimated to have existed in 1945 as the result of damage and destruction and the wartime lag in construction. As of April 1952, however, the shortage was still officially estimated at 3.16 million largely because of the continued growth of the population. 19/

19/ About 320,000 dwelling units are needed annually simply to meet the housing demand arising from an increase in families. In April 1952, 1,159,400 families were said to be living "doubled up" with other families or in houses not built as dwellings; 834,000 were living in excessively small units; and 1,163,000 were reported living in superannuated dwellings.

Postwar construction created a boom in the construction materials industry. Thus the production of cement in 1952 reached 7,095,742 tons or 55% above the 1934-36 average; and the output of sheet glass - 5.4 million cases - was 57% above prewar levels. Reference has already been made to the effect of building on lumber and steel production.

III. FINANCE

The remarkable recovery of production which has taken place in postwar years was made possible partly by the existence of considerable idle capacity and partly by additional investment. The available data on Japanese national accounts and the components in these accounts are not altogether reliable, but they furnish a very rough yardstick of the extent of postwar investment. As Table 14 indicates the volume of investment increased gradually, and with the progressive rise in the total national product a larger proportion of the gross national product went into investment. By the fiscal year 1950 gross investment had reached about 22% of GNP and in the calendar year 1951 it may have been as high as 28.5%. Gross private investment in relation to GNP has risen much more rapidly, amounting to an average of 20% in the last few years as compared with an average of perhaps around 10% in the years 1946-1948 inclusive. Much of the increase in recent years, however, has been due to the very rapid accumulation of inventories which attended the production boom generated by the Korean war. The availability of excess capacity has kept investment in plant and equipment relatively modest. In the years 1946 to 1948 such investment amounted to a little less than 5% of GNP, and in the last few years it has risen to about 8% of GNP. While there is still a substantial amount of idle manufacturing capacity at present levels of production, the progressive obsolescence of industrial equipment has left a substantial backlog of investment requirements.

The Shortage of Capital

Investment in postwar years has been difficult owing to a chronic shortage of capital. Although voluntary savings have increased sharply in recent years, ^{20/} they have generally fallen far short of requirements. The deficit has been made good partly by inflationary financing and partly by compulsory savings effected through the government.

The chronic shortage of capital is clearly evident from an examination of the sources of funds supplied to industry both for working capital and for purchase of plant and equipment. Table 15 shows that private banking institutions, which means primarily the regular commercial banks, have generally supplied well over 60% of the capital required by industry in the postwar period. This fact is even more striking when it is considered that such banks supplied 21.7%, 8.5%, 10.9%, 18.5%, 25.3% and 16.6% of the capital required for the purchase of equipment in the fiscal years 1946, 1947, 1948, 1949, 1950 and 1951 respectively.

^{20/} There are no reliable statistics on such voluntary savings. Such figures as are available (see Annex 1) would indicate that by 1951 voluntary savings in real terms were close to 90% of the average amount in 1934-36.

Table 14

JAPAN: GROSS NATIONAL EXPENDITURES BY FISCAL YEARS
(in billions of Yen)

	1934-36 Average ^{a/}	1946	1947	1948	1949	1950	1951 ^{a/}	1952 ^{b/}
Gross National Expenditures	16.3	389.1	1159.8	2429.8	3408.5	3871.1	5015.3	6023.0
Net Investment Abroad	0.4	-14.3	-68.2	-97.9	-114.1	56.4	60.5	54.0
Gross National Product	16.7	374.8	1091.6	2331.9	3294.4	3927.5	5075.8	6077.0
Gross Private Expenditures	13.7	317.3	955.9	1938.0	2843.6	3218.8	4184.2	4829.0
Consumption	11.2	269.1	856.0	1686.5	2398.9	2533.3	3018.6	3615.0
Investment	2.5	48.2	99.9	251.5	444.7	685.5	1165.6	1214.0
Housing	1.2	24.2	56.6	109.3	33.0	39.6	48.2	104.0
Plant and Equipment	) 1.3	18.1	46.3	113.2	184.9	297.9	448.2	456.0
Inventories		5.9	-3.0	29.0	226.8	348.0	669.2	654.0
Gross Public Expenditures	2.6	86.1	272.1	589.7	679.0	652.3	831.1	1194.0
Consumption	n.a.	64.6	171.6	371.1	419.0	458.1	552.3	832.0
Investment	n.a.	21.5	100.5	218.6	260.0	194.2	278.8	362.0
Proportion of Total Investment to GNP	n.a.	0.181	0.19	0.20	0.214	0.223	0.285	0.26
Proportion of Private Investment to GNP	0.15	0.129	0.092	0.108	0.135	0.175	0.23	0.20
Proportion of Private Investment in Plant and Equipment to GNP	n.a.	0.048	0.043	0.049	0.056	0.076	0.088	0.075

^{a/} Calendar year

^{b/} Estimate as of November 1952

Table 15

SUPPLY OF FUNDS TO INDUSTRY BY FISCAL YEARS

(in billions of yen)

Source	1946		1947		1948		1949		1950		1951		1952 (est.)	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Industry's Own Funds	1.6	2.3	3.5	3.7	13.1	3.5	70.6	13.9	135.2	18.5	261.0	24.7	272.0	21.4
a. Retained profits	0.4	0.6	-	-	6.0	1.6	36.3	7.1	84.0	11.5	149.0	14.1	156.0	12.3
b. Depreciation	1.2	1.7	3.5	3.7	7.1	1.9	34.3	6.8	51.2	7.0	112.0	10.6	116.0	9.1
II. Issue of Shares	3.0	4.2	9.4	10.1	53.4	14.1	74.8	14.7	35.9	4.9	72.8	6.9	110.0	8.7
III. Issue of Debentures	0.7	1.0	0.4	0.4	0.8	0.1	26.7	5.3	42.3	5.8	34.0	3.2	42.0	3.3
IV. Government Funds	6.4	9.1	54.2	58.0	76.2	20.1	0.2	0.0	11.8	1.6	78.8	7.4	111.7	8.8
a. U.S. Aid Counterpart Fund	-	-	-	-	-	-	24.6	4.8	28.6	3.9	46.6	4.4	31.6	2.5
b. Trust Fund Bureau	-	-	-	-	-	-	-	-	-	-	0.8	0.1	13.5	1.1
c. Special Account to Finance Settlers	0.4	0.6	0.8	0.9	3.7	1.0	1.5	0.3	1.2	0.2	1.4	0.1	20.5	1.6
d. Special Account for Agriculture, Forestry & Fisheries	-	-	-	-	-	-	-	-	-	-	12.0	1.1		
e. Reconversion Finance Bank	6.0	8.5	53.4	57.1	72.5	19.1	-25.9	-5.1	-19.0	-2.6	-11.3	-1.1	-	-
f. Development Bank	-	-	-	-	-	-	-	-	-	-	23.4	2.2	39.1	3.1
g. Export & Import Bank	-	-	-	-	-	-	-	-	1.0	0.1	5.9	0.6	7.0	0.6
V. Private Banking Institutions	58.7	83.4	26.0	27.8	236.3	62.2	335.8	66.1	357.7	49.0	700.1	66.1	723.4	57.0
VI. Bank of Japan Foreign Exchange Loans	-	-	-	-	-	-	-	-	147.2	20.2	-88.1	8.3	11.0	0.9
Total	70.4	100	93.5	100	379.8	100	508.1	100	730.1	100	1,058.6	100	1,270.1	100

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The government, too, was an important supplier of funds to industry, particularly in 1947 and 1948. In these years the government injected funds into the economy through its Reconversion Finance Bank which became a potent factor for inflation. With the inauguration of the financial stabilization program in 1949 this institution was abolished, and until 1951, when the Development Bank began functioning, the government was a relatively insignificant supplier of industrial funds. Another characteristic feature of the supply of capital was the unimportant role played by self-financing. Only in the years beginning with 1949 was there a substantial increase in self-financing, partly because government policy permitted larger allocations for depreciation and partly because corporate earnings rose rapidly. Finally, it should be noted that the flotation of debentures accounted for only a very small part of the funds raised by industry. The percentage of funds raised through debentures increased significantly following the adoption of the financial stabilization program but has remained relatively small.

In the following section each of these sources of industrial funds will be analyzed in some detail.

Self-Financing

The extent to which corporations have had to rely on borrowing in the postwar period is indicated by their balance sheets. Thus the balance sheets of principal companies for the second half of 1951 show that only 37.9% of their total capital resources represented their own capital -- i.e. equity capital and reserves. The remainder was borrowed and as much as 48% was borrowed on short-term. By contrast, the statements of companies available for the prewar period September 1936 to February 1937 reveal that 61% of their capital resources consisted of paid-in equity capital and reserves and only 20% were derived from short-term liabilities.

Although the amount of reinvested profits and provision for depreciation has increased substantially in recent years, these two sources accounted for only 24% of the total funds raised by principal corporations in the first half of 1950 and of 1951, as compared with an average of 45% in the years 1934-36. The small extent of self-financing in Japan is made more striking by the following comparative tabulation of the sources of industrial financing in Japan, the United Kingdom and the United States for the year 1951:

Table 16

Sources of Industrial Financing by Percentage

	<u>Japan</u>	<u>U.S.</u>	<u>U.K.</u>
<u>Internal Funds</u>	18	43	42
Depreciation	6	22	14
Retained profits	12	20	28

Table 16

Sources of Industrial Financing by Percentage

	<u>Japan</u>	<u>U.S.</u>	<u>U.K.</u>
<u>Internal Funds</u>	18	43	42
Depreciation	6	22	14
Retained profits	12	20	28
<u>External Funds</u>	82	57	57
Bank Loans	34	9	2
Short-term	23	-	-
Long-term	11	-	-
Reserve for Payables	39	33	45
Net New Issues of			
Stocks	4	6	7
Bonds	5	9	2

Self-financing by business has been severely restricted by high corporate taxes and the low valuation of depreciable assets for tax purposes. The aggregate rate of national and local corporate income taxes, for example, is 59.25% today. ^{21/} Moreover, in levying these taxes no distinction has been made between profits paid out in dividends and those re-invested. Despite the postwar inflation which raised wholesale prices to 228 times the 1934-36 level by the end of 1949, corporations were not permitted to revalue their assets as the basis for determining tax-free depreciation allowances until 1950. In that year, and again in 1951, corporations were allowed to revalue their assets within certain limits. Only 32,066 out of some 260,000 corporations took advantage of the opportunity, although these included nearly all of the principal corporations. The average revaluation, moreover, was only 70% of the legal limit. ^{22/} This relatively poor result was due partly to the fact that the government levied a 6% tax on the increase in book value and partly to a fear by corporations that they would be unable to show an adequate profit after setting aside depreciation allowances on the basis of a much higher book value.

^{21/} These include the national corporation tax (42% of earnings,) the prefectural enterprise tax (12% of earnings) and the municipal "inhabitant's tax" (12.5% of the corporation tax or 5.25% of earnings).

^{22/} The book value of corporations which revalued increased from 129.1 billion yen to 582.4 billion as against a legal limit of 829.7 billion.

In recent years the profit rate on equity capital, including reserves as well as paid-in capital, has been fairly high. It amounted to 34.2% for the second half of 1950 and declined to 11.24% in the second half of 1951 apparently because of the increase in accumulated reserves, particularly revaluation reserves. The need for funds forced most corporations to reinvest a considerable proportion of their profits even though the corporate income tax did not encourage the retention of profits. The percentage reinvested amounted to 67, 80, 77 and 63 respectively in the first and second halves of 1950 and the first and second halves of 1951. 23/

Despite the revaluation of corporate assets, depreciation allowances have generally remained inadequate. In 1936, for instance, corporations set aside about 6% of their total disbursements for depreciation. In the second half of 1950 provision for depreciation amounted to only 1.9% of disbursements, ^{and} in the second half of 1951 it was 2.3%. It is generally conceded in Japan that depreciation allowances are insufficient by comparison with prewar even after taking into account that the turnover ratio of fixed assets was 3.0 in the last half of 1951 as contrasted with 0.77 in 1936-37.

Stock and Bond Issues

As is indicated in Table 17, new issues of stocks and bonds have generally accounted for only about 10% of the supply of funds to industry. Only in the years 1948 and 1949 was the percentage higher. There is no official control or limitation over the amount of security issues, but marketing conditions have been the limiting factor.

In the immediate postwar years rapidly spiraling inflation prevented the flotation of any significant amount of bonds. When the financial stabilization program was adopted in 1949 conditions became more favorable but the fear of renewed inflation together with the limited availability of capital kept the increase in bond flotations within rather modest limits. Moreover, it has been impossible to issue bonds with a maturity of more than 3 to 5 years or at a price which would reduce the yield below 8.5% to 9%. Nearly all of the privately subscribed bonds have been absorbed by the banking system. 24/

Although Japan has a well-developed stock market with active trading in shares, 25/ the proportion of industrial funds raised by stock issues has remained disappointingly small - about 5% in the fiscal year 1950 and 7% in 1951. Corporations have generally preferred

23/ This reduced the dividend rate in total equity capital to 3.6%, 6.3%, 3.9% and 3.93% for the periods indicated. However, the rate on paid-in capital was much higher - 13%, 21.8%, 25.8% and 24.1%.

24/ Of total issues amounting to 167.5 billion in the 2-year period ending June 30, 1952, all but 19.5% was subscribed by banks.

25/ Stockownership is surprisingly widespread in Japan. Individual owners accounted for 56.48% of the total value of outstanding stock.

to raise their money by borrowing, principally from the banks, because the interest rate on borrowing is substantially lower than the virtually fixed dividend rate which stockholders insist that companies pay on their shares. Companies cannot issue new shares except on a basis generally entitling existing stockholders to buy one share at par value for every share already owned. ^{26/} Since the dividend rate is around 20% of the par value, the cost of new money raised in this way is rather high compared to bank borrowing at 10%. Moreover, the taxes and formalities involved in the issue of new shares impose on the companies expenditures of between 5% and 10% of the face value of the shares.

Financing by Banks

The banks have been the principal source of industrial financing. The general resort to banks not only for working capital but also for financing equipment has resulted in a situation generally characterized as "overlending". Whereas loans and discounts generally amounted to about 60% of deposits before the war, the ratio since the war has increased almost without interruption so that in the last three years it has been close to and occasionally in excess of 100%.

Nearly all of this financing has been done by ordinary commercial banks. Under the occupation the three special banks which concentrated on long-term lending were converted by order of SCAP into regular commercial banks. Institutions to provide equipment capital or long-term working capital were re-established, however, by the Long-Term Credit Law of June 12, 1952. Under the terms of this law the existing Industrial Bank again became a long-term credit bank and a new Long-Term Credit Bank of Japan was established in December 1952. These banks are authorized to issue debentures and to make long-term loans and acquire securities. Since they largely depend on the flotation of bonds for their lending resources and the market for such bonds is very limited, it can hardly be expected that they will be able to take over much of the essentially long-term financing which has been done by the commercial banks. This is indicated by the fact that government funds had to subscribe a third of the capital of ¥ 2.25 billion of the Long-Term Credit Bank and also half of its initial bond issue of ¥ 2 billion.

^{26/} One of the factors stimulating the stockmarket boom which developed in 1952 was apparently the anticipation of new issues by stockholders who bid up share prices in order to be able to buy at par value new shares which had a much higher market value. Thus by the end of 1952 the annual yield of stocks based on market quotations had sunk to less than 7%.

Table 17

Principal Assets and Liabilities of All Banks
(in millions of Yen)

End	Assets				Liabilities				Proportion of :Loans & :Discounts :to De- :posits
	Loans & Discounts	Call Loans	Deposits with Others	Securities	Cash Bills & Checks	Capital Paid- In	De- posits	Borrow- ing	
1936	9,505	511	559	7,039	727	1,568	13,968	1,207	: 0.68
1940	18,371	724	862	14,948	1,915	1,521	31,190	972	: 0.59
1946	146,407	2,376	10,829	58,900	10,979	1,420	144,869	43,674	: 1.01
1948	381,348	4,155	24,311	117,033	72,660	14,729	505,349	55,875	: 0.75
1949	679,052	5,206	28,411	106,146	121,156	16,170	792,018	90,727	: 0.86
1950	994,746	2,396	21,621	134,596	158,865	19,131	1,048,564	147,191	: 0.95
1951	1,517,813	8,563	32,862	175,926	181,171	25,763	1,506,308	220,102	: 1.01
1952	2,128,022	16,994	38,918	236,054	335,234	29,545	2,223,820	238,676	: 0.96
March 1952	1,640,629	17,156	26,253	184,489	256,107	26,923	1,675,859	225,845	: 0.98
March 1953	2,261,377	12,885	31,946	255,404	350,771	29,740	2,333,328	298,698	: 0.97

The demand for capital has made it difficult to impose any curbs on bank lending. There has been no requirement that the banks maintain a definite cash reserve against deposits or keep reserves on deposit at the central bank, the Bank of Japan. The latter, of course, can control credit through such means as the sale or purchase of bonds, the interest rate it charges on loans and the determination of collateral eligible for rediscount. While the Bank of Japan does not limit the total volume of credit to its customers, it does establish for each of its customers a credit line divided into basic, primary and secondary portions. The first two are limited in amount, and to each of these portions successively higher interest rates apply. During the last three years interest rates on the basic and primary portions were raised only once, namely on October 15, 1951, but rates on the secondary portion were raised on December 1, 1950 and March 20, 1951, as well as on October 15, 1951. As of the latter date interest rates applicable to the basic portion ranged from a discount rate of 5.84% on commercial bills to rates of 6.21% and 6.57% on loans secured by various types of collateral. The corresponding maximum rates, applicable to the secondary portion, were 7.67%, 8.4% and 9.13% respectively. ^{27/} As of the end of 1952 commercial banks in Tokyo

^{27/} In the fall of 1952 it was reported that only 2 out of the 11 big banks regularly availed themselves of the secondary credit line, and the remaining 9 occasionally, usually at the end of the month.

charged on the average 9.13% for loans on bills although the interest rate on some loans was as high as 12%. 28/

Little qualitative control over credit has been exercised. In theory the Bank of Japan can influence the purpose for which credit is extended by determining the eligibility of collateral on which it will lend, but the criterion of eligibility has been broad enough so that it has not restricted borrowing by the banks from the central bank. The Ministry of Finance can advise the banks on their lending policies. Thus in July 1951 it issued a recommendation to avoid non-urgent loans and in October 1951 it urged banks to advance no loans for capital purposes except to four basic industries - coal, steel, shipbuilding and electric power. The National Bankers' Association established a Voluntary Credit Regulation Committee in July 1951 to carry out the recommendations of the Ministry, but it appears to be generally agreed in Japan that this type of credit restriction has not been very effective.

In general the Bank of Japan has been cautious in applying credit controls. Such caution apparently stems largely from a fear of the widespread repercussions which severe controls would have on a banking system which is greatly "overlent" and also largely illiquid because of the nature of its loans. The willingness of the Bank of Japan to come to the rescue of the banks has undoubtedly been the principal factor in maintaining the solvency of the banking system. Another factor which has made the abnormal banking situation tenable is the close association between banking and commercial and industrial business interests. Neither can afford to undermine confidence in the other. In Japan bank depositors and bank borrowers are in large part identical. The government's postal savings and transfer system provides the facilities for small personal savings and remittances.

The willingness of the Bank of Japan to assist the banks in credit emergencies may be illustrated by the inauguration of its foreign exchange loan system in September 1950. At that time the government's fiscal policy, pursued in line with the financial stabilization program adopted in 1949, had made money rather tight. At the same time there was a rising demand for credit to purchase raw materials which were rapidly increasing in price. To meet this situation the Bank of Japan not only made yen loans for "margin money" on letters of credit, but, when import bills fell due, provided a 100% credit in foreign currency to permit the banks to finance imported stocks until they could be sold. The considerable amount of funds thus supplied to industry in the fiscal year 1950 is evident from Table 15. Foreign exchange loans of this type were discontinued in November 1951, and although they were revived on a more restricted basis in February 1952 the volume of repayments of previous loans has consistently exceeded new loans in the last two fiscal years.

28/ As of the end of January 1953, 65.7% of all bank loans on bills and deeds were at rates ranging from 8.76% to 11.32%.

Table 18 shows the development of the principal accounts of the Bank of Japan over the postwar years. The relationship of the Bank's operations to the government's fiscal operations will be discussed in a subsequent section of this report.

Table 18
Principal Accounts of the Bank of Japan
(millions of Yen)

<u>End</u>	<u>Note Issue</u>	<u>Govern- ment Deposits</u>	<u>Other De- posits</u>	<u>Loans and Discounts</u>	<u>Foreign Exchange Loans</u>	<u>Govern- ment Bonds</u>	<u>Advances to Govern- ment</u>
1945	55,440	17,776	4,159	37,838	-	7,165 ^{a/}	11,220
1946	93,397	6,453	10,869	50,430	-	34,761 ^{a/}	7,600
1947	219,141	6,703	20,953	32,301	-	145,866 ^{a/}	53,201
1948	355,280	14,002	22,660	51,901	-	247,718 ^{a/}	83,509
1949	355,311	12,036	18,127	88,645	-	188,900	100,004
1950	422,063	47,757	25,062	114,507	154,518	136,787	63,014
1951	506,385	31,572	33,323	223,036	138,258	126,044	39,624
1952	576,431	91,626	59,250	223,275	94,486	286,140	38,389
March 1952	457,576	97,197	25,682	227,828	97,035	99,672	39,669
March 1953	515,977	129,893	54,476	291,226	96,468	193,635	38,423

a/ Including bank bonds such as Reconversion Finance Bank bonds

Here it might be noted, however, that the Bank continued to supply substantial amounts of money to the economy up to year 1952 through its ordinary loans and discounts and its foreign exchange loans. With the slackening of economic activity in 1952, however, there was a reduction in the volume of credit made available to the economy, although at the same time the Bank substantially increased its financing of government operations.

Government Funds for Industry

Government funds have been supplied to industry both from special accounts established within the budget and through government banking institutions. These two sources accounted for 7.4% of total industrial funds in the fiscal year 1951 and an estimated 8.8% in the fiscal year 1952.

The principal special budget accounts which have been a source of funds are the following:

1. U.S. Aid Counterpart Fund

This fund was established on April 1, 1949, to receive the yen counterpart resulting from the sale of imports supplied by the United States and financed by appropriations of the U.S. Congress. From its inception to December 31, 1952, the Fund had available ¥61.8 billion derived not only directly from American aid but also from repayment of loans and income on its investments. Only ¥140.0 billion of these funds were used to finance enterprise, and of this sum almost 91% went to industries particularly essential to the economy - electric power, shipping, coal and iron and steel. The remainder was devoted to other purposes including purchase of government bonds (¥111.9 billion of which all but ¥ 49.4 billion was permanently redeemed) and the financing of government enterprises (¥ 97.5 billion of which ¥ 7.5, ¥ 10.0 and ¥ 7.0 was used to finance, respectively, the operations of the Export and Import Bank, the Development Bank and the special loan account in the government budget for agriculture). ^{29/} Loans to private enterprise have been at an interest rate of 7.5% and for periods ranging from 8 years to 25 years (the latter for electric power). As of October 1952 the outstanding loans to private enterprise were taken over by the Development Bank which simultaneously assumed responsibility for making any future loans to private enterprise from the resources of the Fund.

2. Trust Fund Bureau

The Trust Fund Bureau is the government depository for postal savings, the accumulated reserves and surplus cash of other government special accounts and certain other funds. These funds it utilizes to finance the activities of both the national and local governments, of government corporations and certain government supported central banks for cooperatives. Of its total assets of ¥ 482.7 billion at the end of February 1953 about 82% was invested in bonds of the national and local governments and in loans to governments and governmental agencies. About ¥ 80.7 billion was used to acquire bonds of various financial institutions. ^{30/} The Bureau charges 6% on its loans to government special accounts, 6.5% on loans to government agencies and local government bodies and 8.5% on financial debentures.

^{29/} A fuller statement of the utilization of these funds and the balance sheet of the Counterpart Fund may be found at Annex 2.

^{30/} A fuller statement of the utilization of the Trust Fund Bureau's resources as well as its balance sheet will be found at Annex 3.

3. Special Account for Agriculture, Forestry and Fisheries Loans

This special account was established to provide long-term loans at interest rates ranging from 4% to 7.5% for the rehabilitation and development of agriculture, forestry and fisheries. The maximum duration of its loans is 25 years. Its total funds amount to ¥12 billion of which ¥5 billion come from the government's regular (general account) budget, ¥4 billion from the Counterpart Fund and ¥3 billion from the Trust Fund Bureau. As of March 31, 1952, it had almost ¥12 billion of loans outstanding.

4. Government Financial Institutions

Among the government financial institutions established to finance private enterprise the following should be mentioned:

a. Export-Import Bank

This institution was established in December 1950 to finance the export of capital goods, including related technical services, and the acquisition and development abroad of essential raw materials for the Japanese economy. It makes loans to Japanese companies only with the participation of the regular banks but can make loans to foreign companies or governments without such participation. It charges an interest rate of 7.5% and can make loans with maturities of from 6 months to 3 years (in exceptional cases, 5 years). In the spring of 1953 authorization was pending to increase the maximum maturity to 10 years (in exceptional cases, 15 years) in order to permit the Bank to become more active in financing the long-range development of new sources of raw materials abroad. As of the end of February 1952 the Bank's paid-up capital amounted to ¥ 21 billion of which ¥ 7.5 million was supplied by the Counterpart Fund and the balance from the regular (general account) budget. Total loans and discounts at that time amounted to only ¥ 5.6 billion. It is interesting to note that one loan of ¥ 427 million was made to finance the export of machinery and equipment required to develop iron ore mining in Goa for export to Japan.

b. The Development Bank

In the early postwar years, particularly in 1947 and 1948, the government's Reconversion Finance Bank supplied substantial funds to industry not only for purchase of capital equipment but also to cover operating losses. After further lending by this institution was stopped in March 1949, primarily because it was an instrumentality of inflation, the government was a virtually unimportant supplier of industrial funds for two years. In March 1951, however, the government established the Japan Development Bank to provide capital for economic reconstruction and industrial development which ordinary financial

institutions could not supply. For this purpose the Bank was empowered to (1) make loans, (2) subscribe to debentures, (3) take over development loans from other financial institutions, (4) guarantee liabilities with respect to development funds. In 1952 the Bank was also authorized to take over the claims and liabilities of the old Reconversion Finance Bank and the management of loans to private industry from the Counterpart Fund. Amounts equivalent to the government's investment in such Reconversion Finance Bank and Finance Bank loans are being gradually transferred to the Development Bank's capital. The Bank was also made the underwriter of stock issues up to ¥13 billion by the Electric Power Development Company established by the government in July 1952.

As of the end of January 1953 the paid-up capital of the Bank amounted to ¥107.17 billion of which ¥85.22 billion represented the capital counterpart of RFB loans and the balance a cash capital subscription from the Counterpart Fund (¥10 billion) and the government's general account budget (¥11.95 billion). Borrowing from the government amounted to ¥143.1 billion, representing the government's investment in Counterpart Fund loans taken over by the Bank but not yet transferred to capital. The Bank had loans of ¥260.2 billion outstanding of which, however, ¥211.0 billion were old RFB and Counterpart Fund loans. Its subscription to the capital stock of the Electric Power Development Company amounted to ¥4.95 billion. 31/

The Bank has made nearly all of its loans with the participation of private banks such as the Industrial Bank. Loans are made for one to five years but can be extended, where necessary, for a maximum of 30 years. The standard interest rate is 10% but loans for electric power facilities and construction of ocean-going vessels are made at the rate of 7.5%. The Bank has granted most of its loans for basic industrial facilities as is indicated by the following tabulation of its loans outstanding at the end of September 1952 (in millions of yen):

Coal mining	3,868
Other mining	1,550
Metal industry	5,546
Industrial power	4,762
Chemical industry	4,074
Machinery industry	2,375
Others	3,034

The Bank was expected to take over as far as possible equipment loans by commercial banks and it accordingly assumed loan obligations to the shipping and electric power industries amounting to ¥5.8 billion of which ¥5.0 billion was still outstanding at the end of September 1952. The need for capital is so great, however, that it can hardly take over

31/ For a statement of the principal accounts of the Bank, see Annex 4. At the end of January 1953 payments were past due on loans amounting to ¥18.06 billion.

a significant portion of the burden of equipment financing from the commercial banks.

It should be noted that the Development Bank was authorized to contract foreign currency loans from foreign banks and other financial institutions in the expectation that it would become the principal instrumentality for contracting foreign development loans.

c. Other Government Financial Institutions

Other government financial institutions which might be mentioned are: (1) the People's Finance Corporation established in 1949 to give loans to small business which finds it difficult to obtain credit from the regular banks, and (2) the Housing Loan Corporation created in 1950 to finance housing. At the end of January 1953 the first had loans outstanding to a total of ¥19.1 billion as against a paid-up capital of ¥13 billion, a loan of ¥4.5 billion from the Trust Fund Bureau and other resources amounting to ¥3.1 billion. The Housing Loan Corporation had loans of ¥26.75 outstanding on March 31, 1952. Its capital at that time amounted to ¥23 billion (¥10 billion from the Counterpart Fund and ¥13 billion from the government's general account budget) and it had borrowed ¥6 billion from the Trust Fund Bureau. In the fiscal year 1952 the government increased its investment in the People's Finance Corporation by ¥10 billion (¥6 billion from the general account budget and ¥4 billion from the Trust Fund Bureau) and in the Housing Loan Corporation by ¥20 billion (¥8 billion from the general account budget and ¥12 billion from the Trust Fund Bureau).

Government Finance and Inflation

In view of the steady and large demand for capital the government has had to struggle constantly against inflationary pressures. Before, however, attempting to assess the effectiveness of governmental action to maintain financial equilibrium without unduly restricting essential investment, it is advisable to explain the rather complicated structure of government finance.

The government budget consists of (1) the general account budget, and (2) the budgets of many special accounts of which there were no less than 34 in the 1952 fiscal year. To the general account budget accrue all tax revenues, income from government monopolies and enterprises and sundry miscellaneous receipts. From the general account budget, too, all the regular operating expenditures of the government, including those for defense, public works and general administration, are met. The special accounts have been established for specific purposes, and their annual operating receipts (including allocations from the general account budget) and expenditures are incorporated in the government budget. The total picture is confused by the fact that the general account budget finances part or all of the expenditures of some special accounts and that some special accounts finance other special accounts. Thus there are a large number of fund transfers among the various accounts. All of the accounts, however, are included in the operations of the Treasury or Government Fund.

Three of the special accounts - the Counterpart Fund, Trust Fund Bureau and Special Account for Agriculture and Fisheries - have already been described. ^{32/} A few of the others should be briefly mentioned here. The most important of these is the Foreign Exchange Fund which buys and sells all foreign exchange. Another is the Special Account for Foodstuff Control into which are entered government transactions arising out of the purchase and distribution of principal foodstuffs. The government, for example, purchases and distributes all imported and domestic rice and imported wheat and barley. The general account budget provides an annual subsidy to offset the higher price of imported foodstuffs.

Up to the fiscal year 1949, when the financial stabilization program went into effect, the government's financial operations showed substantial deficits which were financed primarily by the Bank of Japan and other financial institutions. As a result the inflation, set in motion by the collapse after the war, spiralled rapidly. The wholesale price index which averaged 16.3 times the 1934-36 level in 1946 rose to approximately 200 times the prewar figure by the end of the fiscal year 1948.

Beginning with the fiscal year 1949, the government's financial operations were directed with a view to counteracting inflation and even promoting some degree of disinflation. This becomes apparent when the Treasury's transactions with the "public" are examined, i.e. its receipts and payments exclusive of intra-government transfers and transactions with the Bank of Japan. (See Table 19.) Thus, with the exception of the fiscal year 1950, the Treasury has absorbed more funds from the public than it paid out to the public. In other words, the Treasury's operations have generally been deflationary in effect. They tended to contract the note issue. That this result was achieved is all the more remarkable because until the fiscal year 1952 the Foreign Exchange Fund ran a substantial surplus of yen payments over yen receipts because Japan had a large surplus in her balance of international payments. Thus the Treasury offset the inflationary effect which this surplus would otherwise have had.

During this period the General Account Budget has shown a particularly large surplus in transactions with the public. The surplus was appropriated in large part to finance the inventory of the Foreign Exchange Fund and the Foodstuff Control Account and has also been used to provide funds for various government investment institutions and accounts. Thus the General Account Budget has been a vehicle for compulsory saving by the public. (See Table 21.)

It should also be noted that during most of this period - at least until the third quarter of the 1952 fiscal year - the government debt to the Bank of Japan was steadily reduced. In the first year of the financial stabilization program the assets of the Counterpart Fund were used to redeem ¥62.5 billion of the outstanding government debt.

^{32/} See page 39-40.

Table 19

NET ABSORPTION (↑) OR RELEASE (-) OF FUNDS IN TRANSACTIONS OF TREASURY AND BANK OF JAPAN
WITH THE PUBLIC AND ITS RELATIONSHIP TO MONEY SUPPLY AND PRICES
 (by fiscal years; in billions of yen)

	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>
1. <u>Treasury Transactions</u> a/	17.3	- 45.8	42.0	21.5
of which Foreign Exchange Transactions	-61.0	-278.1	-38.9	122.0
2. <u>Bank of Japan Transactions</u>	-16.1	- 39.1	-103.3	-79.9
Sale or purchase of government bonds	-55.7	- 24.0	0.3	1.3
Sale or purchase of non-government bonds	65.3	-	-	-
Changes in loans and discounts	-40.8	- 19.1	- 99.8	-53.4
Changes in bank deposits with Bank of Japan	- 2.2	7.5	- 2.6	0.8
Designated deposits	21.6	-	- 15.9	-27.6
Others	- 4.3	- 3.5	14.7	9.0
3. <u>Total Absorption or Release of Funds</u>	1.2	- 84.9	- 61.3	-58.4
4. <u>Increase (↑) or Decrease (-) in Bank of Japan</u>	- 1.2	84.9	61.3	58.4
<u>Note Issue</u>				
5. <u>Index of Bank of Japan Note Issue</u>	99.9	126.8	146.4	172.2
(End of Period; March 1949 = 100)				
6. <u>Increase (↑) or Decrease (-) in Total Money Supply</u>	21.6	127.5	85.3	114.2 ^{b/}
7. <u>Index of Total Money Supply</u>	106.3	143.4	168.2	201.4 ^{c/}
(End of Period; March 31, 1949 = 100)				
8. <u>Wholesale Price Index</u> (End of Period;	115.4	169.6	179.1	178.2
March 1949 = 100)				
9. <u>Export Price Index</u> (End of Period; Apr.1949 = 100)	81.1	157.5	116.9	109.7
10. <u>Import Price Index</u> (End of Period; Apr.1949 = 100)	98.5	141.5	127.2	109.5

a/ It should be noted that Japanese official statistics give several sets of figures on the Treasury's transactions with the public, depending primarily on the type of adjustments made and the attribution of different types of transactions to either the Treasury or the Bank of Japan. The figures in this table are compiled on a consistent basis from year to year.

b/ For 11 months of the fiscal year.

c/ End February 1953.

Table 20

INTERNAL NATIONAL GOVERNMENT DEBT

(for end of each fiscal year; in billions of yen)

<u>Type of Debt Holder</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>
<u>Long-term Bonds</u>	139.9	172.2	208.6	279.6	290.7	241.3	261.1	336.7
Government	45.3	47.5	47.1	53.7	67.2	39.3	101.0	65.9
Bank of Japan	2.3	36.7	58.8	60.7	114.3	143.4	93.9	129.3
Other	92.3	88.0	102.7	165.2	109.2	58.6	66.2	141.5
<u>Short-term Securities^{a/}</u>	3.0	30.8	46.2	120.6	118.9	118.0	194.0	279.1
Government	2.3	-	4.0	20.4	41.6	94.9	158.0	172.7
Bank of Japan	0.7	30.0	35.9	80.5	59.3	0.2	11.6	71.7
Other	-	0.8	6.3	19.7	18.0	22.9	24.4	35.7
<u>Borrowings^{b/}</u>	55.3	59.7	91.2	90.7	88.5	86.9	87.2	109.0
Government	1.2	3.1	2.6	3.0	2.9	2.9	7.3	30.2
Bank of Japan	6.5	14.1	46.1	45.1	43.5	42.6	38.5	37.4
Other	47.6	42.5	42.5	42.6	42.1	41.4	41.4	41.4
<u>Temporary Borrowings^{a/}</u>	0.2	1.5	13.6	32.5	38.3	7.5	-	-
Government	0.2	-	-	-	-	-	-	-
Bank of Japan	-	1.5	13.6	32.5	38.3	7.5	-	-
Other	-	-	-	-	-	-	-	-
<u>Total</u>	198.6	264.5	359.8	523.6	536.6	453.8	543.7	725.9
Government	49.0	50.8	53.7	77.2	111.9	136.2	266.5	268.8
Bank of Japan	9.5	82.2	154.4	218.8	255.5	193.7	145.2	238.4
Other	140.0	131.5	151.7	227.6	169.3	124.0	132.0	218.7

Note: Totals do not always check because of rounding.

a/ Maturity of less than one year.

b/ Maturity longer than one year.

The Treasury's operations must, however, be analyzed in conjunction with those of the Bank of Japan in order to gauge the joint effect of these two institutions on monetary stability. Table 19 shows that the operations of the Bank of Japan have more than offset the disinflationary effect of the Treasury's transactions. In response to the demand for credit the Bank tended to increase its loans and discounts consistently until the third quarter of the fiscal year 1952. With the subsequent slackening in economic activity the demand for credit also declined. Another means by which the Bank of Japan increased the supply of credit was by making deposits of government funds in other banks. These so-called "designated deposits" rose particularly during the second half of the fiscal year 1951 and most of the fiscal year 1952. ^{33/} Thus, except for the fiscal year 1949, the bank note issue has consistently increased. By the end of January 1953 it was 66.3% higher than at the beginning of the fiscal year 1949. Moreover, the total money supply, including deposit currency, has risen even more rapidly, the total outstanding at the end of the fiscal year 1952 (March 1953) being 101.4% higher than at the start of the 1949 fiscal year. This was due to the fact that the banks increased their lending and thus the creation of deposit currency (i.e. current deposits) substantially beyond the amount made available to them through loans and discounts by the Bank of Japan.

Thus Japan has continued to experience a substantial inflation in the money supply over recent years despite the disinflationary policies of the government. This inflation in the money supply has been out of all proportion to the increase in production which has taken place. Inevitably this has resulted in rising prices. Wholesale prices in 1952 averaged between 70% and 80% higher than in March 1949, although they fell slightly in the fiscal year 1952. Undoubtedly, much of the original stimulus for this increase came from the sharp rise in the prices of imports and exports which resulted from the Korean war. Yet Japanese prices have remained high despite the marked drop in both import and export prices which has long since taken place. (See Table 19.)

Since the end of the occupation in 1952 there has also been some weakening of the government's resolve to maintain the financial stabilization program. There have been strong pressures for a more "positive" fiscal policy and for higher consumption outlays. Thus the more purely consumption expenditures of the General Account budget have tended to increase more rapidly than other expenditures. (See Table 21.) Expenditures for purposes other than public works, other investment and defense, which amounted to 52% of the General Account Budget in the fiscal year 1951, rose to an estimated 58% of the total in the 1952 fiscal year and to 64.7% in the budget for the 1953 fiscal year which was submitted to the Diet in June 1952. ^{33a/} Under the 1953 budget the government apparently hopes to float bond issues to raise about ¥ 36 billion in investment funds required by such institutions as the Development Bank, the Power Development

^{33/} At the end of January 1953 the amount of designated deposits outstanding was ¥38.8 billion compared with ¥4.5 billion the year before.

^{33a/} This budget was submitted late because the original 1953 budget was not adopted before the Diet was dissolved in April. In the initial months of the 1953 fiscal year beginning April 1, 1953 government expenditures were made under interim monthly budgets.

Corporation, the National Railways and the Telephone and Telegraph Corporation. It evidently expects that these bonds will be subscribed by corporations and banks even though these generally suffer from a severe shortage of resources themselves. The government also proposes to have the Counterpart Fund supply ¥ 41 billion for investment requirements even though it appears likely that the Fund can find the necessary resources only by selling its holdings of government bonds, presumably to the Bank of Japan.

Table 21

National Government Budgets - Expenditures
(in billions of yen; by fiscal years)

	<u>1950</u> (actual)	<u>1951</u> (est.)	<u>1952</u> (est.)	<u>1953</u> (Proposed)
<u>General Account</u>				
Public Works	98.4	100.4	134.1	161.4
Investment a/	25.4	155.3	77.2	40.6
Excluding inventory financing	12.9	56.1	42.2	40.6
Defense b/	111.6	125.4	180.2	140.1
Equalization Grants to Local Govts.	108.5	120.0	145.0	179.0e/
Price Subsidies c/	64.0	22.5	38.0	30.0
Miscellaneous	236.6	270.0	358.0	376.6
Sub-total	633.3	793.7	932.5	968.3
<u>Special Accounts</u>	1,900.0	1,366.3	1,255.5	n.a.
<hr/>				
<u>Total</u>	2,533.3	2,160.0	2,188.0	n.a.
Deductions d/	720.4	415.6	400.7	n.a.
<hr/>				
<u>Net Total</u>	1,812.9	1,744.4	1,787.3	n.a.

a/ Investment in government financial institutions and corporations and appropriations for financing inventories. Appropriations for inventories were primarily to finance increased foreign exchange holdings by the foreign exchange special account (¥10, ¥80 and ¥35 billion in 1950, 1951 and 1952, respectively) and the purchase of foodstuffs (¥10 billion in 1951).

b/ Including appropriations for the support of U.S. forces.

c/ Subsidies on imported foodstuffs.

d/ Deductions are made for (1) intra-government transfers, and (2) appropriations for debt consolidation which are offset on the revenue side by an equivalent sum.

e/ Including national government's share of expenditures for compulsory education.

Another indication of the relaxation of strict fiscal policy is the program of continued tax reductions. With the rapid rise in national income and government revenues which followed the outbreak of the Korean war there was an understandable desire to reduce tax rates and diminish the total burden of national and local taxes which in the fiscal year 1949 absorbed 26% of the national income. With successive reductions in tax rates the proportion of taxes to national income declined to about 20% in 1951 and 1952. Up to the 1953 fiscal year such reductions were quite compatible with a continued rise in government revenues, but in view of the marked levelling off of economic activity in 1952 it is doubtful whether the same would be true of the additional cuts proposed in the 1953 budget. In any event there seems little doubt that the lowering of tax rates has encouraged consumption more than savings and investment at a time when investment capital has been extremely short.

Selected cuts in direct taxes could have been justified on the ground that the proportion of direct taxes to total national and local tax receipts, which was 63.1% in the fiscal year 1952, discouraged private savings and self-financing by industry. This was particularly true of corporate taxes. Corporations did receive some relief in that they were twice permitted to revalue their assets in order to make larger tax-free depreciation allowances on new investments in certain basic industries. In 1953 the government has proposed to authorize a third revaluation, expand the system of special depreciation allowances and increase the tax-free reserves for "bad debts" and "price fluctuations". However the general corporate tax rate has remained high and was even increased in 1950, so that today the aggregate national and local government tax rate on corporate profits is 59.25% ^{34/} Nor has the government encouraged self-financing by undertaking to tax profits retained for business expansion at a lower rate. Individual income taxes have been repeatedly reduced and were again to be lowered under the proposed 1953 budget. Many features of these reductions, however - particularly more liberal exemptions and reduced rates on the lower income brackets - were a greater stimulus to consumption than to savings. Indirect tax rates, which bear most heavily on consumption, have also been lowered in some cases. Thus in 1952 the government decreed a cut of 50% in amusement taxes, the income of which accrues to the local prefectural governments but the rates of which are fixed by the central government. Under the 1953 budget certain other consumption taxes are to be reduced. These reductions have been in large part justified on the ground that prevailing high rates produced tax evasion, but it is doubtful that they will not result in some losses of government revenues.

Finally, it should be noted that the government has increasingly resorted to the Bank of Japan for financing its transactions during the fiscal year 1952. Thus at the end of the fiscal year 1952 the Bank's holdings of government obligations stood at ¥286.8 billion compared to only ¥144.0 billion the year before.

34/ In addition corporations pay a local tax of 1.6% on their fixed assets.

Table 22

National Government Budgets - General Account Revenues
(in billions of yen; by fiscal years)

	<u>1950</u> (actual)	<u>1951</u> (actual)	<u>1952</u> (est.)	<u>1953</u> (proposed)
Tax and Stamp Revenues	456.4	604.0	685.3	716.1
Direct taxes	313.5	425.0	461.8	n.a.
Income	220.1	225.7	260.1	n.a.
Corporation	83.8	183.9	188.0	n.a.
Others	9.6	15.4	13.7	n.a.
Indirect taxes	133.7	168.5	209.5	n.a.
Stamp revenues	9.2	10.5	14.0	n.a.
Income from monopolies	114.5	119.1	131.3	143.7
Japan Monopoly Corporation <u>a/</u>	113.8	118.8	130.5	n.a.
Alcohol Monopoly	0.6	0.3	0.8	n.a.
Profits and Receipts from				
Government Enterprises	10.0	13.1	13.5)
Liquidation of Government Assets	18.9	34.1	21.6	) 62.9
Miscellaneous	57.8	41.6	53.9)
Surplus in Preceding Fiscal Year	59.2	83.5	26.9	45.6
Total	716.8	895.5	932.5	968.3

a/ This Corporation operates the monopolies for tobacco, salt and camphor.

Despite these tendencies to depart from the financial stabilization program the Treasury showed a surplus of ¥21.5 in its transactions with the public in the 1952 fiscal year. This result, however, was achieved primarily because the foreign exchange fund, in contrast to earlier years ran a surplus of about ¥122 billion in the 1952 fiscal year, partly because in the latter part of the year Japan's balance of international payments became adverse. Moreover, expenditures on national defense ran far behind schedule resulting in a reported carryover of ¥166.5 billion into the 1953 fiscal year. Without these two developments the recent inflationary trend of government financial policy would have become clearly evident. In any event it is generally agreed that the Treasury will show a considerable deficit in the 1953 fiscal year if the final budget adopted after the elections conforms generally to the features of that originally proposed.

IV. FOREIGN TRADE AND BALANCE OF PAYMENTS

Japan's postwar balance of trade and payments has been characterized by (1) the low volume of both exports and imports, (2) the large deficit in the balance of trade, (3) a shift to dollar sources of imports, and (4) large expenditures of the U.S. government and U.S. personnel in Japan resulting in dollar receipts in a volume not only offsetting the commercial trade deficit but permitting substantial additions to foreign exchange reserves.

A comparison between the prewar and postwar trade, with a volume index making a rough adjustment for price changes, is given in the Table 23. It will be noted that the import surplus until 1950 was more than covered

Table 23

Value and Volume of Japan's Foreign Trade

	VALUE (in millions of dollars)				INDEX OF VOLUME	
	<u>Exports</u>	<u>Imports</u>		<u>Import Surplus</u>	<u>Exports : Imports</u>	
		Total	: U.S.Aid		: Imports	
1934-36 av.	928.4	950.9	-	22.5	100	100
Sept.1945-Dec.1946	103.3	305.6	192.9	202.3	-	-
1947	173.6	523.5	404.4	349.9	-	-
1948	258.3	684.2	461.0	425.9	7.5	17.8
1949	509.7	904.8	534.7	395.1	15.5	27.6
1950	820.2 ^{a/}	969.9	361.3	149.2	29.3 ^{a/}	32.5
1951	1,354.5 ^{a/}	2,046.8	160.3 ^{b/}	692.3	29.8 ^{a/}	47.2
1952	1,271.9 ^{a/}	2,027.2	5.4	755.3	31.1 ^{a/}	54.0

^{a/} Excluding goods exported under special U.S. Government Procurement Contracts. If exports of goods under such contracts are included the total volume in the last two years is about 35% of prewar.

^{b/} Estimate.

by goods paid from appropriations made by the U.S. Congress for the support of Japan. After the U.S. fiscal year 1951 appropriations for such imports ceased, but they were more than replaced by other special sources of dollar income which enabled Japan to finance its import surplus. This dollar income has been derived from (1) U.S. government payments to defray part of the cost of local goods and services required by U.S. forces in Japan which before mid-1951 had been entirely met by the Japanese government, (2) payments on U.S. government procurement contracts placed in Japan primarily to support the Korean war effort, and (3) personal expenditures of

U.S. personnel in Japan. Thus from June 1950 to the end of 1952 procurement of goods and services by the U.S. military yielded Japan a dollar income of \$846.1 million of which \$413.8 million was earned in 1952. From all three sources combined, Japan received about \$135 million in 1950, \$512 million in 1951 and as much as \$808 million in 1952.

Foreign Exchange Holdings

Owing to these sources of special dollar income and a favorable balance of non-dollar payments Japan has been able to add substantially to its foreign exchange reserves over recent years. As is indicated in Table 24, there was an overall increase of almost \$230 million in 1952, although a small decline took place in the second half of the year. Dollar holdings rose by \$163 million. Without the special dollar income specified above, however, there would have been a dollar deficit of \$557 million, assuming, of course, that payments would have been the same.

Table 24

Japan's Foreign Exchange Holdings
(in millions of dollars)

<u>End</u>	<u>Dollar</u>	<u>Sterling</u>	<u>Open Account</u>	<u>Total</u>
1949	166.1	44.4	11.2	221.7
1950	461.3	54.4	40.7	556.9
1951	583.0	211.3	119.8	914.0
1952: June	698.3	355.3	134.6	1,188.2
Sept.	718.6	336.9	126.8	1,182.3
Dec. ^{a/}	746.3	261.4	135.1	1,142.8
1953: April	827.9	114.3	84.3	1,026.5

^{a/} Estimate made by adjusting September figures for foreign exchange expenditures and receipts in the last quarter of 1952.

Low Trade Volume

The factors responsible for the low volume of commercial exports have already been mentioned in connection with the discussion of the development of production in Japan. Briefly recapitulated they have included the virtual loss of the nearby Asiatic market; the sharp decline in sales of silk and cotton textiles; the relatively high prices of some basic manufactures; backwardness in techniques in some respects; trade discrimination; and the long delay in turning over to the Japanese responsibility for the promotion of their own exports. The continued low volume of imports is more difficult to explain in view of the fact that production in Japan substantially exceeds prewar levels. The primary reasons for the low volume of imports have been (1) greatly reduced requirements for raw cotton, (2) increased reliance by the metallurgical industry on domestic scrap and domestic coking coal, (3) greater reliance on hydroelectric power as a source

of energy, (4) the shift in production from cotton and woolen textiles which require a high proportion of imported raw materials to chemicals, building materials and machinery which require a much smaller proportion of imports in relation to their value, and (5) possibly some economies in the use of raw materials. In 1951 exports were only 11% of national income and imports 16%, while in 1935 and 1936 each was about 23% of national income.

Composition of Exports and Terms of Trade

Despite a sharp drop in the volume of textile exports, these still accounted for 36.9% of the value of all exports in 1952 as compared with 52.2% in 1934-36. The share of machinery, equipment and chemicals - all products which Japan has hoped to export in increasing measure - has not risen significantly. Machinery and equipment accounted for 7.8% and 10.9% of total exports in 1951 and 1952 respectively, as compared with 7.1% in 1934-36. Exports of chemicals which were negligible before the war, amounted to only 2% of exports in 1950 and 1951. Metals and metal products (primarily iron and steel) were the only item whose share in total exports increased substantially - from 8.2% in 1934-36 to 28% in 1952 - largely owing to the great demand for such products in the world market following the outbreak of the Korean war.

In the postwar years Japan's terms of trade as reflected in the relationship of import and export prices has in general been about the same as in 1934-36. In the post-Korean period they have even been about 10% better than prewar. In the future, however, they may deteriorate somewhat. If Japan is to export a much larger volume of machinery, equipment and chemicals it will presumably have to lower its prices in order to meet competition. At the same time it will have to import proportionately more of those raw materials which, owing to a shift to more distant sources of supply, are especially expensive as compared with prewar years.

Shift in the Distribution of Trade

The marked shift in the geographic orientation of trade becomes apparent when the distribution in 1938 is compared with that in 1951 as in Table 25. In 1951 the neighboring Asiatic area accounted for only 5% of Japanese exports and 4% of the imports as compared with 61% and 40% respectively in 1938, while its share of Japan's exports increased much less. In 1952 the same area took about 9% of Japan's exports and supplied 5% of its imports.

Table 25

Geographic Distribution of Japan's Foreign Trade
(in millions of dollars at 1938 prices)

	1938				1951			
	Exports		Imports		Exports		Imports	
	Value	%	Value	%	Value	%	Value	%
Neighboring Asia ^{a/}	664	61	425	40	15	5	20	4
Other Asia	143	13	175	16	130	46	145	25
North America	131	12	287	27	44	16	266	46
Others	<u>156</u>	<u>14</u>	<u>175</u>	<u>17</u>	<u>92</u>	<u>33</u>	<u>142</u>	<u>25</u>
Total	1,094	100	1,062	100	281	100	573	100

^{a/} China, Korea, Formosa.

The shift of trade toward the dollar area becomes even more graphic by a tabulation of exports and imports according to the type of currency used in settling trade transactions. Table 26 shows the distribution of trade by areas requiring settlement (1) in dollars, (2) in sterling, and (3) through open-account booking of credits and debits under bilateral payments agreements not providing cash foreign exchange transfers on individual transactions. It clearly indicates that the overall trade deficit is a dollar deficit. With the sterling and open-account areas Japan has had substantial surpluses until very recently but owing to the large increase in dollar imports the deficit with the dollar area was \$885 million in 1951 and \$823 million in 1952.

Dependence on the Dollar Area

The principal factor in the large trade deficit with the dollar area was the large volume of imports of foodstuffs and raw materials which Japan had to obtain from this area in postwar years owing to lack of adequate supplies from other sources. Table 27 shows the large proportion of such imports which came from the dollar area in 1951. In this connection it should be noted that the dollar area included not only the United States and Canada, but also the large number of countries in Latin America, Europe and the Middle East which are outside the sterling area and with which Japan does not have bilateral payments agreements.

Table 26

FOREIGN TRADE BY CURRENCY OF SETTLEMENT
(in millions of dollars)

	EXPORTS								IMPORTS								BALANCE			
	1934-36		1950		1951		1952		1934-36		1950		1951		1952		1934-36	1950	1951	1952
	(Average)								(Average)								(Average)			
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	Value	Value	Value
Total	928.4	100.0	802.2	100.0	1354.5	100.0	1272.9	100.0	950.9	100.0	970.0	100.0	2046.8	100.0	2022	100.0	-22.6	-149.8	-692.3	-755.2
Dollar Area ^{a/}	387.9	41.8	294.8	35.9	362.0	23.4	400.0	31.4	406.7	42.8	554.8	57.2	1202.2	58.7	1223.3	60.3	-18.8	-260.0	-885.2	-823.3
U.S.	147.8	15.9	179.2	21.8	185.0	13.7	229.2	18.0	234.6	24.7	426.8	44.0	695.1	33.9	768.3	37.9	-82.6	-247.6	-510.1	-539.1
Sterling Area	204.9	22.1	244.1	29.8	612.7	45.2	539.7	42.4	213.9	22.5	221.5	22.8	472.5	23.1	501.6	24.7	-9.1	+22.5	+140.2	+38.1
U.K.	36.4	3.9	26.9	3.2	54.0	4.0	73.1	5.7	21.8	2.3	6.4	0.7	32.8	1.6	36.7	1.8	+14.6	+20.5	+21.2	+36.4
Australia	20.1	2.2	23.1	2.8	90.1	6.7	28.3	2.2	59.5	6.3	76.4	1.9	139.2	6.7	132.8	6.5	-39.4	-53.4	-49.1	+104.5
India)			20.3	2.5	51.8	3.8	36.7	2.9			17.8	1.8	52.4	2.5	73.0	3.6		+2.5	-0.6	+36.3
Pakistan)	74.7	8.0	55.6	6.8	117.0	8.6	117.8	9.3	93.5	9.8	39.0	4.1	102.5	5.0	82.4	4.1	-18.8	+16.6	+14.5	+35.4
Burma)			16.3	2.0	18.1	1.4	21.2	1.9			17.7	1.8	30.6	1.5	29.8			-1.4	-12.5	-8.6
Open Account	327.8	35.3	281.3	34.3	424.9	31.4	333.3	26.3	322.3	33.9	193.6	20.0	372.2	18.2	303.3	15.0	+5.6	+87.7	+52.7	+30.0
Indonesia	41.7	4.5	46.3	5.0	128.4	9.5	59.8	4.7	24.7	2.6	13.4	1.4	54.8	2.6	27.5	1.4	+17.0	+32.9	+73.6	+32.3
Thailand	10.8	1.3	42.6	5.2	45.2	3.4	36.4	2.8	1.5	0.2	43.5	4.5	51.0	2.5	62.5	3.1	+9.3	-0.9	-5.8	-26.1
Korea	156.5	17.0	11.1	2.8	14.8	1.1	49.8	3.9	134.4	14.1	16.1	1.6	7.1	0.3	20.2	1.0	+22.1	-5.0	+7.7	+29.6
Formosa	69.1	6.5	36.6	4.5	50.6	3.7	60.7	4.8	89.4	9.4	37.9	3.9	53.0	2.6	63.8	3.1	-20.3	-1.2	-2.4	-3.1
Other	7.8	0.8	-	-	-	-	-	-	8.1	0.8	-	-	-	-	-	-	+0.3	-	-	-

^{a/} Includes China, Manchuria and Kwantung province and all countries outside the sterling area with which no bilateral payments agreements have been concluded.

Table 27

Quantity of Imports of Foodstuffs and Raw Materials in 1951
(in thousands of units)

<u>Commodity</u>	<u>Total Imports</u>	<u>Imports from Dollar Area</u>
Raw Cotton (bales)	1,674.0	1,229.6
Wheat (tons)	1,653.6	1,593.0
Barley (tons)	899.2	743.2
Rice (tons)	798.8	235.4
Sugar (tons)	553.7	362.0
Soya Beans (tons)	309.9	309.3
Coal (tons)	1,934.9	1,354.7
Iron ore (tons)	3,088.8 ^{a/}	1,202.3
Salt (tons)	1,798.2	1,017.8
Petroleum (kilolitres)	4,495.0	3,706.4

^{a/} This figure, derived from customs statistics, differs from that given in Table 7 which was supplied by the iron and steel industry.

Most of the dollar trade deficit has been with the United States. Japan's imports from the United States, according to U.S. statistics, reached a high of \$620.3 million in 1952 as compared with an average of only \$203.1 million in 1935-36. The United States which exported virtually no foodstuffs to Japan before the war has become the principal supplier of foodstuffs, principally grains, in the postwar years. In 1952 it even shipped coal and iron ore to a value of \$39.7 million. Among other items which it has supplied in larger volume in postwar years have been machinery, vehicles and chemicals. U.S. cotton exports to Japan in 1952, although only two thirds of the volume in 1935 and 1936, were 87% higher in value because of the rise in prices. At the same time the total of U.S. imports from Japan were actually smaller in volume even though greater in value than in prewar years. There was a sharp drop in U.S. imports of silk. Out of total U.S. imports of \$226.5 million from Japan in 1952, \$31 million consisted of iron and steel products, an import due only to a temporary shortage of steel in the United States.

Table 28

Japan's Trade with the U.S.
(in millions of dollars, according to U.S. statistics)

	<u>1935</u>	<u>1936</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>
<u>Total Imports</u>	202.6	203.6	416.2	592.5	620.3
<u>Principal Imports</u>					
Foodstuffs	1.5	1.4	122.5	183.1	223.2
Grains	-	0.1	88.7	142.4	180.7
Wheat - Value	-	0.1	70.6	96.7	99.4
Wheat (mil. bu.)	-	0.1	30.9	41.8	43.4
Barley - Value	-	-	10.6	38.0	24.4
Barley (mil. bu.)	-	-	8.2	25.1	13.7
Rice - Value	-	-	7.5	7.6	56.9
Rice (mil. lbs.)	-	-	152.1	98.5	681.1
Soya beans	-	-	11.9	40.3	26.7
Raw Materials					
Cotton - Value	98.6	88.3	217.6	181.7	175.0
Cotton (thous. bales)	1158.0	1356.0	1229.0	868.0	840.0
Coal - Value	-	-	1.4	14.6	26.8
Coal (thous. tons)	-	-	147.0	1569.0	2786.0
Petroleum & products	25.6	28.9	2.9	29.4	24.0
Iron ore	-	-	-	8.9	12.9
Machinery & Vehicles	20.5	20.5	11.1	25.9	47.5
Chemicals	6.8	9.9	23.8	24.8	27.9
<u>Total Exports</u>	151.4	172.6	177.5	200.4	226.5
<u>Principal Exports</u>					
Vegetable, animal and marine products	27.2	30.3	37.4	35.6	41.8
Fish & Shellfish and products	5.7	5.3	21.4	16.3	23.1
Cotton manufactures	7.6	16.7	12.2	11.6	11.8
Silk & silk manufactures	93.2	98.5	37.3	39.7	49.4
Woods manufactures	1.0	1.0	2.8	4.6	6.4
Glass & glass products	0.6	0.7	1.7	2.3	2.1
Clay products	4.4	4.4	8.3	12.5	12.1
Iron & steel products	0.1	0.4	3.9	18.1	31.0
Aluminum & manufactures	-	-	4.8	3.9	2.8
Precious metals, jewelry	0.8	0.3	2.5	13.8	6.2
Sewing machines & parts	-	-	4.7	6.1	9.2
Optical goods	0.2	0.3	2.2	3.3	3.0a/
Toys & Sports goods	1.9	2.1	4.1	4.0	4.7

a/ Incomplete

Overall Balance of Payments

In the decade before the last war Japan had considerable difficulty in balancing its international accounts. The proceeds of an export surplus with her overseas dependencies were generally used for investment in these same territories. With the rest of the world there was a substantial import surplus. In some years this surplus could be covered by net receipts from invisibles, particularly from merchant shipping. However, in the years 1930 to 1933 and again for a few years after 1936 Japan apparently had to export significant amounts of gold to cover the remaining deficit. In the decade 1929 to 1939 Japan's monetary gold reserves declined from \$542.5 million to \$163.6 million.

As already indicated, the large postwar deficits on commercial account were covered by U.S. aid and later by various forms of special dollar disbursements in Japan. Because of the destruction of the Japanese merchant marine during the war, Japan has actually had a net deficit on the transport account which amounted to \$215 million in 1951 and dropped to \$67 million in the first half of 1952. An abbreviated form of the balance of payments on current account for recent years is given in the table below.^{35/}

Table 29

Balance of Payments on Current Account
(in millions of dollars)

	1950			1951			1952		
	Re- ceipts	Pay- ments	Bal- ance	Re- ceipts	Pay- ments	Bal- ance	Re- ceipts	Pay- ments	Bal- ance
Commercial									
Trade (f.o.b.)	829	886	-57	1355	1647	-292	690	824	-135
Special Procure- ment Goods	50	-	50	227	-	227	139	-	140
Normal Invisibles	152	131	21	187	345	-158	86	143	-57
Allied Forces, Special Procure- ment Services, etc.	102		102	396	-	396	278	-	278
U.S. Aid ^{a/}	360		360	157		157	4		4
Total	1493	1017	476	2322	1993	329	1197	967	230

^{a/} i.e. aid supplied in the form of goods paid from appropriations by U.S. Congress.

^{35/} A fuller statement of the balance of payments appears in Annex 5.

The balance of actual foreign exchange receipts and payments by type of settlement has been as follows for the past two years (in millions of dollars):

	Dollar		Sterling		Open Account		Total	
	1951	1952	1951	1952	1951	1952	1951	1952
<u>Current Transactions</u>								
Goods	-667	-559	£133	£64	£116	£66	-428	-429
Services	£730	£795	£10	-4	-1	£1	£739	£793
<u>Capital Transactions</u>	£15	-83	£4	-57	-	-	£20	-141
<u>Net Balance</u>	£63	£153	£147	£3	£115	£67	£331	£223

Capital Movements

It will be noted that these figures indicate an outflow of capital in 1952. This is attributable not only to an outlay of \$25 million on Japan's capital subscription to the IBRD and IMF, but also to investments of the Foreign Exchange Fund in U.S. and U.K. securities and IBRD bonds. Aside from these "capital exports" there has been only a negligible amount of Japanese investment abroad. In fact, there has been a net inflow of private capital. The government has sought to encourage the importation of private capital under a Foreign Investment Law enacted in 1950 and amended in 1952. Under this legislation the income from investments properly "validated" by the government may be remitted abroad and the principal may be repatriated in five annual installments of 20% each, beginning two years after the investment is made. Most of the private foreign investment has been "in kind". It has particularly taken the form of technological assistance contracts under which foreign concerns have placed at the disposal of Japanese firms patent rights or other technological information and services against royalties or a share in the profits or sales proceeds. In the period 1949 to December 1952, inclusive, 211 such contracts, of which 161 with American firms, were concluded. They have been an important instrument in "updating" Japanese industrial technology. In the same period foreigners acquired shares in Japanese companies to a total value of ¥9.0 billion (\$25.0 million). Foreign investments in the form of loans amounted to ¥12.0 billion (\$33.3 million) and foreign acquisition of real estate to ¥4.8 billion (\$13.2 million). Only a relatively small portion of the total private investments in these categories took the form of actual foreign exchange - \$0.5 million in 1949, \$1.5 million in 1951 and \$25.1 million in 1952.^{36/}

^{36/} See Annex 6 for detailed tables on foreign investment by type and means of payment.

Payments with the Dollar Area

The factors responsible for the large payments deficit (excluding special dollar income) with the dollar area have already been set forth and therefore need no further elaboration. It might be mentioned, however, that total imports from the dollar area might have been somewhat smaller if the government had elected to use its foreign exchange allocation system to compel importers to buy in non-dollar areas irrespective of price. The government did not by and large find it desirable to take such action in view of its possible adverse effects on costs of production in Japan and in view of the large dollar income resulting from special U.S. dollar disbursements in Japan. Thus no drastic action was taken to compel large purchasers of Pakistani and Brazilian cotton as long as the price of such cotton was considerably higher than that of U.S. cotton. At the same time, Japanese exporters often found it more profitable to export to the non-dollar area because of the higher prices which could be obtained. The government tried to counteract this trend to some extent by depriving exporters to the non-dollar area from July 1, 1952, of the right to retain a small proportion of their foreign exchange proceeds for their own use. Exporters to the dollar area, on the other hand, were permitted to retain 5% to 15% of their foreign exchange proceeds (depending on the type of export) which they could not sell but could use themselves for certain kinds of payments. The system, however, did not provide a significant incentive to dollar exports, especially since regular allocations of foreign exchange for dollar payments have not been severely restrictive. In the spring of 1953 the exchange control authorities were apparently planning to extend the foreign exchange retention system once more to the non-dollar area in view of the adverse turn which payments relations had taken particularly with the sterling area.

Payments with the Sterling Area

With the sterling area Japan for some time accumulated a considerable surplus which for the entire year 1951 amounted, in dollar equivalent, to \$146.7 million, and for the first half of 1952, to \$145.1 million. In part this was due to the great demand for Japanese exports under the conditions of scarcity following the Korean war. In part, however, it was also attributable to a new agreement regulating payments with the sterling area concluded in August 1951. This agreement abrogated the provision which had previously required the settlement of balances in dollars and brought Hong Kong, an important entrepot for Asiatic trade, within the sterling payments scheme. The subsequent rapid accumulation of sterling balance by Japan created anxiety both within the sterling area and in Japan. Import restrictions were adopted by sterling countries both to meet the sterling area's general balance of payments difficulties and to redress the balance with Japan in particular. Even the Japanese government put into effect some restrictions on exports to the sterling area. As the result of the cumulative effect of these measures Japanese exports fell sharply in the second half of 1952 while imports continued to increase somewhat. In the second half of 1952 Japan had an overall sterling deficit of \$86.1 million,

and in the first four months of 1953 alone the deficit rose to \$126.5 million largely because receipts for exports were 62.5% lower than in the corresponding period of 1952 while payments for imports were actually 12.9% greater.

This large sterling trade deficit, which caused a sharp decline in sterling reserves by the equivalent of \$222.6 million in the period July 1952 to April 1953 inclusive, is unlikely, however, to continue indefinitely. In April 1953 a new agreement was reached under which Japan will be permitted exports valued at £ 180 million payable in sterling and will allow imports totalling £ 211 million against payment in sterling during the year 1953.^{37/} As part of this arrangement restrictions on the importation of Japanese goods have been relaxed in the sterling area. Since this relaxation will not affect the actual volume of Japanese exports for some time, arrangements were made in May 1953 for temporary credit accommodation in London to relieve the stringency in sterling exchange.

Payments with the Open-Account Area

With the open-account area, including, among others, Formosa, Indonesia, Thailand, the Philippines, Sweden, France, West Germany, Brazil and Argentina, Japan's payments relationship has followed about the same trend as with the sterling area. There was a substantial surplus amounting to \$115.4 in 1951, followed by another surplus of \$60.7 million in the first half of 1952. The Japanese authorities became worried about these surpluses on bilateral payments accounts because it was not generally possible to use the surplus on one account to meet a deficit on another account. Only occasionally could agreement be obtained to use surpluses for imports from other countries, and it was difficult to enforce provisions requiring cash transfers in the event the "swing margins" in bilateral agreements were exceeded. With Indonesia, for example, a large surplus in excess of the permissible "swing" was accumulated, but immediate payment of the excess could not be enforced.^{38/}

In the second half of 1952, however, the aggregate net surplus with the open-account area fell to only \$6.5 million, and in the first four months of 1953 there was an actual deficit of \$36.8 million. As in the case of the sterling area, Japanese exports dropped while imports continued to rise. In the future it may be expected that accounts will be kept in closer

^{37/} The total of permitted Japanese exports would be about £ 33 million less than in 1952 but about £ 29 million more than the annual rate in the second half of 1952. The planned volume of Japanese imports against sterling would be £ 21 million more than in 1952 but at about the same rate as in the second half of 1952.

^{38/} Provisions of bilateral payments agreements and statistics on the actual balances which have accrued under these agreements are given in Annex 7.

balance, since Japan cannot afford to accumulate large inconvertible balances. Japan is considerably handicapped by the necessity of having to balance its accounts on a bilateral basis with each of some 16 open-account countries. This is a far more serious problem than balancing its payments with the sterling area, for in the latter case Japan does not need to balance its accounts with each sterling country individually.

Prospects for a Closer Balance of International Payments

Apart from special dollar income, Japan's international transactions, it will be recalled, showed a deficit of about \$460 million in 1951 and of \$600 million in 1952. What are the prospects that this deficit can be narrowed and even eliminated?

In order to evaluate these prospects the Economic Counsel Board, an agency of the Japanese Government, has attempted to project a balance of payments for 1957. This projection anticipates that the 1952 deficit can be approximately halved to a figure of about \$330 million, nearly all of which would be a dollar deficit. In other words, if Japan is to make ends meet in 1957, there would still need to be U.S. procurement of goods and services or other forms of assistance to the extent of approximately \$300 million.

The projected balance of payments for 1957, as compared with that for 1951 (complete figures for 1952 are not yet available), is set forth in Table 30.

Table 30

Projected Balance of Payments for 1957
(in millions of dollars)

	<u>Total</u>					
	<u>1951</u>			<u>1957</u>		
	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
Merchandise	1084	1736	-652	1570	2080	-510
Invisibles	<u>296</u> a/	<u>107</u>	<u>/189</u>	<u>388</u>	<u>208</u>	<u>/180</u>
Total	1380	1834	-463	1958	2288	-330

	<u>Dollar Area</u>					
	<u>1951</u>			<u>1957</u>		
	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
Merchandise	254	1027	-773	463	900	-437
Invisibles	<u>192</u>	<u>82</u>	<u>/110</u>	<u>259</u>	<u>129</u>	<u>/130</u>
Total	446	1109	-663	722	1029	-307

	<u>Other Currency Areas</u>					
	<u>1951</u>			<u>1957</u>		
	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
Merchandise	829	708	/121	1107	1180	-73
Invisibles	<u>101</u>	<u>26</u>	<u>/75</u>	<u>129</u>	<u>79</u>	<u>/50</u>
Total	930	734	/196	1236	1259	-23

a/ Includes a small amount of non-monetary gold movements which are not included in the currency breakdown.

Note: The figures for 1951 differ from previously shown balance of payments figures because they were adjusted to make them comparable with the projections for 1957. The differences are as follows:

(1) Merchandise payment figures are based here on c.i.f. imports rather than f.o.b. imports as in the previous table.

(2) Since the imports figures are shown here c.i.f., credit is taken on the receipts side under invisibles for that part of the total freight and insurance on imports which was earned by Japanese ships and companies. Conversely import freight and insurance earned by foreign ships and companies has been deducted from invisible payments since it is already included under merchandise payments. This accounts for the much more favorable invisibles position in these figures as compared with balance of payments figures shown previously.

In this projection imports and exports are valued on the basis of prices prevailing in September 1952. This in itself may be a rather optimistic assumption, since the prices of exported machinery and chemicals in particular may have to come down significantly if, as is anticipated, Japan is to export a much larger volume of these products than in the past.

The projection assumes that international trade in general will continue to expand and that development plans in other countries, particularly those in the Colombo Plan area and southeast Asia, will go forward and thus furnish Japan with a growing market and source of supplies. It does not assume, however, that there will be a significant revival of trade with China. Such a revival is not necessarily precluded, but in view of current uncertainties it is well-nigh impossible to forecast its extent and character. Some coal, for example, is likely to be imported from China and Russian-held Saghalien in the near future, and in the longer run Japan may once again be able to obtain not only coal, but also soya beans, salt, iron ore and perhaps even rice from China. It should be kept in mind, however, that future trade with China may be radically different from prewar trade in respect to both its composition and its terms. Communist China is stressing industrial development, particularly expansion of heavy industry, and is therefore likely to have fewer raw materials available for export and will presumably want to exchange its exports not so much against consumer goods such as textiles but against capital equipment. Moreover, Japan will be unable to dictate the terms of trade as in the past, and will have no advantage in free and equal trade bargaining other than that inherent in geographic propinquity to China.

The projected volume and composition of Japan's foreign trade in 1957 rest in turn on certain assured levels of domestic production which also take into account the probability that the population will increase to about 91,360,000 and that per capita consumption will rise at an annual rate of approximately 2%. Table 31 shows the increase in production anticipated by 1957 in relation to 1951.

Table 31

Index of Production Anticipated for 1957
(1934-36 = 100)

	<u>1951</u>	<u>1957</u>	<u>Percentage Increase 1951-57</u>
<u>Industrial Activity</u>	136.1	178.6	31.2
Public utilities	185.6	250.0	34.7
Industrial production	130.2	170.0	30.6
Mining	122.6	142.2	16.0
Manufacturing	130.8	172.9	32.2
Food	106.2	143.7	35.3
Textiles	65.6	78.5	19.7
Wood	152.4	173.4	13.8
Chemicals	128.4	176.0	37.1
Rubber & leather	95.4	110.6	15.9
Ceramics	143.5	180.4	34.1
Metals	172.9	224.7	24.2
Machinery	180.5	238.0	31.9
<u>Agriculture, Forestry and Fisheries</u>			
<u>Fisheries</u>	102.8	119.5	16.5
Agricultural production	100.4	116.6	16.1
Crops	108.4	121.2	11.8
Raw silk	28.1	40.9	45.5
Livestock	108.8	163.9	50.7
Forestry products	129.3	125.5	-2.7
Fishery products	100.9	136.3	35.1

The projected volume of exports and imports as well as the anticipated receipts and payments on "invisible" account will now be examined in some detail.

1. Exports

The Economic Counsel Board envisages an overall increase in exports of ~~45%~~^{39/} by comparison with 1951, which means that exports will have to rise at an average annual rate of about 8%. This expectation is sanguine but perhaps not unattainable. In any event, it can be attained only if Japan avoids inflation which would raise prices, and if vigorous efforts are made to reduce costs through rationalization of industry.

39/ It should be noted that the increase is only 22% if exports of goods under special procurement contracts is added to the 1951 total.

With respect to the composition of exports, it is expected, not unreasonably, that Japan will no longer export iron and steel in 1957, but will use its iron and steel for the manufacture of machinery, equipment and other products which will require more processing. It is also assumed that the volume of cotton textile exports will not exceed the postwar peaks attained in 1950 and 1951, namely about 1.1 billion square yards. The composition of exports is expected to shift in the direction of much higher exports of artificial textiles, chemicals, machinery and equipment and ceramics, all of which require much smaller imports in relation to their value. The proportion of textiles in total exports is expected to decline from 44% in 1951 to 36% in the fiscal year 1957 while that of machinery and equipment is to increase from 8% to 21%. It is obvious that this shift can be accomplished only if a determined and successful effort is made to make Japanese prices for such items as machinery and equipment more competitive in the international market.

The projection envisages an increase in exports to the dollar area of as much as 82% over 1951. Possibilities for larger dollar exports are foreseen in a wide variety of products. Estimates of increases in dollar exports of individual commodities are relatively modest, but taking the full list, the total adds to a substantial figure. The list includes silk and silk products, cotton cloth, fish, tea, fish liver oils, pearls, furs, bamboo products, bristles, pottery, glass, tankers, cameras and optical equipment, sewing machines, toys, and various other manufactured consumer goods.

Undoubtedly, there are considerable possibilities for increasing dollar exports in these lines. Yet the estimate that in the aggregate they could provide additional dollar earnings of over \$200 million annually appears questionable. From this standpoint the Board's projections appear unduly optimistic.

Non-dollar exports are expected to increase 34%. Larger shipments of a long list of products are anticipated. In the case of most commodities the projected increases are modest. The principal sources of larger non-dollar earnings are expected to be chemical fertilizers, synthetic textiles (mainly rayon and staple fibers), and especially machinery and engineering equipment. The machinery and equipment category, which also includes vehicles, rolling stock and vessels, accounts for roughly two-thirds of the projected total increase in non-dollar exports.

In most cases, including fertilizers and synthetic textiles, the projected increases do not appear unreasonable in terms of the potentialities of non-dollar markets especially in Asia. The assumed increase in exports of machinery and equipment, however, raises questions relating both to the absorptive capacities of non-dollar markets and the competitive position of Japanese exports. In 1951 non-dollar exports in the machinery and equipment categories amounted to about \$75 million. Adjusted for September 1952 prices this figure would be reduced to about \$65 million. For 1957 exports of machinery and equipment to non-dollar areas are estimated at \$258 million representing about a fourfold increase.

The most promising opportunities for increasing non-dollar exports of Japanese machinery and equipment appear to be in the expanding markets for capital goods in Asia. So far, however, Japan's share in these markets has been relatively small. In 1951 the countries of Asia (excluding the Middle East, China and Korea as well as Japan) imported the equivalent of about \$675 million of machinery and parts, electrical equipment and vehicles from the principal suppliers, namely the U.K., the U.S. and Japan. Of this Japan supplied only about \$50 million or about 8%. The largest supplier was the U.K. with about 60% of the total and the U.S. accounted for \$220 million or about 32%.

Therefore, while a steady expansion in the markets for capital goods in Asia can be expected, it will still be necessary for Japan to supply most of the expansion and thus obtain a much larger share of the markets if its non-dollar exports of machinery and equipment are to approach the projected figure of \$258 million.

A substantial increase in the importance of Japan as a supplier of capital goods would be of great advantage to the rest of Asia; especially if through higher levels of trade with Japan the countries of Asia were able to reduce their dollar expenditures on capital equipment. This would presuppose, however, a marked improvement in Japan's international competitive position in the capital goods fields.

2. Imports

Imports as a whole are expected to increase only 20% by 1957. This relatively small rise in imports is ascribed on the one hand to a shift in production to goods for which proportionately less imports are necessary, and, on the other hand, to the anticipated increase in agricultural output. The Economic Counsel Board's projection, for example, assumes that the Five-Year Agricultural Production Program which has been worked out will be put into effect and that 80% of the production targets will be achieved. As will be indicated in greater detail later, this is not an unreasonable assumption. If it is valid, the import requirements of foodstuffs by 1957 would be 2,517,000 tons in brown rice equivalent or about 494,000 tons less than at present.

In an effort to reduce the dollar deficit a considerable shift in imports to non-dollar areas is envisaged. Thus imports from the dollar area are to drop 12% below 1951 levels while those from the non-dollar area are to increase 67%. The quantity and source of imports of principal foodstuffs and raw materials for 1957 are set forth in Table 32, together with the comparative figures for 1951. At first glance the large increase in imports of coal and iron ore and the continued importation of some portion of these from the dollar area seem startling. It should be remembered, however, that the contemplated increase in steel production which would be necessary in line with the general rise in industrial production could be accomplished only by a much sharper increase in pig iron production, necessitating larger imports of iron ore and coking coal, in view of the progressive exhaustion of war scrap. 40/

40/ A considerable volume of scrap might become available for import from the west coast of the United States, but this import would, of course, involve dollar outlays.

Table 32

Volume and Source of Principal Imports

<u>Unit</u>	<u>1951</u>			<u>1957</u>		
	<u>Total Imports</u>	<u>Dollar Share</u>	<u>Non-Dollar Share</u>	<u>Import Re-quirement</u>	<u>Dollar Share</u>	<u>Non-Dollar Share</u>
Raw Cotton 1000 bales	1674	1230	444	2000	1200	800
Wheat 1000 tons	1654	1593	61	1333	933	400
Barley " "	899	743	156	681	470	211
Rice " "	799	235	563	840	0	840
Sugar " "	554	362	192	940	390	550
Soy beans " "	310	309	-	390	390	0
Petroleum and petroleum-products " kilo-liters	5298	4121	1177	6794	4534	2259
Coal " tons	1935 ^{a/}	1355	580	4200	3000	1200
Iron ore " "	3089 ^{a/}	1202	1887	7000	950	6050
Salt " "	1798	1018	780	1700	0	1700
Phosphate Rock " "	1074	868	206	1150	780	370
Wool " bales	419	41	379	660	0	660
Pulp " tons	95	58	37	0	0	0
Hides " tons	42	16	26	39	7	32

^{a/} Figures are from customs statistics and differ from those in Table 7 which were obtained from the iron and steel industry.

Whether the volume and sources of imports by 1957 will actually conform to these projections is, of course, problematic. In general, however, it is by no means improbable that such non-dollar supplies can be developed in five years time. The expected non-dollar rice imports should materialize, for example, if production in Burma and Indo-China reach 90% of prewar levels and production targets in the Colombo Plan countries are generally attained. There are large potential non-dollar supplies of coal and iron ore. In fact, it is possible that the Economic Counsel Board has underestimated in some respects potential non-dollar availabilities. For example, more wheat might be supplied by Australia; the probable availability of iron ore from Malaya, India and the Philippines may well be underestimated; more non-dollar coal might be imported if transport facilities in India are improved and coal resources in Formosa and particularly Australia are developed; and some soya beans might in the end be procured from Manchuria. In theory, at least, further shifts of about \$100 million might be possible. On the other hand, Japan might be unable to pay for such a further increase in non-dollar imports, since the estimate of possible exports to the non-dollar area, particularly of capital goods, seems already excessively sanguine.

3. Invisibles

A picture of the development of the invisible items in the balance of payments expected by the Economic Counsel Board is afforded by Table 33, showing the payments and receipts projected for 1957 as compared with those for 1952 estimated on the basis of actual figures for 9 months.

Table 33

Projection of Invisibles in the Balance of Payments
(in millions of dollars)

	<u>Estimated 1952 a/</u>			<u>Projected Fiscal Year 1957</u>		
	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
<u>Current Transactions</u>						
Transport	166.4 ^{b/}	43.2	123.2	285.0 ^{b/}	45.0	240.0
Insurance	2.5	3.0	-0.5	4.0	3.0	1.0
Travel	7.6	5.3	2.3	13.2	8.0	5.2
Investment Income	4.2	3.0	1.2	7.0	5.0	2.0
Govt. Transactions	-	6.0	-6.0	-	-	-
Donations	12.2	-	12.2	21.1	-	21.1
Other	14.2	40.0	-35.8	24.7	57.0	-32.3
Sub-total	207.1	100.5	106.6	355.0	118.0	237.0
<u>Capital Transactions</u>						
Domestic capital	10.0	132.7 ^{c/}	-122.7	9.0	48.0	-39.0
Foreign capital	4.3	4.1	0.2	24.0	43.0 ^{d/}	-19.0
Sub-total	14.3	136.8	-122.5	33.0	91.0	-58.0
Total	221.4	237.3	-15.9	388.0	209.0	179.0

a/ Omitting special dollar receipts.

b/ Including transportation charges on imports carried in Japanese ships.

c/ Including \$50 million for capital subscription to IMF and IBRD and an investment of \$75,964,000 in U.K. Treasury bills and U.S. Treasury notes made in anticipation of resuming repayment on the Japanese external debt.

d/ Including provision for payments on foreign bonds.

Most of these projections appear reasonable. Increased transport earnings may be anticipated in view of the plans to continue rebuilding the Japanese merchant fleet. Net income from travel or tourism may in fact be somewhat underestimated, although in view of the smallness of the amount any revised estimate would not in any event significantly affect total foreign exchange receipts.

While the projected payments take into account Japan's obligations on her external bonded debt, exception can be taken to the total on the ground that it makes no allowance for repayment of the debt incurred with the United States for postwar supplies or for the discharge of reparation obligations.

Japan resumed payment on nearly all of her prewar external debt in December 1952 under the terms of an agreement reached with representatives of sterling and dollar bondholders on September 28, 1952. This agreement covered sterling bonds with an outstanding principal (as of June 30, 1952) of £76,275,757^{41/} and interest in arrears of £43,387,518^{41/} and dollar bonds with an outstanding principal of \$76,361,300 and interest in arrears of \$51,251,595. These include not only Japanese government bonds, but also municipal and corporate bonds for which the government assumed liability during the war as enemy interests. As a token of its intention to meet all its obligations and as a means of strengthening its credit, the Japanese government made a settlement closely conforming to the original contracts. In general maturities of the bonds were extended by 10 years, and those on sterling issues carrying a dollar option clause were extended by 15 years. Sterling bonds with a dollar option clause are to be paid at the full sterling equivalent of the dollar at the time the payments originally fell due, and the British government has waived its insistence on payment in dollars as long as general payments between Japan and the United Kingdom are settled in sterling. The dollar debt is to be entirely repaid by 1977 and will involve average annual interest and amortization charges of about \$11 million over the first 10 years. The sterling debt will not be entirely paid off until 1991 and entails average annual charges over the first 10 years of about £11.8 million although in one fiscal year 1961 - total charges will be £34.5 million.^{42/}

No settlement has yet been reached on (1) the French tranche of the 4% Japanese government loan of 1910 amounting to Frs. 450 million of which

^{41/} Revalued under currency option clause.

^{42/} A detailed schedule of annual charges appears in Annex 8. In addition to the debt mentioned above Japan obtained from the U.S. Export-Import Bank in April 1953 a 15-month \$40 million cotton credit at 3-1/2%. As of May 31, 1953 about \$12 million of a similar credit obtained in 1931 was still outstanding.

Frs. 383 million is still outstanding, and (2) the French tranche of the 5% City of Tokyo loan of 1912 which amounted to Frs. 100.9 million. In settling the first of these the "gold yen" clause has been the principal difficulty. On the second, which was never taken over by the Japanese government, separate negotiations have been undertaken with the French bondholders by the City of Tokyo. Agreement on this issue has been held up by a dispute over the validity of an agreement made in 1939 under which the old bonds, which carried a sterling payment option, were to be exchanged for new "valorization bonds" with an increased nominal amount in French francs. It is difficult to forecast when an agreement on these two issues will be reached.^{43/}

The balance of payments projection made by the Economic Counsel Board makes no provision for servicing the debt of approximately \$2.1 billion which Japan owes the United States for civilian supplies paid out of U.S. Congressional appropriations. No negotiations have taken place yet on this so-called GARIOA^{44/} debt. The United States has, however, made a settlement on a similar debt with Germany. If an agreement should be reached along the same lines with Japan, the debt would be scaled down by about 62-1/2%, would carry interest at 2-1/2% and be repayable over 30 years, including a 5-year period of grace on payments of principal. Interest and amortization charges in that event would be about \$36 million per year.

Japan's ultimate reparation obligation is very difficult to forecast. Under Article 14 of the Treaty of Peace, Japan is obligated to enter into negotiations with Allied Power who desire reparation and whose territory was occupied and damaged by Japanese forces "with a view to assisting to compensate those countries for the cost of repairing the damage done, by making available the services of the Japanese people in production, salvaging and other work for the Allied Powers in question." It was specifically provided that "Such arrangements shall avoid the imposition of additional liabilities on other Allied Powers, and, where the manufacture of raw materials is called for, they shall be supplied by the Allied Powers in question, so as not to throw any foreign exchange burden upon Japan."

^{43/} The amounts involved are in any event not large. Of the French tranche of the 1910 loan only 25% is actually held in France. Under French proposals this portion of the debt would be revalued to about 3.75 billion of current French francs (\$10.7 million); under Japanese proposals the total would be Frs. 95.8 million (\$275,000). The 1912 loan would be revalued to Frs. 3.3 billion (\$9.4 million) under French proposals and to Frs. 195 million (\$600,000) under Japanese proposals. The latter amounts would be reduced, however, if, as expected, it develops that a significant portion of this loan is no longer held in France.

^{44/} Named for the heading "Government and Relief in Occupied Areas", under which most of the money for such supplies was appropriated.

Although negotiations have been carried on, particularly with the principal claimants, Indonesia and the Philippines, it has been impossible to reach any agreement fixing the total of reparation claims which should be satisfied. The only undertaking to provide specific reparation was made with the Philippines for whom Japan agreed on March 12, 1953, to provide services and equipment to salvage ships sunk in Philippine waters. It is probably only by processing or manufacturing materials furnished by reparation claimants that Japan can in theory furnish much reparation. The Japanese government is likely, however, to resist extensive commitments of this type on the grounds that such manufacturing is likely to reduce the volume of commercial production as long as Japan suffers from a power and fuel bottleneck and that the resulting products may significantly undercut Japan's regular commercial sales abroad.

4. Conclusion

On the whole it may be concluded that the Economic Counsel Board's projection of the balance of payments for 1957 is overoptimistic on several counts. If allowance is made for repayment of the GARIOA debt, some reparation payments and overestimates of revenue from dollar exports and possibly other sources, it is likely that the 1957 deficit will be closer to \$400 million than \$300 million. In the longer run, it is possible that a further reduction may be effected as a result of accelerated development of the raw material and foodstuff resources of non-dollar areas, particularly of southern Asia and of Oceania, and, to the extent that future changes in world political conditions may permit it, by some extension of trade with the mainland. In the face of all these uncertainties, it would hardly be prudent, however, to anticipate that Japan will be able, particularly in the near future, to balance her international accounts at a tolerable level without the continued availability of some sort of special dollar disbursements.

V. INVESTMENT REQUIREMENTS AND PROBLEMS

In order to make Japan more self-supporting along the lines projected by the Economic Counsel Board and to provide for a growing population substantial investments will be necessary over the next five years. As already indicated, large increases in industrial and agricultural production will be needed, and these in turn necessitate expansion in power supply, transport capacity and communications. Some analysis of investment requirements and the problems which they create is therefore in order.

Electric Power

Undoubtedly a rapid expansion of electric power supply will have to take place not only in view of current shortages which have necessitated rationing and curtailment of loads during the low-water period in the winter, but especially in view of the considerable increase in industrial production contemplated over the next five years. On the basis of a rather careful survey made with the help of two experts supplied by the Edison Electric Institute it has been estimated that peak load requirements at the generating end will rise from 7.8 million KW in 1952 to 10.4 million in 1957 (December of each year) and that the annual generation required will have to increase from 45.6 billion KWH in the fiscal year 1952 to 59.0 billion in 1957. If power from captive or industrial power plants is included, the total energy output required is expected to rise from 52.7 to 67.1 billion KWH in this period.^{45/}

This total increase of 33.3% in peak load and of 27.3% in total electric power production is very large. According to government plans it will require an increase in total installed capacity from about 11.3 million KW at the end of the fiscal year 1952 to 16.3 million at the end of 1957, or by 44%. The government's power program calls for the installation of 5,461,500 KW in the years 1952 to 1957 inclusive (4,971,000 KW if 1952 is excluded) and a total outlay of at least ¥852.8 billion (\$2.35 billion). Under this program the capacity would be adequate to meet peak demand anticipated for 1957 without, however, leaving any reserve margin or taking into account a shortfall of hydroelectric power resulting from subnormal stream flow. While the magnitude of the program appears on the whole justifiable on the basis of expected power demand, the heavy expenditure involved does make it desirable to review requirements carefully in order to determine whether some economy in consumption cannot be effected. The government has already considered it advisable to eliminate from its plan some 600,000 KW of reserve capacity provided in a program prepared by the private power industry, and has effected a further reduction of 600,000 KW in the industry's plans by allowing for a somewhat

^{45/} At the consumption end total power requirements will increase from 40.8 billion KWH in 1952 to 53.4 billion in 1957.

higher annual load factor in 1957^{46/} Attention might well be given to the possibility of effecting further economies by reducing to some extent the projected power demand for lighting and by limiting peak demand through curtailment of the operations of heavy industrial consumers of power such as the aluminum and chemical industries during periods of low-water supply. The peak demand foreseen for 1957, for example, implies a 43% increase in demand for lighting over the year 1952 as compared with an increase of only 36% in total demand. Through appropriate increases in the power rates for lighting it may be possible to curtail the projected demand for lighting. It is quite possible also that heavy industrial power consumers will still have excess capacity available in 1957, thus permitting them to curtail operations during periods of peak demand without impairing the possibility of attaining production targets. Finally, it is not clear whether the projected increase in generating capacity makes allowance for an expansion in "effective capacity" that might result from the rehabilitation and modernization of existing thermal plants.

A breakdown of the capacity to be developed by the private power companies, the Power Development Company, local governments and industry is given in Table 34, together with the cost as estimated by the government. The emphasis in this program on hydroelectric power development is attributable to the shortage of coal in Japan and to the presumed cheapness of hydro power.

Table 34

Power Program Projected by the Government
(1952-1957 inclusive)

	<u>Private</u> <u>Power</u> <u>Companies</u>	<u>Power</u> <u>Development</u> <u>Company</u>	<u>Local</u> <u>Governments</u>	<u>Industry</u>	<u>Total</u>
<u>Additional Capacity (000 KW)</u>					
Hydro	2,177.6	1,285.5	344.4	173.8	3,981.3
Thermal	1,252.9	-	-	227.6	1,480.5
Total	3,430.5	1,285.5	344.4	401.4	5,461.8 a/
<u>Expenditures (billion yen)</u>					
Generating Facilities	277.3	115.2	38.3	29.3	460.1
Transmission and distribution Facilities	292.8	8.8	-	-	301.6
Improvements	91.0	-	-	-	91.0
Total	661.1	124.0	38.3	29.3	852.7 b/

a/ Includes ¥490.0 billion scheduled for completion in 1952.

b/ Includes ¥154.2 billion scheduled to be spent before 1953, but excludes ¥73 billion in anticipated expenditures on projects that would be completed after 1957.

^{46/} The government's plan provides for an annual load factor of 66.4% by 1957 as compared with 64.5% in the plan projected by the private power industry.

Thermal power capacity is needed, however, to stabilize the power supply even though the Government has included in its hydro program as many reservoir projects as possible in order to "firm up" the supply of hydro power to some extent.^{48/} Part of the additional thermal capacity will apparently be made available through improvement of boilers and auxiliary plant in existing thermal stations.

Under the program for "improvements" the private power companies plan to spend considerable funds on equipment designed to reduce the "power loss" from about 26.4% of production in 1952 to 22.3% in 1956. This power loss (the difference between power produced and despatched and apparent use at the consuming end) has been high in Japan because of (1) the theft of power by the large number of consumers who are charged a flat rate on the assumption that they will use only a small, limited amount of power for lighting, (2) the high proportion of hydro power to total production, necessitating transmission over long distances, (3) the high proportion of "small power" demand to total consumption, requiring low-voltage terminal loads, and (4) considerable overloading of transmission and transformer facilities since the war.

The financing of such a large program will undoubtedly prove difficult. Public funds are to be used to finance the increase in capacity undertaken by the Power Development Company and the local governments, and a considerable amount of such funds will have to be made available through the Development Bank to assist the private power companies in their expansion program. It may well prove desirable to permit the private companies to do more self-financing by authorizing them to raise somewhat the existing low power rates. At present, prevailing depreciation allowances are inadequate because of serious undervaluation of power plant and equipment. The government has admitted that power rates will in any event have to be increased 15% to 20% on the average by 1957 in order to allow for the much higher cost of new generating and distributing facilities.

It will be noted that over a fifth of the new capacity projected is to be constructed by the Electric Power Development Company. This Company was established by a law enacted on July 31, 1952, to carry out large power projects which presumably are beyond the capacity of each of the nine private power companies. The generating facilities thus established may be leased or sold to private companies, or the power generated may be sold for distribution by private companies. The Company has an authorized capital of ¥100 billion of which ¥99.5 billion is to be subscribed by the government and ¥0.5 billion by private power companies. The capital actually paid in is ¥5 billion of which all but ¥50 million has been paid by the government. In addition, the Company is authorized to issue bonds or contract long-term loans up to ¥156 billion and may borrow abroad with the guarantee of the government.

^{48/} A list of such reservoir projects on which planning is claimed to be sufficiently far advanced to initiate construction appears in Annex 9.

Industrial Investment: Coal and Steel

The existence of considerable idle capacity in most branches of industry would seem to make it possible to expand output without much new investment. Much of this nominal excess capacity, however, can be activated only after considerable expenditures on repair and rehabilitation. Moreover, rationalization of management and equipment is necessary in many industries if Japanese production is to become fully competitive in the foreign market.

During the last year the intensification of competition attending the gradual return to a buyers' market has brought about a considerable reduction on the disparity between Japanese and foreign prices of such items as chemicals, iron and steel and various types of machinery and equipment. Natural market forces may be expected to exert further pressure on Japanese costs and prices provided a renewal of government subsidies or inflation does not diminish the incentive.

The Japanese government and industry have become increasingly preoccupied with programs for "rationalizing" various industries. In many cases, however, such programs have apparently been drawn up without adequate knowledge of the breakdown of costs of production which presumably they are designed to reduce. The widespread adoption of detailed cost accounting in Japanese industry would thus appear to be a prerequisite to the adoption of properly conceived programs to reduce costs.

A reduction of costs and simultaneous improvement of quality seems particularly necessary in the iron and steel and coal mining industries, since the comparatively high cost and poor quality of the products of these industries affects costs throughout Japanese industry in general. Reference has already been made to the rationalization program covering the years 1951 to 1953 adopted by the iron and steel industry. In order to lay the foundation for a further modernization program the iron and steel industry had a study carried out by an American engineering team toward the end of 1952. The prospective large-scale development of Malayan iron ore resources and the possibility of obtaining much larger supplies of Indian iron ore through expansion of transport and port facilities also indicate the likelihood that Japan will be able to import iron ore at a cost considerably lower than in the past. The Economic Counsel Board has estimated that pig iron production will have to increase from 3,474,000 tons in 1952 to 5,350,000 tons in 1957 and that crude steel output will have to rise from 6,988,000 to 7,660,000 tons during the same period. It is expected, however, that virtually all this output will be used at home and that it will be advantageous to export iron and steel only in the form of machinery and equipment and similar products.

The coal industry hopes to invest about ¥146.5 billion over the next five years in order to raise output from a level of 43.3 million tons in 1951 to 55.5 million in 1957 and to reduce costs by about 18%. Costs would be lowered primarily through the expenditure of some ¥49 billion on the sinking of 66 vertical shafts. Gradual replacement of the present inclined

shaft system of mining is expected to reduce substantially travel time to and from the coal face and ultimately to lower haulage costs. Daily output per worker would rise from a present level of about 11 tons to 14.6 tons. It remains to be seen whether detailed cost estimates will support these calculations.

The contemplated increase in domestic coal production will not relieve Japan of the need to economize as far as possible on the use of coal through the development of hydroelectric power and electrification of the railways. Even with an output of 55.5 million tons in 1957, Japan will still need to import in the latter year about 3.75 million tons of high-grade coking coal and anthracite.

Investment in Agriculture

In view of the large foreign exchange outlays on imported foodstuffs, the adoption of all practicable measures to raise domestic food production would seem to be warranted. The Ministry of Agriculture has made a rather careful survey of the available land resources and framed, on this basis, a 5-year agricultural program designed to bring about a net increase in the production of rice and wheat of about 12 million koku (brown rice equivalent) or 1.8 million metric tons. If such a program were successful, import requirements could actually be reduced by about 720,000 tons despite increased domestic consumption resulting from the expected growth in population.

The program can be broken down as follows:

	<u>Area Benefited</u> (1000 cho)	<u>Increase in</u> <u>Cereals Output</u> (1000 koku, brown rice equiv)
Expansion and Improvement of Agricultural Land		
Irrigation and drainage	2,146	5,508
Land improvement	1,672	4,779
Reclamation (other than marshes)	338	1,523
Marshland reclamation	28	763
Sub-total	4,139	12,573
Improvement in Cultural Practices	-	4,453
Gross Total	-	17,026
Less withdrawal of cultivated land	-	5,000
Net Total		12,026

Despite the intensive use of land in Japan, there are still considerable areas which can be converted to agricultural use by such works as clearing, terracing, construction of roads, drainage, etc. From these potentially

available areas the Ministry of Agriculture has selected for reclamation those which, on the basis of estimated costs and results, can be economically reclaimed in its opinion.

The drainage improvement program would cover about 664,000 cho in addition to 571,000 cho on which projects have already been started. It would, above all, make possible the drainage of rice paddies after the rice harvest in such a way as to permit double cropping.

The irrigation program would bring water to upland areas totaling 597,000 cho and improve water supplies for some 1.2 million cho. Over a considerable portion of these areas it would permit a shift to rice cultivation from crops which are much less productive. In some areas, moreover, it has been impossible to have double cropping because the lack of adequate supplies of irrigation water has made it necessary to have water accumulate in rice paddies over a considerable period of time in order to have enough water by planting time.

Among other improvement measures are programs for top dressing of deteriorated rice land and readjustment of land holdings in order to make possible more intensive and efficient use of land. Measures to improve cultural practices call for the use of better seeds, a campaign to combat damage by disease and insects and the use of manure, fertilizers and other measures to raise soil fertility. Despite the high level of agricultural techniques which generally prevails in Japan, room for further improvement undoubtedly exists, and Japanese farmers, who are on the whole well-educated, are likely to respond to various government inducements to employ better practices.

The whole program has been worked out in considerable detail and seems generally well-conceived. Whether its targets would be completely attained even if all the necessary funds were forthcoming may be doubted; and it has already been noted that the Economic Counsel Board has assumed that no more than 80% is likely to be achieved. This reduced target may well be within the bounds of practicability. If it can be achieved, it will make a significant contribution to the reduction of the dollar deficit.

The total capital cost of the 5-year program for expansion and improvement of agricultural land has been estimated at ¥530 billion, of which ¥188 billion would be contributed by the farmers themselves. Annual government outlays would have to increase from a level of ¥20.5 billion in the fiscal year 1952 to an average of about ¥60 billion in the following five years. In the original budget for 1953 the government proposed to make a start with this program by increasing appropriations for this purpose to ¥49.4 billion.

Investment in Transport

The general increase in production contemplated over the next 5 years will inevitably entail some expansion in transportation. The principal and most urgent requirements in this field are those of the railways and the merchant marine.

The government-owned Japanese National Railways, which in the fiscal year 1951 accounted for 78% of the passenger and 98% of the freight traffic handled by all the railways, has a 5-year investment program totaling about ¥294 billion. Included in this total are (1) ¥38.3 billion for the electrification of 746 kilometers of main-line track (1,666.2 kilometers out of a total of 19,849.6 kilometers were already electrified by March 31, 1952), (2) ¥25 billion for the acquisition of Diesel locomotives and rail-cars, (3) ¥47.2 billion for the expansion of mainline capacity and increasing the capacity for transporting coal and commuters, and (4) ¥186 billion for rehabilitation of facilities and equipment, largely for the purpose of making good deferred maintenance. With such investments the railways expect to be able to cope with the anticipated volume of traffic. The proposed electrification and diesel-power program will help not only to reduce costs of operation, but they will have the special advantage of economizing on the use of coal which is expected to remain in scarce supply. It is estimated that the electrification program will effect an annual coal saving of 921,000 tons and the diesel program, 394,000 tons.

The financing of a railway investment plan of this magnitude may well require some increase in freight rates and passenger fares. By 1952 freight rates had increased to about 170 times the 1936 level, but the rise was only about half that in general wholesale prices. The increase in passenger fares has fallen even farther behind that in wholesale prices. Rates were raised 10% to 13% late in 1952 but not enough to offset higher wages recently granted. Even on the basis of rather inadequate depreciation allowances, the railways operated consistently at a loss in the postwar period until the year 1950/51. Out of capital expenditures totaling ¥120.6 billion over the fiscal years 1949 to 1952 inclusive, only ¥71.5 was financed from the depreciation reserve. Nearly all of the balance had to be financed by government funds. With a much heavier investment program in the future the proportion self-financed will be much smaller unless rates and fares are raised.

As production expands, requirements for road transport will undoubtedly increase also. It seems inadvisable, however, to develop highway transport for long-distance haulage. Japan has a large fixed investment in an extensive railway network which with some additional investment can meet the basic transport needs of the country. A shift to motor vehicles will tend to place a greater burden on the balance of payments since virtually all of the motor fuel and much of the raw materials used in the production of vehicles must be imported. Roads in Japan must be considered in the future, as in the past, primarily as a means of feeding and supplementing the railways.^{49/} The current emphasis in Japan on the development of arterial highways accordingly seems

^{49/} Japan is still not extensively motorized. Although the total number of motor vehicles increased from 214,076 in 1937 to 696,113 at the end of 1952, there were at the latter date only 401,467 trucks, 24,306 buses and 251,462 passenger vehicles.

misplaced. Principal emphasis should rather be put on better maintenance and improvement of the existing road network, much of which is in very poor condition. One might question the wisdom of proceeding with plans to construct a broad 327-mile express highway between Tokyo and Kobe which would cost no less than ¥114.5 billion and would require 424,000 tons of steel, 1,035,000 tons of cement and 4,700,000 koku of lumber. In the 1953 budget submitted to the Diet in June 1953, however, the government appears to have abandoned its plan to begin building this super-highway in 1953.

More urgent is the further expansion of the merchant marine with ships built in Japanese yards. In 1953 another 4-year shipbuilding program involving the addition of 300,000 gross tons annually to the merchant fleet, was launched. The yearly investment requirement is large - about ¥52 billion - but may be justified since it will enable Japan to become a net earner of foreign exchange on transportation account.

Plans have also been formulated to expand the capacity of Japanese ports from about 180 million tons at present to 267 million tons in 1957. Because of war damage present port capacity is below that of prewar years. There is considerable idle capacity in the ports facing the Sea of Japan owing to the decline in trade with China, but at the same time other ports are almost fully utilized. The projected five-year port expansion plans call for a total outlay of ¥39.6 billion, including ¥18 billion for cargo-handling gear, sheds and warehouses. In addition there is a program for establishing industrial port areas which would involve total expenditures of ¥5.2 billion by 1959 and private investments totaling about six times this sum. The latter program aims to reduce costs for industries using bulky materials transported by water. Since, however, Japan generally possesses ample industrial capacity and needs primarily to modernize existing rather than to build new plants, the justification of large investments in industrial port facilities may well be questioned. On the other hand, some investment to increase port capacity is apparently warranted.

The Japanese government is also planning to establish a Japanese international airline as a means of earning additional foreign exchange. In 1951 the Japan Airlines was organized to operate a domestic service between Tokyo and the islands of Kyushu and Hokkaido. Another company is now being established to inaugurate services to Korea, Formosa, India, North and South America, Europe and Java over the next three years. A total investment of \$21.3 million (¥7,668 million) is projected to acquire the necessary planes and facilities abroad. The Japanese government expects that these international air operations will yield net foreign exchange earnings of \$2,578,000 in the first year and \$11,187,000 in the third year. If these expectations should materialize, the investment would probably be justified. There is, however, reason for believing that they are based on an excessively optimistic evaluation of the volume of air traffic which a Japanese company would handle and, perhaps, an underestimation of the expenditures involved. Moreover, international

air transport is an extremely competitive field in which even experienced companies have difficulty in making ends meet. A Japanese company might well require considerable direct and indirect government subsidies. Thus it may be questioned whether Japan should venture into international air transport at a time when so many apparently more urgent investment projects have to be carried out.

Investment in Communications

Business is said to be considerably handicapped at present by the lack of adequate telephone communications. Telephone circuits are apparently overloaded and there are great delays in particular in completing inter-urban calls. As of August 1952 there was a backlog of applications for new telephones of 390,640, and new applications at a rate of over 300,000 per year are anticipated. To meet this situation the Nippon Telegraph and Telephone Corporation, a public corporation, has proposed a five-year program involving the addition of 210,000 subscribers per year and the improvement of interurban communications. The magnitude of this program is indicated by the fact that as of March 31, 1951, there were only 1,369,007 subscribers. It would involve an annual investment expenditure of about ¥75 billion as compared with only a little over ¥30 billion in the fiscal year 1951. Although the contemplated expansion is designed primarily to meet business needs,^{50/} it is doubtful that Japan can afford to undertake this entire program in view of the many other urgent claims on resources available for investment.

Housing Investment

Aside from the urgent investment requirements in the sectors of industry, transport and communications discussed above, there is an insistent and large demand for more investment in housing. Although per capita consumption has by now generally recovered to prewar levels, housing accommodations are much less adequate than before the war. About 320,000 new dwelling units are said to be needed each year to provide for the increase in families and annual replacement requirements; and this would not diminish existing overcrowded and inadequate housing conditions which are reported to have created a shortage of over 3 million units. The Ministry of Construction has projected plans for the construction of about 340,000 units annually, but this would require an annual investment of about ¥225 billion per year as compared with an average of only about

^{50/} The number of residential telephone subscribers on March 31, 1952, was only 6.5% of the total.

¥100 billion in 1951 and 1952. Although such a program is clearly beyond Japan's capacity to finance, investment in housing will no doubt have to exceed the volume in the past even if only the most urgent requirements are met.

Implications of Large Investments

The above review of investment needs in some of the critical sectors of the economy is necessarily incomplete but will serve to suggest the large magnitude of such requirements. Investment plans formulated in various government ministries and agencies and in many private sectors of the economy are in the aggregate clearly beyond the ability of the country to finance. Many of these plans may well remain, at least in part, paper plans, but there is a tendency in Japan to press ahead with investments in all fields without adequate consideration of their comparative importance. Even if stated requirements are carefully screened in order to eliminate or reduce less essential needs, the financing of the balance is likely to raise serious problems. The Economic Counsel Board, for instance, has estimated that minimum gross investment requirements (exclusive of inventories) over the next five years will probably be on the average 20% higher than in the fiscal year 1952. According to its projections this would entail investments at the rate of about 20.5% of national income by the 1955 fiscal year as compared with 18.2% in 1952.

Basically Japan will have to finance investment out of its own resources. Foreign capital and the possible use of foreign exchange reserves can at best be expected to cover only a very small percentage of the total investment resources required. The possible volume of non-inflationary investment will be determined by the amount of real savings which can be effected through the government and in the private sector of the economy. The volume of savings or domestic investment resources will in turn be determined by the development of production and national income and the proportion of national income which will go into consumption.

It is unlikely that a balance can be struck between investment resources and requirements without some long-range planning and controls. This need has recently received some recognition in Japan. For example, the government has strengthened the Supreme Economic Council which was originally established to advise the Prime Minister on economic problems. Its composition was broadened to include not only selected cabinet members but also outstanding experts from banking and industry; and it was given the task of screening investment requirements and considering the means of financing an investment program.^{51/}

^{51/} The Council consists of the Ministers of Foreign Affairs, Finance and International Trade and Industry, the Secretary-General of the Cabinet, the Director General of the Economic Counsel Board, the Governor of the Bank of Japan and three business leaders.

Planning of this type need not involve the elaboration of a detailed, inflexible blueprint for the economy and the imposition of many direct controls. It would necessitate, however, some advance planning of the general composition and size of public investments and the setting of targets for private investment. Public investment outlays are quite substantial, and it is important that they be determined not simply by annual budget allocations, influenced to a considerable extent by current political pressures, but by longer range economic considerations. This is particularly necessary for expenditures on agriculture, forestry and fisheries, roads, ports and railways and housing. Private investment, of course, is less susceptible to control, but its direction can be greatly influenced by credit and fiscal policies. Targets for private investment in various fields could be set with the idea of ensuring adequate funds for most essential investment and reducing outlays for less important activities. Through controls over bank credit and capital issues the government and the Bank of Japan can largely determine the total of private investment; and the direction of private investment can be extensively influenced through qualitative credit controls, differential interest rates, tax measures, including special depreciation allowances, and the policies of government investment institutions.

Any global investment program must, of course, be flexible. It would require periodic readjustment in the light of changing circumstances. Its size and composition must, above all, reflect changes in the resources available for its financing. It is important, however, that policies touching investment be framed not simply to meet the needs - political and economic - of the moment, but to attain the long-term goals which must be kept in mind. These goals are to make Japan more self-supporting and at the same time to cover minimum essential domestic consumption requirements.

The primary task will be to ensure that the investment essential to the fulfillment of these goals is made without running the danger of inflation. If Japan is to sell an increasing volume of goods on the world market at competitive prices, inflation must be avoided at all costs. Japan will therefore have to finance its investment requirements out of real domestic savings except for such small amounts as may be financed through the use of its foreign exchange reserves or investment of foreign capital.

A program to achieve these ends will presumably have to include the following features:

1. Restraint on consumption - As long as basic investment requirements have not been met, Japan will be unable to afford a significant rise in per capita consumption. This will mean that consumption outlays in the government budget will have to be kept to a minimum and that any substantial increases in wages will need to be deferred until there is a considerable improvement in the productivity of Japanese industry. In the postwar period Japanese labor has become well organized and has been pressing

vigorously for higher wages. Apparently, however, real wages in manufacturing industry are already about 10% higher than in 1934/36. It is difficult, however, to persuade labor to exercise restraint unless at the same time attempts are made to restrict some of the conspicuous spending on luxuries by corporations and individuals.

2. Incentives to saving - It would be desirable to explore various means of stimulating an increase in savings, particularly by encouraging greater self-financing by industry. Private industry, particularly in essential fields, might be given special tax concessions on reinvested profits; and public corporations such as the Japan National Railways and the Nippon Telegraph and Telephone Corporation might be given the means to finance more of their investment requirements by adjustments in rates and fares.

3. Maintenance of Government Revenues at a High Level - So long as voluntary individual and corporate savings are likely to be inadequate, it seems essential to keep government revenues at a high level and to channel a considerable portion of this income into essential investment. The government must mobilize sufficient funds not only to meet essential public investment requirements, including those for transport, agriculture, forestry and fisheries, but also to permit it to direct capital through the Development Bank and similar institutions into key industries. While changes in the tax structure may well prove desirable, the overall tax burden in recent years does not seem excessive particularly in the light of the many high-priority claims on government resources for investment.

With a careful husbanding of resources, Japan should be able to meet essential investment requirements without extensive resort to foreign borrowing or the use of foreign exchange reserves. In fact, the Economic Council Board has recently estimated that domestic resources likely to be available for investment over the next five years will fall short of requirements by about \$120 million. This estimate was based on certain projections of the national income and rests on the assumption that (1) investment requirements will be carefully screened, and (2) the rise in per capita consumption will be confined to 1% per year. Although such a calculation illustrates the hypothesis that Japan can do much to meet its own requirements, it can hardly justify a confident prediction that Japan will need to borrow abroad \$120 million to cover the remaining deficiency. The figure in question clearly falls well within the margin of error which affects the underlying projections of national income, consumption and savings.

It is therefore impossible to predict exactly how much Japan might need to borrow abroad. The principal economic justification which Japan can advance its foreign borrowing rests, in fact, on the uncertainties which affect both the future size of its foreign exchange reserves and the magnitude of the direct and indirect foreign exchange requirements resulting from the future volume of investment. The size of the foreign

exchange reserve will be determined to a large extent by the volume of U.S. dollar disbursements in Japan which cannot be accurately forecast; and the foreign exchange needs arising from future investments can hardly be predicted with any degree of exactitude. Under these circumstances foreign borrowing must be considered primarily as a means of providing Japan with an extra foreign exchange "cushion" on the basis of which Japan could proceed more confidently with plans to make the country more self-supporting.

Any foreign loans contracted for this purpose can, in the last analysis, be repaid only if Japan continues to receive, albeit in declining volume, special dollar income, or if relaxation of political tensions or economic development in the Far Eastern area, accompanied by an easing of trade restrictions permit Japanese access to lower cost raw materials and foodstuffs and to larger markets for her goods. For the near term it appears that special dollar income is likely to continue at rather substantial levels and it is fair to note that past expenditures of this nature have reflected U.S. recognition of Japan's significance as a vital element in the Pacific area. There is no reason to anticipate that this significance will diminish within any period for which it seems useful to attempt a forecast.

ANNEX I

INDICATORS OF SAVINGS
(in millions of yen)

Fiscal year	Bank Deposits (a)	Trust funds & Investment Trust funds (b)	Postal Savings (c)	Government Life Insu- rance and Postal A nnuities (d)	Special Insurance (e)	Life and non- life insurance	Deposits in Mutual Savings Banks (f)	Deposits in other Financial Institutions (g)	Investment in Securities (h)	Total	Index of Real Savings
1934-1936 (average)	847	163	184	156	-	256	15	118	631	2,368	100
1947	78,677	470	4,264	2,062	1,977	319	3,877	6,983	15,055	113,684	75
1948	185,092	2,928	27,029	2,793	5,197	10,594	10,863	60,983	82,703	389,182	106
1949	201,219	5,051	41,513	8,697	9,733	8,424	12,859	29,185	42,886	355,767	71
1950	201,540	6,815	32,648	18,396	13,129	15,182	23,237	30,772	-13,149	328,570	52
1951	391,390	33,802	46,180	29,269	16,312	24,543	36,244	67,854	102,714	747,398	90

Note : This table does not purport to provide an estimate of total savings, but only indicators of the trend in savings. The total is given for presumed savings in various forms and this total is deflated by changes in the official price level to provide an indication of the trend of "real savings." The amount of "real savings" in the years 1947 to 1949 is undoubtedly exaggerated because the wholesale price level did not take into account the large volume of transactions at blackmarket prices.

- (a) Total deposits of all banks - (current deposits + government deposits and deposits from other financial institutions other than the Bank of Japan + loans on deposit).
- (b) Money held in trust (excluding National Savings Association) and Investment Trust Funds - (deposits from other financial institutions + loans on deposit).
- (c) Postal savings excluding postal transfer savings.
- (d) Operating assets.
- (e) Deposits in special insurance account of Trust Fund Bureau.
- (f) Deposits - (current deposits + government deposits + deposits from other financial institutions).
- (g) Adjusted in similar manner as deposits of all banks.
- (h) Outstanding debentures of government and financial institutions + stock issues + receipt on debentures etc. - (securities held by government and financial institutions + loans on stocks and bonds).

ANNEX 2

U.S. AID COUNTERPART FUND
(in millions of yen)

	Period		Assets as of Dec. 31, 1952
	<u>Apr. 1, 1949- Total Funds and Utilization</u>	<u>Dec. 31, 1952 Capital Collections</u>	
<u>Fund Available - Total</u>	561,801	-	-
1. Receipts of capital	323,097	-	-
Transfers from US Aid Account	306,508	-	-
Income from investment	16,589	-	-
2. Collections of capital	238,704	-	-
Long-term investment	37,110	-	-
Short-term investment	94,230	-	-
Cash drawn down	107,364	-	-
<u>Fund Utilization - Total</u>	561,801	238,704	-
1. Government enterprises	97,488	27,008	30,500
Railways	19,000 a/	15,000	0
Communications	24,000 b/	12,000	0
Public Works	10,988 c/	8	0
Public Housing	10,000 c/	0	0
Forests	3,000 c/	0	0
Export-Import Bank	7,500 d/	0	7,500
Development Bank	16,000 d/	0	16,000
Agricultural Loan Special Account	7,000 d/	0	7,000
2. Private enterprise	140,007	3,868	136,138
Electric power	63,093	420	62,673
Shipping	54,637	36	54,600
Coal	6,425	847	5,578
Iron and steel	2,208	276	1,933
Chemicals	865	48	817
Fertilizer	516	131	385
Agriculture, forestry & fisheries	1,015	220	795
Small and medium business	4,198	958	3,239
Banks	5,950	878	5,072
Textiles	700	50	650
Tourist hotels	80	0.6	79
Machinery imports	70	3	68
Subway	250	0	250
3. Special uses	9,854	308	7,106
Dependents housing	7,409	303	7,106
Milk for school lunches	1,774 c/	0	0
Reorientation program	671 c/	5	0
4. Acquisition of government bonds	111,885 e/	5,926	43,492
5. Short-term investment	94,725	94,230	495 f/
6. Cash deposit in Bank of Japan	107,514	107,364	150
7. Operating expenses	328	-	-

ANNEX 3

ASSETS AND LIABILITIES OF TRUST FUND BUREAU
(in millions of yen)

	End Fiscal Year			: End	
	1948	1949	1950	1951	: Feb. 1953
I. <u>ASSETS</u>					
Securities					
National government	70,741	77,439	87,387	99,224	93,524
Local government	923	522	405	610	552
Financial institutions	4,706	526	18,471	48,146	80,364
Other	909	907	712	993	1,442
Loans					
National government accounts	2,969	2,891	17,890	7,327	18,719
Local public bodies	34,552	63,080	103,321	156,851	218,408
Other ^{a/}	1,103	21,202	11,627	38,754	66,591
Deposits with					
Bank of Japan	1,295	1,946	16,137	4,348	3,128
Financial institutions	-	13,976	-	-	-
II. <u>LIABILITIES</u>					
Postal savings and postal transfer savings	83,912	124,139	157,145	202,329	264,838
Insurance and pension funds	23,243	43,193	79,481	127,027	157,648
Surplus cash deposit of national Treasury	-	-	-	5,000	5,000
Other funds or deposits	10,200	15,162	19,326	20,142	47,528
Reserve Fund and Excess Revenues	-	-	-	1,755	7,716
III. <u>TOTAL ASSETS OR LIABILITIES</u>					
	117,202	182,494	255,950	356,253	482,730

^{a/} Primarily government agencies.

ANNEX 4

PRINCIPAL ACCOUNTS OF THE DEVELOPMENT BANK

February 28, 1953

(in millions of yen)

Paid-up capital	111,170
Borrowing from government	149,113
Loans	
On deeds	53,813
On deeds taken over	56,987
On bills taken over	7,642
U.S. Aid Counterpart Fund loans taken over	144,914
Total loans	<u>263,357</u>
Securities	
National government bonds	4,767
Local government bonds	5
Stocks and shares	4,950
Total securities	<u>9,723</u>
Deposits with other financial institutions	1,497

ANNEX 5

BALANCES OF INTERNATIONAL PAYMENTS

Table 1

Balance of Payments for 1950

(in millions of dollars)

	<u>Total</u>			<u>Dollar Transactions</u>			<u>Sterling Transactions</u>			<u>Open-Account Transactions</u>		
	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.
Commercial Trade f.o.b.	829	886	-57	298	503	-205	301	212	+ 89	230	171	+ 59
Special Procurement goods	50	-	+50	50	-	+50	-	-	-	-	-	-
Gold a/	4		+ 4	-	-	-	-	-	-	-	-	-
Travel	22	2	+20	17	1	+16	3	1	+2	3	-	+3
Transportation and Insurance	10	100	-90	6	58	-52	2	24	-22	2	19	-17
Investment Income	-	6	-6	-	5	-5	-	1	-1	-	-	-
Government Transactions (Including special procurement services, etc.)	104	-	+104	102	-	+102	2	-	+2	-	-	-
Miscellaneous	34	12	+22	23	9	+13	8	2	-6	3	1	+3
Private Donations	80	11	+69	61	3	+58	11	5	+6	8	3	+5
GARIOA Import Aid	360	-	+360	360	-	+360	-	-	-	-	-	-
	1493	1017	+476	917	579	+338	327	244	+82	247	194	+53
Multilateral Settlements						+76			-34			-42
Errors and Omissions			-5			+20			-25			
Total			471			+434			+23			+11

a/ Included in total but not allocated by currency breakdown.

ANNEX 5 (cont'd.)

Table 2

Balance of Payments for 1951
(in millions of dollars)

	Total			Dollar Transactions			Sterling Transactions			Open Account Transactions		
	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.
Commercial Trade (f.o.b.)	1355	1647	-292	317	976	-659	613	373	+239	425	297	+127
Special Procurement Goods	227	-	+227	227	-	+227	-	-	-	-	-	-
Gold a/	4	-	+4									
Travel	9	4	+5	7	2	+4	1	2	-1	1	-	+1
Transport	41	256	-215	11	154	-142	18	71	-54	12	31	-19
Insurance	4	16	-12	1	8	-7	2	5	-3	-	2	-2
Investment Income	1	6	-5	1	6	-5	-	-	-	-	-	-
Government Transactions												
Allied Forces	297	-	+297	291	-	+291	6	-	+6	-	-	-
Special Procurement Services	99	-	+99	99		+99	-	-	-	-	-	-
Other	1	2	-1	1	1	-	-	-	-	-	-	-
Miscellaneous	101	51	+50	88	44	+43	13	6	+7	1	1	-
Private Donations	26	10	+16	22	10	+13	3	1	+2	1	-	+1
GARIOA Import Aid	157	-	+157	157	-	+157	-	-	-	-	-	-
Total	2322	1993	+329	1222	1201	+20	655	458	+197	440	333	+108
Multilateral Settlements			-			+89			-25			-63
Errors and Omissions			+8			+7			-37			+38
Total			+337			+116			+135			+83

a/ Included in total but not allocated by currency areas.

ANNEX 5

Table 3

Balance of Payments for First Half 1952

(in millions of dollars)

	Total			Dollar Transactions			Sterling Transactions			Open-Account Transactions		
	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.	Cr.	Deb.	Bal.
Commercial Trade (fob)	690	824	-134	181	491	-310	340	221	+119	169	112	+57
Special Procurement												
Goods	139	-	+139	139	-	+139	-	-	-	-	-	-
Gold a/	2	-	+ 2	-	-	-	-	-	-	-	-	-
Travel	5	3	+ 2	4	2	+ 3	-	1	- 1	-	-	-
Transportation	36	102	- 67	16	63	- 47	18	21	- 3	3	19	-16
Insurance	2	6	- 4	1	5	- 4	1	1	- 1	-	-	-
Investment income	2	2	-	1	2	- 1	-	-	-	-	-	-
Government transactions including special procurement services, etc.	280	3	+277	271	2	+269	8	-	- 7	2	-	+1
Miscellaneous	9	17	- 8	6	12	- 5	2	4	- 2	1	1	-
Donations	32	10	+ 22	26	7	+ 19	1	1	-	5	1	+3
Total	1197	967	+230	645	582	+ 63	370	250	+120	179	135	+45
Multilateral Settlements												
E & O			+8			+ 21			- 2			-19
						- 14			+ 23			- 1
Total			+238			+ 70			+141			+25

a/ Included in total but not allocated by currency breakdown.

ANNEX 6

POSTWAR FOREIGN INVESTMENT IN JAPAN

Table 1

Capitalized Value of Technological Assistance Contracts
(in thousands of dollars)

	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u> <u>(Jan-Sept)</u>	<u>Total</u>
Manufacturing Industry					
Spinning	-	-	10,138	1,729	11,867
Lumber & Wood Products	-	-	517	-	517
Paper & Pulp	-	-	543	54	597
Printing & Publishing	-	-	-	77	77
Chemicals	-	810	12,047	1,284	14,141
Petroleum	-	-	1,011	4,909	5,920
Rubber & Leather	-	2,123	5,358	1,158	8,639
Stone Clay & Glass	-	-	247	115	362
Metals	-	-	6,686	4,710	11,396
Electric Instruments	-	895	7,204	17,952	26,051
Transportation Equipment	270	2,007	5,992	857	9,126
Other Machinery	810	5,791	8,694	16,593	31,888
Construction	-	-	733	61	794
Electricity-Gas	-	-	-	790	790
Recreation & Amusement	-	-	54	-	54
Total	1,080	11,626	59,224	50,289	122,219*

*Of this amount \$96,702,000 is attributable to contracts concluded with U.S. firms.

ANNEX 6 (Cont'd.)

Table 2

Acquisition of Japanese Shares by Foreigners

<u>Year</u>	<u>Number of cases</u>	<u>Number of stocks</u>	<u>Total Value</u>	<u>Means of Acquisition</u>		
				<u>Foreign Currency</u>	<u>Investment in kind</u>	<u>Japanese Currency</u>
1949	95	3,234,490	¥ 176,644,238	¥ 159,316,692	¥ 6,000,000	¥ 11,327,566
1950	126	16,332,206	876,299,450	463,641,555	380,299,740	32,358,153
1951	384	51,139,968	4,603,121,350	2,757,403,900	1,788,923,800	56,793,650
1952 Jan-Sept.	1,268	22,740,793	1,977,316,385	1,278,548,505	608,287,680	90,380,200
<u>Total</u>	<u>1,873</u>	<u>93,447,457</u>	<u>¥7,633,381,423</u>	<u>¥4,658,910,652</u>	<u>¥2,783,611,220</u>	<u>¥190,859,569</u>

ANNEX 6 (Cont'd.)

Table 3

Acquisition of Japanese Real Estate by Foreigners

<u>Year</u>	<u>Number of cases</u>	<u>Land (Tsubo)</u>	<u>Building (Tsubo)</u>	<u>Value (yen)</u>	<u>Means of Acquisition</u>		
					<u>Foreign Currency</u>	<u>Investment in kind</u>	<u>Japanese Currency</u>
1949	58	93,596.1	4,733.6	279,134,250	18,139,110	153,960,000	107,035,146
1950	57	151,802.3	8,808.1	163,251,304	66,008,260	0	97,243,044
1951	194	575,087.6	45,441.1	4,213,809,771	292,406,904	490,698,586	3,430,704,281
1952 Jan-Sept.	72	32,194.5	2,986.8	113,734,194	22,674,948	0	91,059,246
<u>Total</u>	<u>381</u>	<u>853,680.5</u>	<u>61,969.6</u>	<u>4,769,929,519</u>	<u>399,229,222</u>	<u>644,658,586</u>	<u>3,726,041,711</u>

ANNEX 7OPEN-ACCOUNT AGREEMENTSTable 1Provisions of Open-Account Agreements
at End of 1952

(figures in millions of dollars)

<u>Country</u>	<u>Planned Annual-Level of Trade</u>		<u>Agreed "Swing"</u>
	<u>Japanese Exports</u>	<u>Japanese Imports</u>	
Argentina	-	-	10
Brazil	33.5	35.6	none
Finland	2.7	2.7	0.5
French Union	25.0	41.0	3.0
West Germany	30.0	30.0	2.0
Indonesia	55.0	40.0	a/
Netherlands	7.3	7.3	2.0
Philippines	50.0	50.0	2.5
Sweden	10.45	17.3	4.0
Formosa	50.0	50.0	4.0
Thailand	56.0	56.0	2.0
Korea	32.0	16.0	2.0
Italy b/	15.0	15.0	1.0

a/ At the conclusion of the new agreement in August 1952 Japan's net credit balance with Indonesia was over \$60 million. The excess over \$60 million was transferred to the new account, \$6 million was frozen for a period of five years, and \$54 million is to be paid in dollars in five annual installments. Under the new agreement, Japanese net credit balances up to \$20 million are to be settled mainly by "switch" trade transactions (\$15 million) and the remainder in cash dollars. Excesses beyond \$20 million will be paid in a suitably agreed currency over a two year period.

b/ Reported concluded mid-January 1953.

ANNEX 7 (Cont'd.)

Table 2

Japanese Balances under Open-Account Payment Agreements a/
(in thousands of dollars)

	<u>1950</u>	<u>1951</u>	<u>Jan-Sept. 1952</u>
Argentina	-8,025	13,154	7,202
Brazil	1,133	3,900	-888
Finland	-144	-665	1,011
France	566	5,631	24,630
Germany	4,546	7,062	-6,882
Korea	695	5,576	10,915
Netherlands	2,098	-880	3,106
Indonesia	15,233	61,895	31,770
Philippines	-3,634	1,637	-9,057
Thailand	20	4,347	-7,034
Sweden	3,298	4,602	7,167
Taiwan	-2,127	8,515	-2,436

a/ Excluding transactions conducted outside the open-accounts and usually settled in dollars. The most important of recent transactions outside the open-account has been the purchase of rice from Thailand with dollars.

ANNEX 8

ESTIMATED ANNUAL SERVICE CHARGES ON JAPANESE EXTERNAL BONDED INDEBTEDNESS

(in thousands of pound sterling or dollars)

<u>Fiscal Year</u>	<u>Payments on Sterling Bonds</u>					<u>Payments on Dollar Bonds</u>				<u>Grand Total</u> (Dollar equivalent)
	<u>Principal Matured</u>	<u>Sinking Fund</u>	<u>Interest</u>	<u>Total</u>		<u>Principal Matured</u>	<u>Sinking Fund</u>	<u>Interest</u>	<u>Total</u>	
				<u>In Sterling</u>	<u>In dollar equivalent</u>					
1953	£ -	£ 1,024	£ 7,874	£ 8,998	\$25,195	\$ -	\$3,470	\$9,226	\$12,696	\$ 37,891
1954	-	1,089	7,884	8,973	25,125	1,457	2,592	8,900	12,949	38,074
1955	-	1,122	7,822	8,944	25,044	-	2,594	8,672	11,266	36,310
1956	-	1,178	7,759	8,937	25,024	-	2,453	8,515	10,968	35,992
1957	-	1,237	7,693	8,930	25,004	-	2,500	8,367	10,867	35,871
1958	3,467	1,302	7,535	12,304	34,452	-	2,573	8,217	10,790	45,242
1959	-	1,368	7,294	8,662	24,254	-	2,626	8,062	10,688	34,942
1960	-	1,438	7,137	8,575	24,010	-	2,683	7,906	10,589	34,599
1961	25,973	1,513	7,055	34,541	96,715	-	2,741	7,746	10,487	107,202
1962	-	1,578	3,718	5,296	14,829	6,165	2,333	5,278	13,776	28,605
1963	6,915	1,455	1,674	10,044	28,124	26,618	1,364	2,017	29,999	58,123
1964	500	1,532	1,301	3,333	9,333	-	1,435	721	2,156	11,489
1965	-	1,613	1,199	2,812	7,874	-	1,440	641	2,081	9,955
1966	-	1,699	1,106	2,805	7,854	-	1,024	556	1,580	9,434
1967	-	1,789	1,009	2,798	7,835	-	922	502	1,424	9,259
1968	3,233	1,769	806	5,808	16,263	2,324	847	451	3,622	19,885
1969	1,204	932	572	2,708	7,583	-	893	277	1,170	8,753
1970	-	984	484	1,468	4,111	-	942	228	1,170	5,281
1971	413	713	430	1,556	4,357	-	994	176	1,170	5,527
1972	-	752	368	1,120	3,136	-	1,049	121	1,170	4,306
1973	-	545	326	871	2,439	-	237	66	303	2,742
1974	-	5	296	301	843	-	237	50	287	1,130
1975	-	5	296	301	843	-	250	37	287	1,130

(Cont'd.)

ANNEX 8 (Cont'd.)

<u>Fiscal Year</u>	<u>Payments on Sterling Bonds</u>					<u>Payments on Dollar Bonds</u>				<u>Grand Total (Dollar equivalent)</u>
	<u>Principal</u>	<u>Sinking</u>	<u>Interest</u>	<u>Total</u>		<u>Principal</u>	<u>Sinking</u>	<u>Interest</u>	<u>Total</u>	
	<u>Matured</u>	<u>Fund</u>		<u>In Sterling</u>	<u>In dollar equivalent</u>	<u>Matured</u>	<u>Fund</u>			
1976	£ -	£ 5	£ 295	£ 300	\$ 840	\$ -	\$ 264	\$ 23	\$ 287	\$ 1,127
1977	-	5	295	300	840	-	151	9	160	1,000
1978	-	5	295	300	840	-	-	-	-	840
1979	-	5	294	299	838	-	-	-	-	838
1980	-	5	294	299	838	-	-	-	-	838
1981	-	5	294	299	838	-	-	-	-	838
1982	-	6	293	299	838	-	-	-	-	838
1983	-	6	293	299	838	-	-	-	-	838
1984	-	6	293	299	838	-	-	-	-	838
1985	7,213	6	148	7,367	20,617	-	-	-	-	20,617
1986	-	6	3	9	26	-	-	-	-	26
1987	-	6	3	9	26	-	-	-	-	26
1988	-	6	2	8	23	-	-	-	-	23
1989	-	6	2	8	23	-	-	-	-	23
1990	-	6	2	8	23	-	-	-	-	23
1991	14	-	1	15	42	-	-	-	-	42

ANNEX 9

ELECTRIC POWER DEVELOPMENT PROGRAM

TABLE 1
Fund Requirements for Electric Power Expansion Program
(in millions of yen)

	Increased capacity (1,000 KW)	Total fund	Expenditures already made in and before 1951	Fund Requirements by Fiscal Years					
				1952	1953	1954	1955	1956	1957
Mine Power Companies									
Works under construction	2,463	227,443.1	21,759.5	81,556.8	83,990.1	31,938.0	8,198.7	-	-
Works to be started in and after 1953	968	342,650.0	0	0	16,488.0	66,520.0	89,331.0	89,202.0	81,109.0
Sub-total	3,431	661,140.0	21,759.5	98,553.8	117,528.1	115,458.0	114,529.7	102,202.0	91,109.0
Local Governments									
Works under construction	191	21,329.0	2,971.0	5,679.0	8,500.0	3,179.0	1,000.0	-	-
Works to be started in and after 1953	153	16,936.0	-	53.0	2,508.0	5,294.0	4,451.0	3,337.0	1,301.0
Sub-total	344	38,265.0	2,971.0	5,732.0	11,000.0	8,473.0	5,451.0	3,337.0	1,301.0
Electric Power Resources Development Co.									
Works under construction	742.6	66,936	-	6,700	16,300	16,600	13,016	12,000	2,320
Works to be started in and after 1953	542.9	57,070	-	300	8,700	16,100	17,800	11,470	2,700
Sub-total	1,285.5	124,006	-	7,000	25,000	32,700	30,816	23,470	5,020
Captive plants									
Works under construction	341	25,147.0	4,083.0	14,128.0	6,133.0	803.0	-	-	-
Works to be started in and after 1953	60	4,200.0	-	-	1,400.0	1,600.0	1,200.0	-	-
Sub-total	401	29,347.0	4,083.0	14,128.0	7,533.0	2,403.0	1,200.0	-	-
Grand total	5,461.5	852,758.1	28,813.5	125,413.8	161,061.1	159,034.0	151,996.7	129,009.0	97,430.0
						*3,000.0	*5,000.0	*25,000.0	*40,000.0

Remarks : 1. "Works under construction" includes works which were to be started in FY 1952.
2. Figures marked * represent the funds for projects which will be completed in and after 1958.

Table 3

Principal Hydroelectric (Reservoir) Projects

Name of Company undertaking project	Name of Power Plant (Prefecture)	Estimated Cost (in millions of yen)	Maximum Power in KW	Generating Power in 1000 KWh	Water Usable (cub.m/s)	Effective Head (m)	Type of Dam	Features of Dams and Reservoirs			
								Height of Dam (m)	Cubic Volume of Dam (1000 cub.m.)	Usable Pondage (1000 cub.m.)	Usable Depth (m)
Power Source Development Co.	Sakuma (Shizuoka)	26,000	360,000	1,500,000	310.00	148.00	Concrete Gravity	150.00	1,620	260,000	50.00
	Mihoro (Gifu)	16,500	142,000	819,000	100.00	170.00	"	120.00	1,600	320,000	45.00
	Okutadami (Fukushima)	21,171	300,000	570,000	300.00	150.00	"	150.00	1,510	558,000	75.00
	Yunotani ^{a/} #1 (Fukushima)	38,154	370,000	1,030,000	130.00	379.00	"	150.00	1,510	558,000	75.00
	#2		120,000	379,000	124.00	121.00	"	33.00	29	500,000	2.00
	#3		110,000	375,000	126.00	109.00	"	17.00	7	100,000	2.00
Nukabira + 3 others (Hokkaido)	16,320	157,300	495,213	50.00	137.00	"	81.00	542	310,400	40.00	
Nukabira only	-	52,400	120,493								
Kyushu Electric Power Co.	Kamishiiba ^{b/} (Miyazaki)	10,797	90,000	254,218	73.00	145.50	Arch	110.00	315	760,000	45.00
Chubu Electric Power Co.	Ikawa ^{b/} }	14,543	49,300	176,775	65.80	89.40	Concrete Gravity	92.80	554	235,000	15.00
	Okuzum ^{b/} (Shizuoka)		87,000	527,480	60.00	169.30	"	43.00	41	600,000	3.00
Tokyo Electric Power Co.	Sudagai	3,323	30,000	143,016	50.00	72.00	"	79.00	240	19,400	25.00
	Yagisawa (Gumma)	6,806	32,000	68,120	45.00	87.25	"	97.00	574	80,000	35.00

^{a/} Suggested alternative to Okutadami project.

^{b/} In progress.

ANNEX 9 (Cont'd)

Table 2

Projected Increase in Installed Generating Capacity to be put
into Operation Annually

(in Kilowatts)

	Number of projects	Total of In- creased Capacity	1952	1953	1954	1955	1956	1957
Hydro Power Plants								
Nine Power Companies	114	2,177,610	161,260	543,600	685,200	322,550	234,200	230,800
Local Governments	28	344,390	60,820	39,030	26,120	155,120	38,300	25,000
Electric Power Resources Dev. Co.	17	1,285,500	0	37,200	0	310,700	550,300	387,300
Sub Total	159	3,807,500	222,080	619,830	711,320	788,370	822,800	643,100
Captive Plants	23	173,790	37,790	136,000	-	-	-	-
Total	182	3,981,290	259,870	755,830	711,320	788,370	822,800	643,100
Thermal Power Plants								
Nine Power Companies	30	1,252,870	110,500	379,750	221,000	371,620	104,000	66,000
Captive Plants	38	227,600	119,600	68,000	20,000	20,000	-	-
Total	68	1,480,470	230,100	447,750	241,000	391,620	104,000	66,000
Total								
Total of Public Utilities	189	5,060,370	332,580	999,580	932,320	1,159,990	926,800	709,100
Captive Plants	61	401,390	157,390	204,000	20,000	20,000	-	-
Grand Total	250	5,461,760	489,970	1,203,580	952,320	1,179,990	926,800	709,100